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Ramsey Abbey, Cambridgeshire: Excavations at the Site of a Fenland Monastery

By PAUL SPOERRY¹, ROB ATKINS², STEPHEN MACAULAY³ *and* ELIZABETH SHEPHERD POPESCU⁴

WE KNOW remarkably little about the archaeology of the great fenland abbeys. Ramsey stands with Peterborough, Crowland, Thorney and Ely as one of the principal late-Saxon, post- Regularis Concordia monasteries of eastern England and shares their significance. It ranked among the most important ecclesiastical institutions in England and prospered until the Dissolution. This paper presents new interpretations of the layout of the Benedictine abbey, linked to the recent discovery of possible late-Saxon monastic buildings. It includes rare evidence for a later medieval artificial waterway (or 'lode'), with an adjacent crane and possible storehouse: their implications for monastic trade and economy are set within the wider fenland context.

This report is the first of a series of three publications examining different aspects of Ramsey Abbey (Scheduled Ancient Monument Cambridgeshire 14; TL 2931 8512; Fig 1). It deals with excavations and geophysical survey within the abbey precinct conducted at Ramsey Abbey School between 1998 and 2002 by CAM ARC, Cambridgeshire County Council (formerly the Archaeological Field Unit). It partly acts as a synthesis of the excavated findings held in the project archive.⁵ The second report will detail a nationally significant assemblage of relief-decorated tiles that we know Ramsey Abbey manufactured. Finally, an overview paper will discuss recent advances in knowledge about the development of Ramsey town in relation to its abbey.

HISTORICAL BACKGROUND

The historic town of Ramsey owes its existence to the Benedictine abbey created by Oswald, bishop of Worcester from AD 960, and Aethelwine, the

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⁵ <http://ads.ahds.ac.uk/catalogue/resources.html?ramsey_ma_2008> forthcoming.



Site location. Drawn by Crane Begg. © CAM ARC, Cambridgeshire County Council 2008.

aeldorman of East Anglia. At Oswald's suggestion, Aethelwine founded a small wooden chapel for three hermits, reputedly after a vision of St Benedict appeared to his fisherman in Ramsey Mere. A bull was to indicate the position of the church.⁶ Being suitably impressed by the story, Oswald sent 12 monks and a prior from the Benedictine house at Westbury; he made the journey to inspect Ramsey and described it as an island 'surrounded by marsh and bogs; with meadow, woods, and ponds; with all kinds of fish and a wide variety of birds; and cut off from the outside world'.⁷ Oswald's investment in the site

⁶ DeWindt and DeWindt 2006, 11.

⁷ Ibid; quoting Macray (ed) 1886, 38.

continued with the construction of a stone church and other buildings, which began in 969.8

A series of substantial endowments made the house one of the richest in the fens — Ramsey the Golden. Its wealth enabled it to acquire an extensive library and the abbey rapidly developed a reputation for learning that continued until the Dissolution.

The estates were reorganised c 1100 with certain manors providing supplies to the cellarer while others, usually the more distant ones, provided money instead. Many of the detailed estate documents survive and the published records are extensive. The abbey not only supported almost 80 monks, a number that remained constant during the 13th century, but also daughter houses. In the 11th century, Ramsey bought a stone quarry from Peterborough Abbey and used it to rebuild the monastery, refashioning the church during the 12th century. In Stephen's reign, the house suffered severely and was overtaken by Geoffrey de Mandeville in 1143 — he fortified the house and expelled the monks.⁹ The abbey was badly damaged and impoverished.

The late 13th and 14th centuries saw a succession of wealthy and worldly abbots — John of Sawtry, Simon of Eye and William of Godmanchester — each of whom embarked on costly building programmes. The Black Death added to these financial problems and by 1349 the house owed 2,500 marks (£1,666 138 4d). The visitation returns at the end of the 14th century suggest that the abbey was both financially and morally decayed, but by 1431 all was restored. In 1535 Thomas Bedyll visited and reported to Thomas Cromwell that the monks would acknowledge the Supremacy and in 1538 they surrendered without complaint, receiving high pensions as a reward. The house was valued in 1535 at £1,715 12s 3d, which included the abbey and the cells at Modney (Norfolk) and Slepe (St Ives, Cambridgeshire). They assessed the house at Chatteris (Cambridgeshire) separately.

The abbey was dissolved in 1539, when the Cromwell family bought its land, titles and buildings and saw to its destruction. We know that several Cambridge Colleges (Kings, Trinity, Gonville and Caius), as well as the gatehouse at Hinchingbrooke House (Cambridgeshire), used much of the abbey stone.

The earliest cartographic depiction of Ramsey is the very small-scale 1646 county map of Huntingdonshire by Blaeu, although this gives no indication of the layout of the abbey itself. Jonas Moore's map of 1684 is the first to show the town to any scale — it illustrates the general shape of the settlement along two main roads, linked to Ramsey Mere via two artificial watercourses (or lodes). The map records the Great Whyte but not its subsidiary, the Little Whyte: the Great Whyte, now a wide road, once incorporated a lode that discharged into the High Lode and thence the Nene further north. Dating back to at least the 13th century, it was culverted in the 19th century and survives beneath the present road. The first detailed map of Ramsey Abbey itself is the Silius Titus estate survey c 1704–9, which is a wonderfully eccentric depiction, showing

⁸ De Windt and DeWindt 2006, 11.

⁹ Page et al 1932, 191.

the surviving parish church within the former abbey precinct and a few other buildings, probable ponds and many small fields, some of which may have been orchards.¹⁰

GEOLOGY AND TOPOGRAPHY

Ramsey lies on March gravels,¹¹ on what was effectively an island surrounded by Bury Fen to the south and Stocking Fen to the north. Visitors approached it, as the chroniclers note, by a causeway on one side. The line of the streets has changed little since originally laid out.¹² The monks built the abbey and its precinct on a very slight rise, the abbey lying at between 5 m and 6 m OD and the town between 4 m and 5 m OD, although there is a drop in level towards the NW and W edges of the historic town. Most of the extensive fenland in the parish is near to sea level.¹³ Within our excavation areas, the ground level sloped down significantly towards the east. Modern ground levels here are between 4 m and 5 m OD with natural deposits generally encountered between 2.5 m and 3 m OD.

ARCHAEOLOGICAL BACKGROUND

Present understanding of the archaeology of the abbey is very poor. We do not know the accurate location of the monastic buildings, including the cloisters, abbey church and inner/outer court boundaries, such was the scale of the destruction after the Dissolution. Various theories persist, based upon interpretation of the surviving buildings (Fig 2; see below). The RCHME recorded the most obvious earthworks within the abbey environs and the relevant earthworks are illustrated and discussed below alongside recent archaeological findings (Fig 3).14

Ramsey Abbey is known from documents to have produced decorated and undecorated tiles and a tile kiln was discovered in the grounds of the Ailwyn School in 1966 — the following year Elizabeth Eames, John Cherry and the master and pupils of the school excavated it.¹⁵ The precise location of the kiln is not known but it evidently lay close to the small copse along Hollow Lane to the south-east of the school buildings (Fig 1).

Various finds have been retrieved from a field between 300 and 500 m to the north of the surviving abbey buildings.¹⁶ When surveyed in March 1978 the ploughed field showed soilmarks and remains of earthworks (Fig 3, C). This location appears from documentary references to have been where the abbey disposed of much of its refuse.¹⁷ Pottery recovered from this area is accessible

¹⁰ HRO 1737 RB 2/1.

¹¹ British Geological Survey 1995.

¹² Page et al 1932, 188–9.

¹³ Hall 1992, 41.

¹⁴ RCHME 1926, 210.

¹⁵ DeWindt and DeWindt 2006, 188; Eames 1980.

¹⁶ Hall 1992 site 17, 42; fig 25.
¹⁷ E DeWindt and A DeWindt pers comm, as noted in Hall, 1992, 42.



FIG 2

Ramsey Abbey: interpretative plan showing surviving buildings and archaeological interventions. 1: Church of St Thomas a Becket. 2: Gatehouse (late 15th century). 3: Infirmary chapel or chapter house (13th century). 4: Wall remnant. 5: Wall remnant. 6: Test pits (1996). 7: Excavation (1998). 8: Excavation (2000). 9: Geophysics survey. 10: Masonry structures (geophysics). 11: Masonry structure (geophysics). 12: Masonry structure (geophysics). Drawn by Crane Begg. © CAM ARC, Cambridgeshire County Council 2008.

through Ramsey Rural Museum and includes a range of recognisable high- and late-medieval fabrics and some additional sherds in a fabric like that of Ramsey's decorated tiles. The sherds exhibit characteristic wheel-stamped decoration that is also seen on ceramic objects and decorated tiles found in the area around the Ailwyn School (which lies in the southern part of the former abbey precinct), perhaps suggesting that pottery production took place here.

Until recently, the limited archaeological work conducted elsewhere in Ramsey has all occurred to the north-west of the abbey. Excavations at 52 High Street found Saxo-Norman occupation,¹⁸ while high-medieval activity located on several sites demonstrates the levelling and reclamation of wet, low-lying areas.¹⁹ Remains of structures lie above some of these levelling layers;²⁰ archaeological work demonstrates repeated flooding and late peat formation with resultant problems for settlement. Further ground levelling occurred in the post-medieval period.²¹

¹⁸ Archaeological Solutions forthcoming.

¹⁹ Atkins 2004a and 2004b; Cooper 2003 and 2005; Hickling 2006; O'Brien and Crank 2002; Membery and Hatton 1996; Pearson and McDonald 2000.

²⁰ Eg Atkins 2004b.

²¹ Atkins 2004a.



FIG 3

Interpretative map, showing possible elements of the Ramsey Abbey precinct enclosure and lodes mentioned in the text, in relation to the 1891 Ordnance Survey map (1st edition). A: Excavations 2004 and 2006. B: Booths Hill. C: Earthworks. D: Ditch or channel. E: Great Whyte. F: Little Whyte. G: Northern limit of abbey precinct. H: Three-celled structure and double ditch. Drawn by Crane Begg. © CAM ARC, Cambridgeshire County Council 2008.

THE MONASTIC BUILDINGS

Supposition is the basis of most previous interpretations of the layout of Ramsey Abbey and hypotheses about the position and arrangement of the monastic buildings. The exact location of the abbey church itself has yet to be pinpointed, although a multi-disciplinary project undertaken by CAM ARC in 1999 provided sufficient new data for one of the previously published models, that of Dickinson, to be discounted in favour of an interpretation akin to one suggested by the late Tony Baggs.²² This places the abbey church's N wall along the surviving dog-legged southern wall of the churchyard of St Thomas a Becket (where in-situ high-medieval fabric has now been identified; Fig 2, No 5). It implies that the extant 13th-century fabric in the basement of part of Ramsey Abbey School (No 3) is more likely to represent an infirmary chapel or chapter house located to the south-east of the cloistral range, rather than a lost Lady Chapel as indicated in some previous publications.²³

The only other above-ground and in-situ elements from the monastery are various wall fragments (Nos 4 and 5), the surviving half of the late-15th-century gatehouse (No 2) and the parish church itself. This was originally the abbev's hospital, infirmary or guesthouse c 1180–90, converted into the church for the new parish of Ramsey c 1222 (No 1).²⁴ If Baggs' model for the position of the abbey church is indeed correct, then the parish church cannot be the original infirmary that we would normally anticipate east of a cloistral range positioned to the south of the church. As already indicated, the 13th-century fabric in the school basement is a good candidate for the infirmary chapel, suggesting that the parish church's origins are as a guesthouse placed appropriately within the outer court to the north of the abbey church. Baggs' suggestion that the surviving gatehouse fragment is analogous to the 'Abbot's Gate' at Peterborough (Cambridgeshire) (linking the outer and inner courts and not forming the main gate to the monastery) then follows logically, at least for an initial phase of the layout. The main gate must originally have lain further to the north-west, leading into the area of the outer court that contained the guesthouse. One can argue that the change in function of the guesthouse to parish church in the early 13th century led to the withdrawal of the main gate to permit access by the townspeople to the church: the inner gate may have then become the new main gate. Whichever arrangement is correct, a two-phase model is implied.

The 1999 survey project provided further important evidence through geophysical surveying of the area to the south and east of the 13th-century 'chapel'. Although access was restricted to grassed lawns, high-resistance anomalies were mapped and ground-penetrating radar transects were taken across these providing confirmation of their depth and substance. These anomalies clearly indicated the wall lines of three further masonry structures positioned to the east of the chapel (No 10), aligned ordinally with it and with the surviving wall foundations located beneath the churchyard wall some 80 m to the north (No 5). In addition, an area of generally enhanced resistance to the south of the chapel may have signalled a further stone structure, while further geophysical surveying suggested former structures well to the north-west, south of the churchyard wall (Nos 11 and 12). Our revised plan of the post-Conquest monastic buildings incorporates all this evidence.

²² Dickinson 1967, 245-7; Baggs pers comm; Spoerry and Cooper 2000.

 ²³ Spoerry and Cooper 2000.
 ²⁴ Haigh 1988.

THE ABBEY PRECINCT

The RCHME identified the more obvious earthworks within the abbey environs, with a large oval enclosure representing the abbey precinct itself.²⁵ These earthworks are, however, more complex than they appear at first glance. The line of the enclosure ditches is clear to the north-east and south-east, where they cut across the high island ridge, but they are not visible in the eastern part of the circuit across a bay of low-lying fenland (Figs 3 and 4).



FIG 4

Terrain model showing the setting of Ramsey Abbey within the local topography. Drawn by Crane Begg. © CAM ARC, Cambridgeshire County Council 2008.

²⁵ RCHME 1926, 210.

To the extreme north is a cluster of very large rectangular 'pits' or earthworks (Fig 3, C), one of which the RCHME show as a pond. These lie at the north-western terminus of a large ditch that curves around to the east and south and that forms the north-eastern part of the monastic enclosure (G). Westwards of this point (running to the junction of New Road with Great Whyte) the enclosure ditch is replaced by the line of a ditch or channel (D) that runs below and parallel to the 5 m contour (at approximately 3 m OD), and has the effect of flattening off the enclosure's north-western side. This channel feeds either into or out of the large pond-like earthwork complex (C).

The position of the western precinct boundary line is represented by a surviving ditch that again runs just below the 5 m contour and is positioned around 80 m west of Hollow Lane, which itself leads towards the late-medieval gatehouse. The ditch links to earthworks south of Hollow Lane shown on the RCHME plan.

To the south-east and north-east there is some evidence (stronger at the south-east) for the existence of a double boundary, or of different versions of the precinct; the information being recoverable from early edition OS maps, recent aerial photographs and an excavated section through a previously unknown boundary ditch (A).²⁶ It is possible that these alignments represent the line of, and ditched flood defences for, a trackway around the outside of the precinct.

Booth's Hill, an Anarchy fortification, lies at the extreme south of the precinct (Fig 3, B), and could either have been set within it (dating the enclosure to before the Anarchy period) or deliberately enclosed by it (dating after the Anarchy). Scholars usually interpret Booth's Hill as a defensive work dating to 1143 when de Mandeville's forces occupied and fortified the abbey. It was no doubt located to command the seasonally dry land to the south of the island on which the monastery lies, and across which an ancient routeway from Ramsey to its former mother parish church at Bury (Cambridgeshire) is believed to have existed (Fig 4).²⁷ Unlike the crossing from the mainland to the west, this route would not involve a crossing of the Bury Brook. Parts of this route may be fossilised in the footpaths that still run to the east of the Bury Brook between Bury and Ramsey.

It is probable that the causeway to the mainland due west from the abbey was in place by the middle or end of the 12th century, as it was at this point that the settlement outside the abbey gate was granted a market;²⁸ it is possible that until this route's construction the main way onto the island was direct from Bury to the south. The causeway would not only have had to cross deep fen but also the course, or multiple courses, of the Bury Brook, and it may be that the canalisation of the Bury Brook was begun at this time — a causeway would necessitate the closing off of all but one course of the stream, and also the construction of a bridge. The early bridge would have been of wood, but was of stone by the 13th century.

²⁶ Mortimer 2006.

²⁷ D Cozens pers comm.

²⁸ Page et al 1932, 188.

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The relationship between the precinct boundary and the growth and shape of the town of Ramsey itself is undoubtedly complicated. While we cannot fully explore this subject here, it is important to note the following observations. Surviving property boundaries visible to the N of Little Whyte and to the S of High Street preserve the original precinct boundary line and give a position for the original western gateway, and perhaps also a logical position for further defensive works from the Anarchy period. Ramsey's plan was probably first formalised at, or soon after, the award of a market charter in 1200. This may have resulted in establishment of the market place between the current High Street and Little Whyte, but it is also possible that an informal arrangement was already in existence here. Whatever the case, by 1222 (when the guesthouse was converted into a church for the parish), the precinct boundary may have been redefined to provide access to the church. This change also offered the possibility of infilling the resultant space with further properties and allowed the market place to be extended eastwards to the current Church Green. The resultant peculiar curving shape of properties is visible north of Little Whyte. South of the new parish church, the southern churchyard boundary became aligned on the N wall of the abbey church and a new gateway into the precinct was established where the late-15th-century structure was later built.²⁹ This gateway may already have been in existence as the entrance to the inner court.

THE ARCHAEOLOGICAL EVIDENCE

The CAM ARC excavations forming the main subject of this paper took place between 1998 and 2002 in advance of the construction of new school buildings, following test pitting in 1996 (Fig 2, Nos 6, 7 and 8). The study area lay within the abbey's former precinct to the east of the main monastic complex: during the excavation, we sub-sampled features and deposits as appropriate. In 1999 we commissioned a magnetometer survey east of the 1998 excavation (Fig 2, No 9).³⁰ Further archaeological work took place some distance to the south-east in 2004 and 2006, prior to the erection of another school building complex: these investigations found probable abbey precinct enclosure ditches (Fig 3, A).³¹

Definition of the various phases of archaeological evidence recorded by the 1998 and 2002 excavations has proved problematic, since the medieval pottery (from Phases 2–4) generally has a broad date of c 1150—c 1350. The phasing presented below therefore largely relies on the stratigraphic sequence and its interpretation, with some resultant overlap in phase date ranges.

PHASE I: LATE SAXON TO SAXO-NORMAN (IOTH TO MID-12TH CENTURIES)

At the extreme south-east of the site were the remains of what may have been a group of timber buildings associated with the early abbey, perhaps

²⁹ Spoerry and Cooper 2000.

³⁰ Ibid.

³¹ Cooper 2004; Mortimer 2006; Howe 2006.

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enclosed by a ditch to the north (Fig 5). Furthest to the east was the largest structure, measuring approximately 10 m N/S (Building 1, Fig 6) and extending beyond the limit of excavation. The exposed part of the building comprised a post-built wall to the north, with the W wall being a combination of posts and



FIG 5

Phase plans: Phases 1 and 2. Drawn by Crane Begg. © CAM ARC, Cambridgeshire County Council 2008.



FIG 6

Detail of Buildings 1-3 (Phase 1). Drawn by Crane Begg. © CAM ARC, Cambridgeshire County Council 2008.

beamslots with integral posts. Two right-angled offsets from the latter wall could suggest internal partitions, perhaps forming a corridor 0.60 m wide. Further west, 'outside' the building, were other postholes tentatively interpreted as a porch, although they lay very close to an adjacent structure. Postholes and slots found within the footprint of the building could represent internal supports or further subdivisions.

Immediately to the north-west was a small sub-rectangular structure (Building 2), again constructed from beamslots and postholes, measuring c 7 m (E/W) by c 5 m (N/S). Enclosed by the building was a posthole cut by a sub-rectangular pit (1166), filled with olive brown clay, then dark charcoal-rich silty clay, with a slighty peaty uppermost fill. The few finds comprise a tiny quantity of slag and animal bone. In form, the structure appears similar to latrine buildings found, for example, at Hinxton (Cambridgeshire) and North Elmham (Norfolk).³² Just to the south lay another group of slots and postholes (some of

³² Spoerry in prep a; Wade-Martins 1980.

them double postholes), perhaps suggesting the presence of a third building (?Building 3).

All three buildings lay to the south of an E/W boundary ditch, traced further to the east in the geophysical survey (Fig 2, No 9). This boundary persisted in various forms until the 18th century when the 1707 estate map records its line. Its earliest version had a v-shaped profile and was 0.75 m wide by 0.62 m deep; it contained no finds. The uppermost fill of clean silty clay may suggest that an associated bank was subsequently used to infill the ditch.

Excluding intrusive material, the small pottery assemblage attributed to this phase (39 sherds, 0.283 kg) consists of St Neots-type ware (c 850–c 1150), Grimston Thetford ware (c 1000–c 1200) and East Anglian Early Medieval ware (henceforth Early Medieval ware;³³ c 1050–c 1200), suggesting that the features fell from use during the Saxo-Norman period. The only other finds were a few fragments of animal bone (NISP = 10), most of which were from cattle.

PHASE 2: EARLY TO MID-I2TH CENTURY

Replanning of the site appears to have occurred after the Conquest, when the position of buildings shifted to the north (Fig 5). Cutting across the earlier features was the NE corner of an enclosure, apparently demarcating land to the west. The defining ditch was 2.2 m wide and 0.55 m deep and flat-bottomed. Its basal fill of organic, silty material was overlain by deliberate infilling with clean redeposited natural. The uppermost fill appeared to have accumulated within the hollow formed by the infilled ditch. Only this upper deposit yielded finds comprising a small quantity of mid-12th- to 14th-century pottery and metalworking waste including a bloom fragment and a smithy hearth bottom. Within the enclosure, a large undated pit may have served as a livestock watering hole (measuring 7.4 m by more than 6.4 m; it was not bottomed at a depth of 0.54m). This had been backfilled with several deposits, tipped in from the east, some of which appeared trampled or mixed. Both this feature and adjacent layers of stones used to consolidate the ground contained hearth-lining material and metalworking slag (nearly 10 kg in total), including numerous smithing hearth bottoms (see below).

Some 7 m to the north was a shallow ditch aligned E/W (c 0.65 m wide and 0.25 m deep), running parallel to the enclosure marker and possibly indicating the presence of a trackway between the two. It turned abruptly north at its E end, perhaps to enclose a building. Its main fill of olive grey clay silt contained charcoal and a relatively large amount of pottery (92 sherds; 0.727 kg) including late-Saxon and post-Conquest fabrics, some of which may be residual: the group is dominated by Early Medieval ware/Medieval Ely-type ware (68 sherds; c 1050–c 1350) and Rockingham Forest Shelly wares (henceforth Shelly wares; 15 sherds, c 1150–c 1350). Although a date of 11th to 12th century is possible, infilling after c 1150 is perhaps most likely.

³³ Note: the term 'Early Medieval ware' has been used for several decades in this region and derives from a different period-naming convention to that used in this journal.

Further north was a substantial sub-rectangular building (Building 4, Fig 7) with an observed width of 7.5 m. Its southern wall (1054) consisted of a beamslot, butt-ended to the east, with two internal oval or linear post/timber settings. The beamslot forming the eastern wall of the building (1091) had a large post set at its southern end, this and the gap between the two walls of the building perhaps indicating the position of an entrance. Within the building, at approximate right angles to the S wall, was an irregular beamslot (1115) with integral post/slot settings. Just to the north-west was a large post-pit or the end of another post-in-slot trench (1072). There was little to indicate the building's function. A residual single-ended pin beater of late-Saxon date came from the



FIG 7 Detail of Building 4 and associated features (Phase 2). Drawn by Crane Begg. © CAM ARC, Cambridgeshire County Council 2008.

fill of the eastern wall beamslot. Weavers used such bone tools to push down the weft threads on a vertical two-beam loom, which they probably began to use in England in the early 10th century.³⁴ To the south of the building were two further slots or drainage ditches (1242 and 1077) that may have been associated with it.

Among the pottery attributed to this phase (207 sherds, 1.679 kg) the contemporary fabrics are dominated by Early Medieval ware dating to c 1050-c 1200 (37% by weight) followed by Shelly wares of the mid-12th to mid-13th centuries (30% by weight). Medieval Ely-type wares are strongly represented (21% by weight) and are of comparable date. Jars for both cooking and storage predominate in Phases 2–4, which is consistent with many rural assemblages in this period. Phase 2 demonstrates this dominance most clearly with over 70% of the identifiable forms being jars.

Most of the metalworking waste recovered from the site came from deposits assigned to this phase (83% of the site total of 11.666 kg), the majority deriving from the southern part of the site in the vicinity of the putative watering hole, perhaps suggesting a nearby smithy. Smithing hearth bottoms, such as the group of 12 found here, formed during either primary bloom smithing or iron working — they result from charcoal, fuel ash, hearth lining, slag, flux and iron agglomerating together at the base of the smithing hearth in hot oxidising conditions. A small fragment of possible bloom was identified among the Phase 2 assemblage.³⁵ Such items are rare on archaeological sites and, while in itself the fragment found is not evidence for in-situ smelting, it does raise the possibility of small-scale bloom smithing.

A very small assemblage of animal bone was recovered (NISP = 19). Most of the sheep bones recovered from the site were of the small size typical during the high-medieval period. A scapula fragment from Phase 2 provides an exception: it came from a particularly large animal, perhaps a ram. The horn cores of a second ram also came from this phase.

PHASE 3: MID-12TH TO 13TH CENTURIES

At the southern end of the site two parallel ditches probably represent a trackway or path; the southernmost ditch turned south at its E end to form an enclosure (Figs 8 and 9A). The ditches were up to 1.46 m wide and 0.44 m deep, with broad flat profiles. Their associated banks had evidently been used to infill the ditches, yielding pottery of the mid-12th to mid-14th centuries. Other finds include animal bone, slag and a lead pencil with a narrowed upper shank and short point.³⁶

Just to the north, the earlier boundary marker was recut in a more substantial form, perhaps indicating a defensive function: again, we traced this

³⁶ Cf Egan 1998, 270.

³⁴ Like the earlier warp-weighted loom, the two-beam loom is associated with home production, and was gradually replaced from the 11th century by the faster horizontal loom (Crummy 2002, 37).

³⁵ Blooms are the product of the bloomery iron-smelting furnace that converted iron from ore under reducing conditions. The bloomery furnace did not create pure iron but a heterogenous mass of slag and iron of varying carbon content that required skilful smithing to expel the entrapped slag.



fig 8

Phase plans: Phases 3 and 4. Drawn by Crane Begg. © CAM ARC, Cambridgeshire County Council 2008.

35 m further east by geophysics (Fig 2, No 9). The creation of this feature may indicate the insertion of an early form of the lode at this time, both it and the associated structures requiring protection, perhaps at the time of the Anarchy in the mid-12th century (the date of the precinct boundary itself remaining uncertain). The absence of features immediately to the north may suggest the



FIG 9

A. Reconstruction of Phase 3 (mid-12th to 13th centuries). B. Reconstruction of Phase 4 (13th century to c 1539). Drawn by Jon Cane. © CAM ARC, Cambridgeshire County Council 2008.

presence of a bank. The large u-shaped ditch was c 4.6 m wide and survived to 1.87 m deep. Its basal fill was 0.80 m thick and consisted of black/grey clay containing frequent charcoal that proved to be relatively rich in plant remains: the character of this lower fill reflects the wet conditions. Plant remains include various crop species, the most common of which was bread wheat (Triticum *aestivum*) in the form of grains and crop-processing debris. Other crops include a free-threshing tetraploid wheat such as macaroni wheat (*Triticum durum*), rye (Secale cereale), hulled barley (Hodeum vulgare) and peas (Pisum sativum). Weed seeds correspond to those usually associated with crops, the presence of stinking mayweed (Anthemis cotula) and parsley-piert (Aphanes arvensis) suggesting that both heavy and light soils were being cultivated. Species such as buttercup (Ranunculus subgenus Ranunculus), knotgrass (Polygonum sp.), goosefoot (Chenopodium sp.), vetches (Vicia/Lathyrus sp.), medick and clover (Medicago sp. and Trifolium sp.), small nettle (Urtica urens), cleavers (Galium aparine) and nipplewort (Lapsana communis) attest arable fields. Scrubby habitat is represented by hawthorn (Crataegus sp.), possible hazel nutshell (Corylus avellana), elderberry (Sambucus nigra) and apple (Malus sylvestris), while grassland may be suggested by the presence of self-heal (Prunella vulgaris).

The other major component is of plants found in damp/waterlogged environments; lesser spearwort (*Ranunculus flammula*), duckweed (*Lemna* sp.), water crowfoot (*Ranunculus* subg. *Batrachium*), woodrush (*Luzula* sp.), spike-rush (*Eleocharis* sp.), bulrush (*Schoenoplectus lacustris*), fen or saw sedge (*Cladium mariscus*) and the sedges (*Carex* sp.) including the star sedge (*Carex echinata*). These wetland indicators suggest that many of the fields had high water-tables that enabled the encroachment of these species, although other uses such as flooring and roofing may explain their presence.

Other finds from the lower ditch fill include small quantities of pottery suggesting a date of mid-12th to mid-14th century, tile and animal bone. Upper backfills were completely different to the basal fill, consisting of olive/olive brown silty clay. These contained small quantities of pottery of similar date to those from the underlying fill, an iron joiner's dog and part of a possible chisel blade.

Running perpendicular to the ditch was another possible trackway represented by flanking ditches (1377 and 1362), spaced c 4 m apart and extending for a distance of more than 20 m. These were c 0.70 m wide and 0.33 m deep, the westernmost being recut (1375). Their fills contained residual late-Saxon wares, along with small quantities of contemporary fabrics comprising Shelly wares (1150–1350), Grimston (1200–1350) and Lyveden-Stanion wares (1200– 1350).

Overlying the northern part of this possible track were the remnants of the SE corner of a large structure (recorded over an area of 8.5 m by 4.5 m, Building 5, Fig 10), on a slightly different alignment to the earlier building that it overlay. This may have formed a store or other ancillary building associated with the abbey and again the pottery recovered dates to the mid-12th to mid-14th centuries. The beamslot forming the eastern and southern walls (1078) was c 0.50 m wide by 0.13 m deep. Just inside the line of the wall were two postholes that may relate to it. Another, more substantial post-pit lay outside the building to the north-east.

To the east lay a series of features, some of which may represent further elements of Building 5. This complex of possible beamslots and postholes had been very disturbed. Running parallel to the S wall of the building was another possible beamslot (1363), adjoined at its eastern end by two further slots. In turn, these ran northwards to link to another complex of features, including an E/Waligned slot, which had been recut at least once (1276, recut 1322). To the north lay another fragment of slot (1240) and associated post. Taken alongside the evidence for Building 5, these features could suggest the presence of a corridor on the outer side of the building or perhaps indicate a feature associated with an early phase of the lode (which we otherwise first see in Phase 4). One might envisage various timber structures in this context, such as platforms and jetties.

A few pits lay scattered to the south-east of the building, containing refuse and building material waste. One example (pit 1117) filled with dark grey silty clay included a spread of limestone fragments, frequent charcoal and near complete peg tiles. Medieval Ely-type ware (c 1150–c 1350) dominates the relatively large quantity of pottery (62 sherds, 0.630 kg). Another nearby pit contained hearth/oven waste in the form of scorched clay.



FIG IO Detail of Building 5 and related features (Phase 3). Drawn by Crane Begg. © CAM ARC, Cambridgeshire County Council 2008.

To the north-east of Building 5 was a cluster of postholes and slots, perhaps forming a small rectangular structure (?Building 6) that was set end-on to Building 5 (Figs 8, 9A and 11). Its small size (at only 2.5 m N/S by c $_3$ m E/W) may suggest a specialised function.

The pottery from deposits assigned to Phase 3 (325 sherds, 3.456 kg) shows an increase in the number of jugs, which mainly results from the predominance of Medieval Ely-type wares and an increase in the amount of Grimston ware (c 1250-c 1500). A slight decline in the number of jars (cooking and storage

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vessels) is also observable. The increased use of large jugs for the serving of liquids is a feature of pottery assemblages in England from the later 12th century onwards and the Ramsey assemblage reflects this trend. The change may be associated with the growth of the wine trade, a factor that has particular relevance here, at a site in close proximity to the loading and storage facilities of a major monastic institution.

The assemblage of animal and bird bone from this phase (NISP = 206) is dominated by the main domesticates, supplemented by a small number of horse, red deer, dog, goose and domestic fowl bones. The remains of pig were particularly common, accounting for nearly 10% of identified bone. Of the canine teeth and canine alveoli (teeth sockets) available, all but one are from male animals, which suggests the culling of surplus boars not required for breeding purposes. Most pigs were probably slaughtered before the age of two years.

PHASE 4: 13TH CENTURY TO C 1539

Activity during this phase was focused around a large lode that ran for 45 m from the northern baulk of the 2002 excavations before butt-ending in the 1998 excavation area (Figs 8 and 9B). It was up to 8.7 m wide and a maximum of 1.45 m deep, with moderately sloping sides (c $45-50^{\circ}$) and a flat base.

Basal fills indicate naturally waterlain material, comprising dark clay silts that were often soft or smooth/plastic in consistency. There were occasional suggestions of slumping or weathering episodes. Upper fills included deliberate dumps containing concentrations of limestone, bricks and rubble implying ground levelling. The pottery recovered from the lode is generally fairly uninformative in terms of defining the dates of infilling (105 sherds, 1.262 kg): this is not surprising since the feature almost certainly underwent scouring episodes and most fills relate to its disuse rather than its use. The basal fills were undated with secondary fills containing fabrics spanning c 1150–c 1350, dominated by Medieval Ely-type wares. Some of the uppermost fills include a few sherds of post-medieval fabrics. The fills also yielded a small collection of iron objects comprising a horseshoe fragment, a scale-tang knife of late-medieval date at the earliest, three wallhooks and three nails. We also recovered a probable bone skate made from a horse metacarpus.³⁷

One deposit near the southern end of the lode contained a group of horse bones from two large animals (over 13 and 14 hands respectively), some of which displayed butchery marks. Minor species represented include fallow deer (*Dama dama*), fox (*Vulpes vulpes*) and weasel (*Mustela nivalis*).

Environmental remains point to shallow, low velocity water conditions with little or no overgrowth on the lode banks. The basal and middle fills yielded seeds/fruits of water plantain (*Alisima plantago-aquatica*), spike-rush (*Eleocharis* sp.),

³⁷ During the late Saxon and medieval periods, ice-skating using such bone skates was in many cases a leisure activity, but they could also have been of practical use when travel on frozen waterways during harsh winters was probably easier than over snow-covered land. They may also have been used as runners on sledges (Ambrosiani 1981, 138–9). Of the skates found at Coppergate, York, just over half were made from horse rather than cattle bones, though a greater preference for horse bones was found at Thetford and London (MacGregor et al 1999; Rogerson and Dallas 1984, 179; Pritchard 1991, 208).

duckweed (*Lemna* sp.) and water crowfoot (*Ranunculus* subg. *Batrachium*). Marsh and freshwater mollusc shells were found in most of the samples (ie *Anisus leucostoma, Lymnaea* sp., *L. peregra* and *Planorbis planorbis*), both these and the wetland/ aquatic plant remains indicating slightly stagnant freshwater conditions. The few charred plant remains from upper fills may have been accidentally incorporated, perhaps as wind-blown detritus.

The possible storehouse on the western side of the lode (Building 5) may have continued in use into this period, and the defensive ditch to the south appears to have remained substantially open.

On the NE side of the lode was a cluster of features that may relate to its use (Fig 11). Their relationship to a number of trample layers/colluvium in this



FIG II

Detail of lode, 'crane' and associated features (Phase 4). Drawn by Crane Begg. © CAM ARC, Cambridgeshire County Council 2008.

area remains uncertain; some cut through them and some sealed them. Furthest to the north was a line of pits, the westernmost of which was a large rectangular feature (1553) measuring 1.7 m long by 1.2 m wide and 0.75 m deep, with near vertical sides and a flat base. Three postholes (up to 0.25 m in diameter and 0.15 m deep) were set within it, apparently forming a tripod structure interpreted as a possible crane setting: the posts to the south were notably smaller than that to the north. The pit was infilled with greyish green silty clay, containing charcoal and other organic matter including decomposed wood. Its upper fill contained domestic refuse and building rubble. Most of the pottery recovered dates to the 13th to 14th centuries, while a brick fragment may imply that final backfilling took place in the 16th century. A sawn red deer antler beam and terminal tine fragment indicates discarded primary waste, although appears to be residual. There were also abundant fish bones, tile and animal bone.

Adjacent to the putative crane were several intercutting pits, set within a sub-rectangular area. Most had been infilled with domestic waste including animal bone, but their primary function remains unclear. The pottery generally predates 1400, although it includes a few later sherds. The most productive pit (1506) contained a globular stone spindlewhorl, a copper-alloy lace end (of Colchester Type 1, c 1375–1550/75), an iron strap fitting, three nails, a lead fishing weight and a hone made from Norwegian ragstone. The mudstone spindlewhorl is similar to post-Conquest examples from King's Lynn and Northampton.³⁸

Two ditches just to the south of the pit group may indicate drainage and fed into the lode or into 'tanks', evidently intended to maintain water levels (another similar ditch fed into the lode some distance to the south). Molluscs from the ditch fills included both open country and woodland/shade loving species. Finds include a late-medieval prick spur, padlock and peg tiles, as well as 13th- to 14th-century pottery. At their western end lay two elongated 'tanks' (1569 and 1547) that measured up to 7.5 m long by 2 m wide and were 0.5 m deep with steep sides. An adjacent slot (1546) is of unknown function. The 'tanks' contained dark grey silty clay with more mixed upper fills - mollusc shells recovered from their fills were predominantly of marsh/freshwater slum species and freshwater obligate taxa, indicative of shallow-water conditions. We found the humerus of a large horse of $15\frac{1}{2}$ hands in the southernmost tank, with 21 bones from the skeleton of a horse of $13\frac{1}{2}$ hands coming from the other, found in articulation. This individual has extensive (stage 4) exostoses on the distal first phalanx, a pathology typically found affecting the hind feet of draught animals.³⁹ Most of the pottery recovered from the 'tanks' dates to the 13th to 14th centuries, although the presence of two sherds of post-medieval pottery and 16th-century brick may indicate a later infill date.

³⁸ Geddes and Dunning 1977, 315–17; Oakley and Hall 1979, 286–9. At a weight of 19.92 g the Ramsey example falls between the two weight ranges defined by both the Northampton and King's Lynn whorls. The size and weight of a whorl might be expected to have been dictated by the grade of yarn aimed for in spinning, but Walton Rogers has noted that more complex factors were involved, such as the method of manufacture for the whorls and the spinning technique used (Walton Rogers 1997, 1743–5). Though in the high medieval period weaving became a male-dominated trade, the wide spread of spindlewhorls in domestic contexts in towns such as Winchester shows that spinning remained a female domestic craft, carried out between other household activities (Woodland 1990).

³⁹ Bartosiewicz et al 1997.

Medieval Ely-type wares of the mid-12th to mid-14th centuries dominate the pottery from Phase 4 (983 sherds, 11.676 kg). The extensive range of ceramics represented reflects the wide date range of the phase (13th century to c 1539). The marked reduction in the presence of Early Medieval ware, which it is thought finished around AD 1200 as other fabrics developed, supports its start date. Medieval Ely-type wares now comprise 50% of the assemblage; Shelly wares are still an important element but now other high- and late-medieval types, both glazed and unglazed, begin to appear in more significant numbers than in earlier phases, making up more than 10% of the assemblage.

This phase assemblage is almost identical to that of the preceding phase in terms of vessel types present, although the fabric types present change. For example, while the number of bowls remains similar, in Phase 3 these are exclusively Medieval Ely-type and Shelly wares, whereas by Phase 4 some 52% of the bowl sherds are in post-medieval fabrics.

The metalwork recovered from the site amounts to 60 items of which the majority were from Phase 4 (22) or unstratified (32). Their dates span the high-medieval to post-medieval periods and most are common types. The dress accessories are generally quite standard items, but they include a remarkable buckle-plate made from a piece of copper-alloy sheet on which a bronze smith had earlier practised cutting Lombardic letters, Roman numerals and crosses (SF 12; Fig 12). The surface is covered with pairs of incised guide lines, between which have been cut different sizes of As, an A and B together, an A and partly finished B together, a V (five), and a IIII (four). There is a faint incuse cross on one side and, close to the end of the other side, what may be a relief cross. The recycling of this piece of metal suggests that both items, trial-piece and buckle-plate, were apprentice pieces.

A notable lead token has a letter R on one face and a design of a bird pecking at a fish on the other (SF 50; Fig 12). No heraldic parallel for this latter device has yet been found, and it probably, as the letter R suggests, refers to Ramsey Abbey itself. The token is more substantial than pilgrim or secular badges, which are usually only decorated on one side. Monks or abbey servants travelling outside the precinct on business may have used it as a symbol of authority.

Other finds of note include a lead weight possibly used for weighing medicines or their ingredients, or culinary spices. The evidence for literacy is sparse, comprising a lead pencil and a copper-alloy strap-end with trefoil decoration that may come from a book-fastening. Ironwork associated with horses consists of a prick spur of late-medieval form, a harness buckle and fragments of two horseshoes. Archaeologists have found buckles with stout knobbed terminals on the bar similar to the Ramsey example in contexts dating from the late 12th to early 14th century in Winchester (Hampshire) and York (North Yorkshire).⁴⁰

Three fishing-weights comprise neatly rolled sheet lead and are of a consistent size. Fish formed an important part of the monastic diet (see below), and most religious houses installed fish ponds to cater for this demand.

⁴⁰ Goodall 1990, 526, 530, fig 138, 1303-4; Ottaway and Rogers 2002, fig 1469, 12692-3.





FIG I2

 SF 50: Lead token. SF 12: Copper-alloy folded buckle plate, apprentice piece. Scale 1:1. Drawn by Carlos Silva.
 © CAM ARC, Cambridgeshire County Council 2008.

Cattle remains are relatively infrequent at the site, occurring as scattered isolated elements in most features. An exception occurs among the Phase 4 assemblage (NISP = 234) where a humerus fragment was accompanied by three proximal tibia fragments (pit 1506 in the pit cluster near to the 'crane'). We found the proximal radius and ulna from a single individual representing a discarded joint in an adjacent pit, and recovered the astragalus of a juvenile from the ditch immediately to the south of the pit group. No cattle bones were complete enough to calculate withers heights. The limited information available from teeth and epiphyseal fusion data elsewhere suggests that most contemporary cattle were adults or old adults at death. This probably relates to

their usefulness as traction animals. A first phalanx from the same ditch fill has high ring bone indicative of a beast used for traction.⁴¹

Among the horse bone, a third metatarsal has the second metatarsal fused to it with pitting of the proximal articular surface. This is unlikely to be a case of spavin as the joint surface is affected. It may be a mild case of infective arthritis, probably caused by *Brucella abortus* that also causes infectious abortion in cattle and severe undulant fever infection in man.⁴²

We also found the remains of a relatively large dog, comprising a distal humerus, most of a femur and a proximal tibia. Although none of the bones is complete enough to give an accurate withers height, this was a large hound similar in size and build to a modern Irish Wolfhound. There is a transverse cut mark on the lateral midshaft of the humerus; a longitudinal cut mark on the proximal anterior shaft of the femur, which also has an old proximal break indicative of an impact fracture; and two longitudinal cut marks on the lateral shaft of the tibia, the medial proximal part of which has been crushed inwards while the bone was still fresh.

Geese bones from this phase are slightly smaller than a reference whitefronted goose (*Anser albifrons*) in the Leicester City Museums collections and may have originated from wild birds. A wild duck species is represented by a tibiotarsus from a widgeon (*Anas penelope*). A femur found in the same context (pit 1506) is comparable with partridge (*Perdix perdix*), while partial skeletons of thrush-sized passerines (cf *Turdus* sp.) were found in samples taken from this same pit and the adjacent 'crane' setting. All these species are potential food items.

Most of the fish remains recovered from the site came from Phase 4 deposits; they consist of herring and eel vertebrae, other species represented being pike, Cyprinidae (roach and chub/dace) and haddock. A few of these are crushed, indicating human consumption and probably indicating cess deposits.⁴³ Herring and haddock are obligate marine species and therefore must represent goods brought in, probably in a preserved state. All the other fish could have come from the local streams. The pike and cyprinid remains derive from small individuals and could have been caught incidentally with the eels. Cyprinids and pike are frequent finds at inland excavations, particularly those in the Cambridge area.

The excavations produced important evidence for the constructional character of the abbey buildings, which lay to the west of the excavated areas discussed here. Eight relief-decorated floor tile fragments were recovered during the 1998 excavation and a further fragment was found in adjacent flower beds in 2002. All of the decorated tiles found in 1998 are in one fabric that is certainly local in origin, while the 2002 addition is in another fabric possibly not originating from Ramsey.⁴⁴ In summer 2006 several boxes of archaeological

⁴¹ Baker and Brothwell 1980, 120–2.

⁴² Ibid. See Baxter 1996 for a more severe case of infective arthritis from Market Harborough (Leicestershire).

⁴³ Jones 1986.

⁴⁴ Vince 2008.

finds recovered on the school farm and during the 1960s brick kiln excavations were rediscovered and loaned to CAM ARC for assessment. This material includes a group of more than 50 further fragments of decorated floor tiles, including Star of David motifs and one whole tile showing a bull and prone figures, presumably illustrating the fisherman's vision of St Benedict from the abbey foundation myth, alongside other decorative ceramic objects in similar fabrics. These nationally important tiles provide the first examples of decorated floor tiles probably made at Ramsey Abbey. The comparatively high relief (up to 5 mm) and generally intricate complexity of the designs when compared to the more usual inlaid tiles found in contemporary monastic contexts makes the group unusual.

Other indicators of the character of adjacent buildings include a range of stonework (noted below). Some of the lead-working waste may derive from the construction of and alterations to the abbey buildings, such as the offcut strips found during the evaluation that probably came from the installation of leaded windows.

PHASE 5: POST-DISSOLUTION

After the Dissolution, earlier features fell from use and field systems bounded by stone walls and ditches were established; these maintained previous alignments. Two drains were dug, one of which lay above the former lode.

The new walls reused Barnack stone (Cambridgeshire) from the abbey itself and a relatively large quantity of architectural stonework was recovered: this includes fragments such as string or hood mouldings, a plinth, possible window mullions and transoms, spanning the 12th to 15th centuries: these will be published in detail with the decorated tiles noted above.⁴⁵ Several unstratified lead spills, drips, and offcuts probably represent lead working, on a small scale. While some of this may represent post-medieval lead-working, perhaps during building works such as roofing and guttering, some fragments may come from the recycling of building materials after the Dissolution, when all the lead from monastic establishments was considered to be the property of the king and there is evidence for its removal and reuse by the crown.⁴⁶

This phase sees the introduction of ceramic drinking vessels, represented by fragments of Ely Babylon ware (16th to 17th centuries), 17th-century postmedieval Black ware vessels most likely to be tygs or mugs, and a Bichrome vessel (16th to 17th centuries). Bowls are now the major vessel type at 71% of the total, and 90% of these are post-medieval redwares. The presence of these often large bowls or pancheons may indicate processes associated with dairying.

Among the small metalwork assemblage from this phase, part of a snaffle bit is probably of late-medieval or early post-medieval date but might be later; the type is useful on young horses as the long cheekpieces reinforce the pressure from the reins at a turn.

⁴⁵ Spoerry 2008; Spoerry in prep b.

⁴⁶ Dunning 1952, 200; Rahtz and Hirst 1976, 205; Hare 1985, 42; Coppack 1986, 103–11; 1990, 132–4; Brooks et al 2004, 137–8.

RAMSEY ABBEY

DISCUSSION

THE EARLY ABBEY

The earliest remains found (Phase I) may represent the first evidence for the pre-Conquest phases of Ramsey Abbey. The only late-Saxon deposits previously identified, which perhaps indicate the presence of further buildings, lay within very small test pits and evaluation trenches to the north of the Abbey School (Fig 2, No 6).⁴⁷

Supplementing the excavated evidence, an oblique aerial photograph taken in 1976 of the playing fields to the south of the school revealed parchmarks north of Booth's Hill (Fig 3, H). These suggested the presence of a small, three-celled stone structure,⁴⁸ to the north of which was the possible line of a curving double ditch. Both features were investigated during the 1999 geophysics programme using resistivity and magnetometry; the 'building' provided high resistance walltype anomalies and the double ditch line was confirmed as a characteristic 'ditch'-type magnetic anomaly of low enhancement. It was initially suggested that these features might represent a late-Saxon precinct boundary enclosing an associated early structure,⁴⁹ although this interpretation now seems less likely given the evident presence of late-Saxon buildings immediately to the east of the known post-Conquest monastic complex.

The group of timber buildings found during the 1998 excavation perhaps formed part of an eastern and northern range arranged around a courtyard. These are almost certainly elements of the late-Saxon monastery founded in the later 10th century and, if so, it is important to consider what the initial phase would have looked like. Unfortunately, surviving plan and structural evidence for English monasteries of this date is scant. The fact that so many of these institutions developed into well-known later medieval abbeys and priories means that the rather more ephemeral and smaller-scale structures of their Anglo-Saxon incarnations have either been obliterated, or have become hard to recover among the wealth of later standing buildings and excavated information. It is generally expected that institutions like Ramsey Abbey — newly created as part of the later 10th-century Benedictine reform movement — would have represented the ideals of that movement in their plan, and they would not have looked like the monasteries of the previous middle-Anglo-Saxon era as exemplified by Jarrow and Monkwearmouth (Tyne and Wear), and Whithorn (Dumfries and Galloway).⁵⁰ Instead, Ramsey would have conformed in general terms to the idealised St Gall plan consisting of a single monastic church, with a cloister to the south and buildings arranged around it in familiar pattern. This model is exactly that used for the majority of stone-built monasteries in subsequent post-Conquest centuries. In the late-Saxon phases at Ramsey, however, these structures would have been predominantly timber. No full plans of 10th-century English monasteries exist; the 10th-century phase of the church at Deerhurst

⁴⁷ Macaulay 1996.

⁴⁸ Thanks are extended to David Cozens for providing the authors with this photograph

⁴⁹ Spoerry and Cooper 2000.

⁵⁰ Üsefully summarised in Aston 1993.

(Gloucestershire) is understood,⁵¹ while the southern part of an 11th-century cloister has been excavated at Eynsham (Oxfordshire), replacing an earlier phase of timber buildings, perhaps relating to the pre-existing Anglo-Saxon minster.⁵² This earlier phase at Eynsham in size, arrangement and construction, is not unlike the remains present at Ramsey in Phase 1. A problem arises when comparing the Ramsey and Eynsham evidence, however, in that the structures clearly most comparable at the latter site are attributed to the final pre-monastic phase and not part of the reformed Benedictine monastery.

It is difficult to be more specific about the early buildings at Ramsey; certainly the size of Building 1 is impressive, and the other structures may be secondary to it. If Building 2 is indeed a latrine, then it implies residential accommodation, perhaps indicating proximity to either the monk's dormitory or the infirmary, or a private lodging of a senior official. All of these alternatives might suggest a location to the south and east of the main cloistral ranges.

Building I is also significant in that it has for the most part earthfast post foundations, which are more often early or middle Anglo-Saxon in date when found in larger structures. As far as can be determined from the exposed portion, it conforms in plan with the early- to middle-Anglo-Saxon 'hall', particularly when the suggested square porch at its western end is taken into account.⁵³ Given its apparent date, the seemingly archaic attributes of this building are undeniable and it could conceivably be a 'special' structure conforming to a strongly held and traditional notion of what an important 'hall' should be like. The ditch found to the north of the buildings can be interpreted either as providing evidence for their enclosure or indicating that they lay outside another complex.

In conclusion, it is clear that the remains that constitute Phase I are probably part of the late-Saxon conventual buildings, including at least one major domestic-type hall, and that they may have lain to the south and east of the main cloister of the 10th-century foundation.

REPLANNING THE ABBEY

The Phase 2 remains indicate a change in use for this part of the monastic landscape, domestic buildings being replaced by a possible stock enclosure and a watering hole. The latter subsequently had quantities of iron-working waste dumped into it, while a new building lay further north beyond a newly defined E/W trackway with which it aligns. It is likely that these changes towards stock management and industrial processing are associated with the development of the monastery in the post-Conquest period, the nature of the activities being more appropriate for the outer court or the fringes of the inner court, and this seems to signal that the abbey moved the main monastic structures further away at this time.

⁵¹ Coppack 1990, 37.

⁵² Hardy et al 2002.

⁵³ James et al 1984.

Phase 3 sees a further replanning of the monastic landscape. The new alignments were placed slightly to the west of north and these persisted into subsequent phases and still do in the position of some boundaries in existence today. The main elements in this arrangement are the possible defensive ditch and putative bank on its northern side, running across the centre of the site, and the trackway to the south. We know the ditch continued some distance to the east, but whether it stopped at the point recorded by geophysical survey or continued eastwards is not clear. Functional explanations tend to preclude the former suggestion, particularly as it led into an area of low-lying land that may have been partially impassable. As a defensive work, the ditch and bank perhaps protected the lode and/or abbey buildings to the north from attack from the south, which was the direction from which assailants from the mainland would have arrived prior to the canalisation of the Bury Brook and the creation of a bridge on the High Street. De Mandeville fortified Ramsey during 1143,⁵⁴ and it is therefore reasonable to suggest this as a likely date for the creation of the ditch and bank; pottery dating is not sufficiently accurate to confirm this. Building 5 and the lode share their alignment with the ditch, the lode certainly being present from Phase 4, but possibly originating in Phase 3. All of these features are ordinal with the known standing later medieval remains and geophysical anomalies previously detailed, that lie to the south and east, perhaps indicating a further replanning of the alignment of the major monastic buildings during the well-documented major building programmes of that century.⁵⁵

THE LODE AND 'WHARF'

Recognition of a lode and facilities for the loading/unloading and storage of goods is a significant addition to current understanding of the internal arrangements of the later medieval precinct of Ramsey Abbey. The putative lode, crane and possible storehouse (Phase 4) provide rare evidence for such features in Britain. The lode probably led towards the northernmost point of the postulated monastic enclosure (Fig 3, G) and from thence to Ramsey Mere to the north-east via the Great Whyte. Despite being a fen island, Ramsey remained fen-like, with meres, bogs, and other expanses of marshland that required constant drainage to prevent the inundation of the town. Many lodes and waterways are recorded within the town, most long since infilled or culverted: 'Even on the drier, more solid mainland beyond the Great Whyte, the court rolls make it clear that the landscape was riddled with ditches, gutters, waterways and causeways'.⁵⁶ Cnute's Dyke probably served Ramsey from the 10th century. This 'lode' provided a shortcut to the Nene system and Peterborough, upstream of which at Barnack the abbey had acquired stone quarries in the late 11th century.⁵⁷ Construction of new lodes continued over subsequent centuries and these offered further access to the Nene and Ouse systems and

⁵⁴ Page et al 1932, 191.

⁵⁵ Ibid.

⁵⁶ DeWindt and DeWindt 2006, 25-7.

⁵⁷ Hall 1992, 42.

thereby the rivers and ports of the Fenland and central eastern England as a whole.⁵⁸ Trench-digging was one of the customary villein services — four people at Upwood were, for example, amerced in 1339 because they did not go to the 'ditching' at Ramsey when summoned.⁵⁹

The Ramsey Abbey lode is first clearly present in Phase 4, although circumstantial evidence suggests an origin in the preceding phase. The dating of material found in its fills (most of the pottery being 13th century) is unlikely to indicate closely its date of construction, due to the combined effects of cleaning episodes and later refuse deposition. One of the primary functions of this waterway was probably to import building stone for the many documented building programmes that characterise the abbey's history from the 12th century: it is possible that the excavated lode and 'wharf' were established by AD 1200 and may have continued in use in some form until the Dissolution. At 8.7 m wide and 1.45 m deep, the lode would have been of sufficient size to take the draft of the kind of small craft that plied the Fenland waterways, bringing in building materials and all of the other commodities necessary to provision a large and wealthy monastic community.

We know little of how such lodes were constructed. The surviving waterways were undoubtedly reworked over time and varied considerably in size, probably dictated by the perceived size of the flow being diverted. Examples in four parishes on the southern Cambridgeshire fen edge date to before the end of the 13th century.⁶⁰ They varied in width from 6.7 m to 12 m (22 to 40 ft) and all seem to have been utilised for traffic, at least to serve local purposes. In summer, the water levels were often too low to permit waterborne transport. All the lodes were embanked and were fed by fen-edge catchment drains (similar to those found next to the Ramsey Abbey lode), which were also embanked. Such catchment drains and tanks have recently been found adjacent to high- and latemedieval lodes at Ely (Cambridgeshire) and Burwell (Cambridgeshire).⁶¹ At Ramsey, these drains apparently originate in a bay of low-lying fenland to the east of the excavation: they may therefore reflect the process by which the water level in the lode was restored following use of a possible chamber- or flash-lock (see below).

Lodes had the added benefit of taking water away during floods. In 1230, for example, Monkslode at Sawtry (Cambridgeshire) was made 'to preserve the lands, meadows and pastures of the men of Walton, Sawtry and Conington from the waters descending ... and for navigation of corn, turves and other things to diverse places'.⁶²

Excavations at Blackhorse Lane, Swavesey (Cambridgeshire), found a short lode dating to the high Middle Ages, perhaps 8 m wide and 1 m deep with sloping sides.⁶³ Archaeologists have excavated three late-14th- to 15th-century

⁵⁸ Hall and Coles 1994, 137.

⁵⁹ Darby 1940, 148, fn 2.

⁶⁰ Oosthuizen 2000, 32.

⁶¹ Cessford et al 2006, fig 10; Aileen Connor pers comm.

⁶² Hart and Lyons 1884, 177; quoted in Hall and Coles 1994, 137.

⁶³ Spoerry 2005.

lodes in Ely between Broad Street and the Great Ouse. Here the lodes were narrower at 3.5 to 4.0 m wide and the sides varied more, ranging from c $45-50^{\circ}$ to c 60° +, although all were flat bottomed. Oak revetments were found embedded in the lode sides, held in place by a wattle fence. ⁶⁴ At Glastonbury (Somerset) a man-made lode over 1 km long was in use from the 10th to the 13th centuries and was c 6 m wide and 1 m deep with a flat base.⁶⁵

The base of the Ramsey lode lay at c 4.5 m OD whereas the peaty material at the natural water level in the town is recorded at between 2.5 and 3 m OD. The abbey lode would have lain about 2–2.5 m above the main lode at the Great Whyte and use of a system of locks may explain this discrepancy, the most likely position for which is at point G (Fig 3), to which the abbey lode may have led.

Documentary records show that sluices were common in the high- and late-medieval fenland and many other monasteries in the region had benefit of sluice gates or flash-locks. Many related disputes arose: 'presentment after presentment declared that certain "clowes" [a clow was a sluice or floodgate] had been stopped; that certain channels should be repaired, or cleaned, or made wide, or straightened; that certain banks ought to be restored and made higher; and that certain sluices must be constructed'.⁶⁶

The 14th- to 16th-century Castle Acre Priory lode (Norfolk) — possibly revetted in stone and/or wood — was built within the abbey precinct about 50 m to the south of the abbey nave.⁶⁷ A large barn and granary stood about 5 m to the south of the lode with a kilnhouse and bake/brewhouse further away surrounding a courtyard. The remains of a wharf survived, along with a probable bridge over the lode and the remains of a sluice gate, probably used as a flash-lock.⁶⁸ At Byland Abbey (North Yorkshire), a channel had a fall of nearly 3 m down towards the Hollins Wood quarry, and it has been suggested that if, as seems likely, this was built for navigation, then some sort of flash-lock system must be implied.⁶⁹

At Ramsey, the relative ground levels suggest that a sequence of flash-locks would have been required to transfer craft into the excavated lode. A recent assessment of European evidence for lock technology indicates that chamber- or lift-locks were in use in Holland from the late 12th century onwards, capable of a higher lift, and Ramsey Abbey perhaps used such a system.⁷⁰

Ellmers has established a typology of medieval cranes.⁷¹ The excavated tripod base adjacent to the Ramsey lode may represent a 'wippe' crane (see-saw) or hoisting spar foundation, or could reasonably match a different means of supporting other types of crane. The 'wippe' crane-type consists of a mast with

⁶⁴ Cessford et al 2006, 24–5.

⁶⁵ Hollinrake and Hollinrake 1993.

⁶⁶ Darby 1940, 149.

⁶⁷ Wilcox 2002, fig 3.

⁶⁸ Ibid, 32–5.

⁶⁹ Bond 1989, 98.

⁷⁰ Bond 2007, 173–4. ⁷¹ Ellmers 1989.

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a yard. It originated from the requirement to lift cargo from deep-going vessels that could not reach a harbour.⁷²

Cranes may have been introduced to waterfronts from the second half of the 12th century and by about 1250 the town law of Bergen (Norway) refers to a crane of this type.⁷³ One 'wippe' crane survives in Bergen Museum; the mast is 12.85 m long, with the hook for the 15.05 m-long yard positioned c 10 m above the ground. The Ramsey example would have been much smaller (about one third the size), although it does appear to have been more substantial than the late-medieval lifting devices found adjacent to lodes at Ely, where archaeologists have interpreted remains of groups of between two and five shallow pits or postholes directly to the south of channels as possible hoisting spars for small goods.⁷⁴ The absence of storage facilities here suggests that cargos were taken away immediately after unloading.

RIVER TRANSPORT AND SITE ECONOMY

Linkage of Ramsey to the main river network via lodes meant that stone and other commodities were easily transportable to the abbey, river transport being the predominant means by which building materials travelled to sites in the region.⁷⁵ The *Ramsey Cartulary* records an agreement that Ramsey should give 4,000 eels a year in Lent to Peterborough in return for building stone at Barnack.⁷⁶ In 1192 an agreement was drawn up between the abbots of Ramsey and Sawtry by which the monks of Sawtry were to close up all the lodes that they had made in the marsh of Whittlesey, with the exception of the 'great lode which runs from Whittlesey Mere to Sawtry ... for by it the monks of Sawtry bring stones and such necessities for the building of their monastery'.⁷⁷ This demonstrates both the amount of influence and power the abbeys had over waterways in the area and the importance of stone. A range of stonework recovered from the Ramsey excavations dates from the 12th to the 15th centuries, attesting to the fact that stone travelled to the site over an extensive period. Reflecting such trade are the blocks of Barnack stone at Whittlesea Mere,⁷⁸ which probably indicate a sunken barge. The remains suggest a flat-bottomed double-ended vessel 9.0 m long, with a beam of 3.0 m and a draught of less than 1.0 m that could carry over 7 tonnes.⁷⁹ Ramsey Abbey paid four different employees to repair boats between 1471 and 1500.

The building(s) that lay c 5 m to the west of the Ramsey lode may have been a storehouse. The abbey records mention a corn mill and a malt mill in the 14th century, as well as the repair of many types of buildings including three storehouses and barns. Ramsey Abbey was probably sending produce to Kings

⁷² Ibid 1989, 47.

⁷³ Hutchinson 1994, 113; Ellmers 1989, 48.

⁷⁴ Cessford et al 2006, fig 10; 72.

⁷⁵ Edwards and Hindle 1991.

⁷⁶ 1052–65; quoted in Darby 1940, 105, fn 1.

⁷⁷ Ramsey Cartulary; quoted in Darby 1940, 101.

⁷⁸ Hutchinson 1994, 121; Jenkins 1993a and b.

⁷⁹ Cessford et al 2006, 28.

Lynn that had an important corn and wool market — entailing transportation down the River Nene.⁸⁰ Evidence from the lodes and wharfs at Castle Acre Priory and Waltham Abbey (Essex) primarily relates to the movement of agricultural produce.⁸¹ Grain transport to Ramsey is well-documented. Tenants of the Ely, Ramsey and other fenland manors used water carriage to take grain or other supplies to the monks.⁸² There is ample evidence for other river trade — payments to Ramsey Abbey employees attest to the transport of diverse commodities such as fodder, lumber and wine.⁸³

The abbey was evidently making and selling tile from at least the middle of the 14th century and brick from the early 15th century.⁸⁴ We recovered a large amount of roof and floor tile from the site (more than 50 kg) and both the documentary and archaeological evidence attests to significant trade in skilfully decorated tiles and bricks.

East Anglian Late Saxon and Saxo-Norman types in Phases 1 and 2, alongside increasing quantities of Shelly wares originating from Northamptonshire and perhaps Lincolnshire, dominate the pottery assemblage. Ely-type wares, made locally in the Fenland, then become the most common product and these, alongside Shelly wares, are the most common types until the later medieval period. It is likely that from the later 14th century onwards, once Shelly pottery ceases to be produced and distributed in quantity, Ely-type wares dominate the assemblage, but these decline in the face of increasing supply of Bourne D ware from south Lincolnshire from the mid-15th century onwards.⁸⁵ It is important to recognise that the broad classification Medieval Ely-type ware, as described in this assemblage, is likely to be a conflation of sandy and calcareous pottery made at Ely and similar, but not identical, fabrics and types made closer to Ramsey around the Huntingdonshire fenland. Since recent Inductively Coupled Plasma Spectroscopy suggests that Ely-type wares excavated at Ramsey may not be actual Ely products,⁸⁶ it is tempting to associate this Huntingdonshire pottery variant with the estates, patronage and interests of Ramsey Abbey — in contrast to the Ely pottery industry that was quite clearly facilitated, if not encouraged and initiated, through the interests of the monastic and ecclesiastical authorities at that centre.

The Ramsey pottery assemblage is similar to groups from domestic and lay communities in the town and surrounding countryside, insofar as it includes items made in the Cambridgeshire fenland, alongside vessels from further west in Northamptonshire and a small amount of material transported across the fens from Norfolk. The group may contain slightly more vessels from further afield, and there could also be an elevated level of glazed jugs represented here in the

86 Spoerry 2008b.

⁸⁰ Darby 1940, 98.

⁸¹ Wilcox 2002, 32-4; Huggins 1972, 81-9.

⁸² Darby 1940, 102.

⁸³ DeWindt and Dewindt 2006, appendix 8.

⁸⁴ Ibid.

⁸⁵ The site phase statistics do not clearly represent this progression due to reworking of deposits and mixing of differently dated types, and due to the wide date range encompassed by Phase 4.

high Middle Ages. These differences are, however, only slight and in no way striking or fundamental to the nature of the assemblage, which remains mostly parochial and seemingly domestic.

The excavation suggests both ferrous and non-ferrous metalworking, the former focused in the southern part of the site and most of it occurring in Phase 2. Documented payments to smiths for ironwork are numerous and include a wide range of items such as horseshoes, iron wheels, the making of 'diverse ironwork for the church' and for 'iron things, annually'.⁸⁷

Pig remains are particularly frequent at this site. Many religious houses kept pigs on a moderately large scale and the practice of pannage will have required an abundance of suitable woodland forage in the locality. The abundance of horse remains is also notable, particularly since these large remains are not confined to the ditches as is normally the case. It is possible that, like many abbeys in France, Ramsey was involved in the horse trade. In France during the high Middle Ages, abbeys played a significant role in horse-trading,⁸⁸ but no comparable data is yet known from England. After the Dissolution Henry VIII enacted legislation to improve the quality of English horses and increase their size and fitness for war.⁸⁹ Horses of a size suitable for use as palfreys (docile saddle horses) and destriers (war horses)⁹⁰ were found in the high- and late-medieval deposits at Ramsey, together with evidence of horse butchery. Whether horse meat was intended for the consumption of humans or dogs is unknown. The horse with extensive exostoses found in Phase 4 may have been a hercerarius, which seems to have been an animal used for harrowing, as mentioned in the Domesday Book.91

Supplementing the excavated remains, the abbey records frequently note domestic livestock, with cattle, pigs, sheep, horses and calves pastured at nearby Muchwood. The records attest to the herding of swine (eg Adam Porcarious, 1353) and cows (eg John Prowde, 1523), the buying of beasts, the activities of butchers and the slaughterhouse. The records also note the employment of fishermen and those preparing fish, along with the supply of dried fish and eels.

Ramsey Abbey had hunting rights in the hundred of Hirstingstone (in which Ramsey lies) dating back to at least the time of Henry II, despite the probable proscription of such rights to the clergy. The abbots evidently employed huntsmen and records note the hunting of deer and game.⁹² The monks were criticised in 1518 by church officials: 'Many of the monks give themselves over to hunting and games more than they should, and sometimes some of them shoot arrows in the fields without a decent habit on, to the scandal of the house'.93 Travel expenses for 'seeking birds' were paid to Henry Cocus in 1356, while other records attest to swans, partridge and pheasant. The faunal remains

⁸⁷ DeWindt and DeWindt 2006, appendix 8.

⁸⁸ Hyland 1994, 83-5.

⁸⁹ Chivers 1976, 7–8.

⁹⁰ Hyland 1994.

⁹¹ Darby 1952, 311. ⁹² DeWindt and DeWindt 2006, 123, 148.

⁹³ Hamilton Thompson 1914, 85; quoted in DeWindt and DeWindt 2006, 148 and fn 46.

of deer and wild birds, as well as the presence of a probable large hunting dog, now provide archaeological evidence for hunting and wildfowling.

There was evidently no occupation within the excavation area from the 16th century, although various boundaries and drains tally with the cartographic evidence. The use of architectural stone from the former abbey in the post-medieval drains and walls shows that such stone remained plentiful. Indeed, Ramsey stone was still being used locally and exported decades after the abbey was dissolved.

CONCLUSIONS

These comparatively small excavations provide the first opportunity to examine the workings of the precinct at Ramsey Abbey during the high and late Middle Ages and they offer new evidence for the possible arrangement and nature of buildings associated with a 10th-century English monastery of the Benedictine reform. They have provided the opportunity to give wider and more accurate synthesis of the landscape and economy of the monastery, and have enabled the development of further research-based investigations into, for example, the arrangement of the inner court and the development of the town. Nonetheless, the primary research contribution here is the simple sequence of occupation and activity, with its emphasis on trade and industry, and its position in relation to the newly discovered monastic lode. In a wider context, it is possible to contextualise these remains in respect of the landscape and economy of larger monastic houses of the period in general, and to the monasteries and communities of the fenland in particular. In the former case, the focus on water/waterways, drains and drainage in the works of the great religious houses and the special significance of cleansing and life-giving water under the monastic codes is well attested. In respect of the latter, the act of bringing waterways into the economic heart of a settlement through lodes and private 'spur lodes' leading to hithes (wharves) or landing places is one that is beginning to appear again and again in both the monastic and lay settlements of the high- and latemedieval fenland. This was a place wholly circumscribed, blessed and cursed through its wateriness.

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BIBLIOGRAPHY

Published sources

- Ambrosiani, K 1981, Viking Age Combs, Comb Making and Comb Makers, Stockholm Studies in Archaeology 2.
- Aston M 1993, *Monasteries*, London: Batsford.
- Baker, J and Brothwell, D 1980, Animal Diseases in Archaeology, London: Academic Press.
- Bartosiewicz, L, Van Neer, W and Lentacker, A 1997, *Draught Cattle: Their Osteological Identification and History*, Koninklijk Museum voor Midden-Afrika, Tervuren, België, Annalen Zoölogische Wetenschappen/Annales Sciences Zoologiques, Tervuren, Belgique: Musée Royale de l'Afrique Central.
- Baxter, I L 1996, 'Medieval and early post-medieval horse bones from Market Harborough, Leicestershire, England, UK', *Circaea* 11(2), 65–79.
- Biddle, M (ed) 1990, Object and Economy in Medieval Winchester, Winchester Studies 7ii.
- Blair J 2007, Waterdays and Canal Building in Medieval England, Oxford: Oxford University Press.

- Bond, C J 1989, 'Water management in the rural monastery', in Gilchrist and Mytum 1989, 83–111.
- Bond, J 2007 'Canal construction in the Early Middle Ages', in Blair 2007, 153–206.
- Brinkhuizen, D C and Clason, A T (eds) 1986, *Fish and Archaeology*, Brit Archaeol Rep Int Ser **294**.
- British Geological Survey 1995, Sheet 172.
- Brooks, H, Crummy, N and Archibald, M M 2004, 'A medieval lead canister from Colchester High Street: hoard container, or floor safe?', *Medieval Archaeol* **48**, 131–42.
- Cessford, C, Alexander, M and Dickens, A 2006, *Between Broad Street and the Great Ouse: Waterfront Archaeology in Ely*, E Anglian Archaeol **114**.
- Chivers, K 1976, (reprinted 1988) The Shire Horse. A History of the Breed, the Society and the Men, London: J A Allen.
- Coppack, G 1986 'Some descriptions of Rievaulx Abbey in 1538–9: the disposition of a major Cistercian precinct in the early sixteenth century', *J Brit Archaeol Ass* **139**, 100–33.

- Coppack, G 1990, *Abbeys and Priories*, London: Batsford.
- Crummy, N 2002 'From self-sufficiency to commerce: structural and artifactual evidence for textile manufacture in Eastern England in the pre-Conquest period', in Koslin and Snyder 2002, 25–43.
- Darby, H C 1940, *The Medieval Fenland*, Cambridge: Cambridge University Press.
- Darby, H C 1952, *The Domesday Geography of Eastern England*, Cambridge: Cambridge University Press.
- DeWindt, A R and DeWindt, E B 2006, Ramsey: The Lives of an English Fenland Town, 1200–1600, Washington DC: The Catholic University of America Press.
- Dickinson P G M 1967, 'St Ives Chapel; Ramsey Abbey Church, Abbey and Gatehouse', Archaeol 7 124, 214–58
- Gatehouse', Archaeol J **124**, 214–58 Dunning, G C 1952, 'A lead ingot at Rievaulx Abbey', Antiq J **32**, 199–202.
- Eames, E S 1980, Catalogue of Medieval Lead-glazed Earthenware Tiles in the Department of Medieval and Later Antiquities, British Museum, London: British Museum Publications.
- Edwards, J F and Hindle, B P 1991, 'The transportation system of medieval England and Wales', *J Historical Geography*, **17**, 123–34.
- Egan, G 1998, *The Medieval Household*, Medieval Finds from Excavations in London 5, London: The Stationery Office Ltd.
- Ellmers, D 1989, 'Development and usage of harbour cranes', in Villain-Gandossi et al 1989, 43–69.
- et al 1989, 43–69. Geddes J and Dunning, G C 1977, 'Stone objects', in H Clarke and A Carter, *Excavations in King's Lynn 1963–1970*, Soc Medieval Archaeol Monogr **7**, 315–47. Gilchrist, R and Mytum, H (eds) 1989,
- Gilchrist, R and Mytum, H (eds) 1989, *The Archaeology of Rural Monasteries*, Brit Archaeol Rep Brit Ser **227**.
- Giles, K and Dyer, C (eds) 2005, Town and Country in the Middle Ages; Contrasts, Contracts and Interconnections, 1100–1150, Soc Medieval Archaeol Monogr 22.
- Goodall, I H 1990, 'Iron buckles and belt-fittings', in Biddle 1990, 526–36.
- Haigh, D 1988, *The Religious Houses of Cambridgeshire*, Cambridge: Cambridge-shire County Council.
- Hall, D 1992, The Fenland Project Number 6: The South-Western Cambridgeshire Fenlands, E Anglian Archaeol **56**.

- Hall, D and Coles, J 1994, Fenland Survey: An Essay in Landscape and Persistence, English Heritage.
- Hamilton Thompson, A (ed) 1914, Visitations of Religious Houses in the Diocese of Lincoln. Vol 1: Injunctions and other Documents from the Registers of Richard Flemyng and William Grey, Bishops of Lincoln, AD 1420 to AD 1436, Horncastle: Canterbury and York Society.
- Hardy A, Dodd A and Keevill G D 2002, *Aelfric's Abbey: Excavations at Eynsham Abbey, Oxfordshire* 1989–1992, Oxford: Oxford Archaeological Unit.
- Hare, J N 1985, Battle Abbey: the Eastern Range and the Excavations of 1978–80, HBMCE Archaeol Rep 2.
- Hart, W H and Lyons, P A (eds), 1884, *Cartularium Monasterii de Ramseia*, Rolls Series **79**, Vol 1.
- Hollinrake, C and Hollinrake, N 1993, 'The abbey enclosure ditch and a late Saxon lode: rescue excavations at Glastonbury, 1984–8', Somerset Archaeol Natur Hist Soc **136**, 73–94.
- Huggins, P J 1972, 'Monastic grange and outer close excavations, Waltham Abbey, 1970–72', Essex Archaeol Hist **4**, 30–127
- Hutchinson, G 1994, *Medieval Ships and Shipping*, London: Leicester University Press.
- Hyland, A 1994, *The Medieval Warhorse from Byzantium to the Crusades*, Stroud: Alan Sutton.
- James, S, Marshall, A and Millett M 1984, 'An early medieval building tradition', *Archaeol J* **141**, 182–215. Jenkins, H J K 1993a, 'Medieval barge
- Jenkins, H J K 1993a, 'Medieval barge traffic and the building of Peterborough Cathedral', Northamptonshire Past and Present 8, 255–6.
- Present 8, 255–6. Jenkins, H J K 1993b, 'Medieval Fenland stone barges: a fragment of evidence', Mar Mirror 79, 458–60.
- Jones, A K G 1986, 'Fish bone survival in the digestive systems of the pig, dog and man: some experiments', in Brinkhuizen and Clason 1986, 53–61.
- Kirby, T, and Oosthuizen, S (eds) 2000, An Atlas of Cambridgeshire and Huntingdonshire History, Cambridge: Centre for Regional Studies, Anglia Polytechnic University.
- Koslin, D G and Snyder, J E (eds) 2002, Encountering Medieval Textiles and Dress. Objects, Texts, Images, New York/Basingstoke: Palgrave.

- MacGregor, A, Mainman, A J and Rogers, N S H 1999, Craft, Industry and Everyday Life: Bone, Antler, Ivory and Horn from Anglo-Scandinavian and Medieval York, The Archaeology of York 17/12, York: York Archaeological Trust.
- Macray, W D (ed) 1886, Chronicon Abbatiae Ramesiensis, Roll Series 83.
- Oakley, G E and Hall, A D 1979, 'The spindlewhorls', in Williams 1979, 286-9.
- Oosthuizen, S 2000, The Cambridgeshire Lodes', in Kirby and Oosthuizen 2000, 32.
- Ottaway, P and Rogers, N 2002, Craft, Industry and Everyday Life: Finds from Medieval York, The Archaeology of York 17/15
- Page, W, Proby, G, and Inskip Ladds, S (eds) 1932, The Victoria History of the County of Huntingdon, II.
- Pritchard, F 1991, 'Small finds', in Finds and Environmental Evidence, Aspects of Saxo-Norman London 2, London Middlesex Archaeol Soc Spec Pap 12.
- Rahtz, P and Hirst, S 1976, Bordesley Abbey, Brit Archaeol Rep Brit Ser 23.
- RCHME 1926, The Monuments of Huntingdonshire, London: HMSO.
- Rogerson, A and Dallas, C 1984, Excavations in Thetford, 1948-59 & 1973-80, E Anglian Archaeol **22**.
- Spoerry, P.S 2005, Town and Country in the Medieval Fenland', in Giles and Dyer
- 2005, 95–9. Spoerry P S 2008a, 'Ramsey Abbey 1998 and 2002: ceramic building material report', in Atkins et al 2008. Spoerry, P S 2008b, *Ely Ware*, E Anglian
- Archaeol 122.
- Spoerry P S in prep a, *Hinxton*, *Cambridgeshire*: Part II — Anglo-Saxon to Medieval, E Anglian Archaeol.
- Spoerry P S in prep b, 'Images and identity: late-medieval relief decorated tiles from Ramsey Abbey' [working title].
- Villain-Gandossi, C, Busuttil, S, and Adam, P (eds) 1989, Medieval Ships and the Birth of Technological Studies, I, 43-69, Northern Europe, Malta: Foundation for International Studies.
- Wade-Martins P 1980, Excavations in North Elmham Park 1967–1972, E Anglian Archaeol **9**.
- Walton Rogers, P 1997, Textile production at 16-22 Coppergate, The Archaeology of York 17/11.
- Wilcox, R 2002, 'Excavation of a monastic grain processing complex at Castle Acre

Priory, Norfolk, 1977–82', Norfolk Archaeol **44**, 15–58.

- Williams, J H 1979, St Peter's Street, Northampton, Excavations 1973-6, Northampton: Northampton Development Corporation.
- Woodland, M 1990, 'Spindle-whorls', in Biddle 1990, 216–25.

Unpublished sources

- Archaeological Solutions, forthcoming. Archaeological excavation at 52 High Street, Ramsey.
- Atkins, R 2004a, Medieval and postmedieval features at Nos 46-48 High Street, Ramsey, Cambridgeshire: an archaeological evaluation, Cambridgeshire County Counc Archaeol Field Unit Rep 713.
- Atkins, R 2004b, Medieval and postmedieval features at 42 High Street, Ramsey, Cambridgeshire: an archaeo-Cambridgeshire logical excavation, County Counc Archaeol Field Unit Rep **7<u>3</u>2**.
- Atkins, R and Macaulay, S, with Spoerry P S and Shepherd Popescu E 2008, Ramsey Abbey: excavations at Ramsey Abbey School, Cambridgeshire, 1998-2002, CAM ARC Report 929. <http:// ads.ahds.ac.uk/catalogue/resources.html? ramsey_ma_2008>.
- Cooper, S 2003, A medieval ditch at 30 Great Whyte, Ramsey, Cambridgeshire, Cambridgeshire County Counc Archaeol Rep 728.
- Cooper, S 2004, An archaeological evaluation at Ailwyn Community School, Ramsey, Cambridgeshire, Cambridgeshire County Counc Archaeol Rep 748.
- Cooper, S 2005, Medieval remains at 96–98 Great Whyte, Ramsey, Cambridgeshire: an archaeological evaluation, Cambridgeshire County Counc Archaeol Rep 724.
- Hickling, S 2006, Late medieval/early postmedieval remains at The Grand, Great Whyte, Ramsey: an archaeological evaluation, Cambridgeshire County Counc Archaeol Field Unit Rep **860**.
- Howe, A 2006, Ramsey Abbey School, Ramsey, Cambridgeshire: archaeological recording and monitoring, Cambridgeshire County Counc Archaeol Rep **893**.
- Macaulay, S 1996, Late Saxon and medieval archaeology at Ramsey Abbey,

Cambridgeshire. An archaeological evaluation, Cambridgeshire County Counc Archaeol Field Unit Rep **129**.

- Membery, S and Hatton, A 1996, Marriots Yard, Ramsey: an archaeological recording brief, Cambridgeshire County Counc Archaeol Field Unit Rep **Ago**.
- Mortimer, R 2006, A possible location for the Ramsey Abbey precinct and docks: excavations at Ailwyn Community School, Ramsey, Cambridgeshire, Cambridgeshire County Counc Archaeol Field Unit Rep **894**.
- O'Brien, L and Crank, N 2002, Land at Ramsey Garden Centre, Great Whyte, Ramsey, Cambridgeshire. An archaeological desk-based assessment and field evaluation, Hertfordshire Archaeol Trust Rep **1024**.

- Pearson, A and McDonald, T 2000, Newtown Green, Ramsey, archaeological desk-based assessment and trial trench evaluation, Hertfordshire Archaeol Trust Rep 0761.
- Spoerry, P S and Cooper, S 2000, Ramsey Abbey, an archaeological survey, Cambridgeshire County Counc Archaeol Field Unit Rep **170** (CD ROM).
- Vince, A 2008, 'Characterisation studies of clay from Ramsey Abbey, Ramsey, Cambridgeshire', in Atkins et al 2008.

Abbreviations

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- NISP Number of individual specimens present
- RCHME Royal Commission for Historical Monuments, England

FRENCH, GERMAN AND ITALIAN ABSTRACTS

Résumé

L'abbaye de Ramsey, Cambridgeshire: excavations sur le site d'un monastère de la région des Fens *par* Paul Spoerry, Rob Atkins, Stephen Macaulay *et* Elizabeth Shepherd Popescu

Nous savons très peu de choses sur l'archéologie des grandes abbayes de la région des Fens. L'abbaye de Ramsey figure avec Peterborough, Crowland, Thorney et Ely au rang des principaux monastères de l'Est de l'Angleterre à la fin de la période saxonne, après la *Regularis Concordia* et partage leur importance. Classée parmi les institutions ecclésiastiques les plus importantes d'Angleterre, elle continua à prospérer jusqu'à la Dissolution. Notre article présente de nouvelles interprétations de l'agencement de cette abbaye bénédictine, liées à la récente découverte de bâtiments monastiques, remontant peut-être à la fin de la période saxonne. Ces vestiges comportent les traces rarement découvertes d'un cours d'eau artificiel (ou *'lode'*) médiéval plus tardif, avec grue adjacente et un éventuel entrepôt: leurs implications en ce qui concerne le commerce et l'économie monastique sont replacés dans le contexte plus large de la région des Fens.

Zusammenfassung

Die Abtei von Ramsey, Cambridgeshire: Ausgrabungen an der Stätte eines Klosters im Fenland von Paul Spoerry, Rob Atkins, Stephen Macaulay und Elizabeth Shepherd Popescu

Wir wissen äußerst wenig über die Archäologie der großen Klosteranlagen in den Fen-Niederungen. Ramsey ist zusammen mit Peterborough, Crowland, Thorney und Ely eines der größten und bedeutendsten spätsächsischen Klöster nach dem Regularis Concordia im Osten Englands. Das Kloster war eine der wichtigsten kirchlichen Institutionen Englands und blühte bis zur Auflösung durch Heinrich VIII. Diese Arbeit präsentiert in Verbindung mit den vor Kurzem entdeckten möglicherweise spätsächsischen Klostergebäuden eine neue Interpretation des Lageplans des Benediktinerklosters. Dazu gehören einige Hinweise

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auf einen spätmittelalterlichen künstlichen Wasserweg (oder 'Lode') mit einem daneben befindlichen Kran und möglichen Lagerhäusern. Die Auswirkungen für Klosterhandel und -wirtschaft werden im weiteren Fenland-Kontext erläutert.

Riassunto

Abbazia di Ramsey, Cambridgeshire: Scavi presso il sito di un monastero nelle paludi di Paul Spoerry, Rob Atkins, Stephen Macaulay e Elizabeth Shepherd Popescu

Si sa molto poco dell'archeologia delle grandi abbazie nelle zone paludose. Quella di Ramsey, insieme con Peterborough, Crowland, Thorney ed Ely, rappresenta uno dei principali monasteri tardo sassoni, successivi al Regularis Concordia dell'Inghilterra orientale e ne condivide il significato. Era classificata tra le più importanti istituzioni ecclesiastiche in Inghilterra e prosperò fino alla Dissoluzione dei monasteri. Questa relazione presenta nuove interpretazioni del progetto dell'abbazia benedettina, collegate alla recente scoperta di probabili edifici monastici tardo sassoni, e include una rara prova di tardo canale artificiale medievale (o 'filone'), con un adiacente braccio girevole e possibile magazzino: le loro relazioni con il commercio e l'economia monastica si inquadrano nell'ambito del più vasto contesto delle paludi.