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Excavation at Crown House, Croxton Road, Thetford, Norfolk

40819

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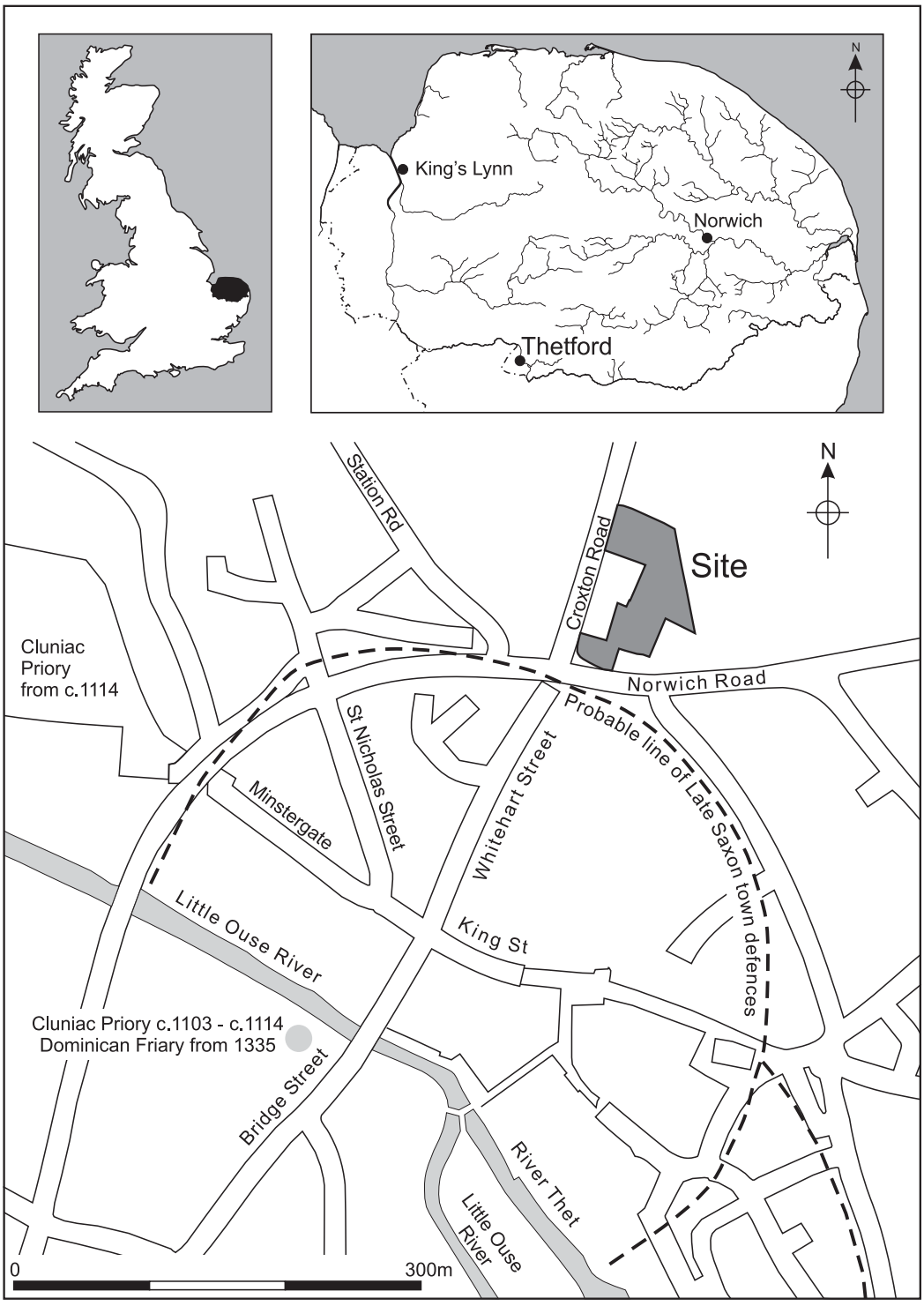

Figure 1 Site location. Scale 1:5000

EXCAVATION AT CROWN HOUSE, CROXTON ROAD, THETFORD

by Heather Wallis

with contributions from Francesca Boghi, Julie Curl, Richenda Goffin, Julia Huddle

SUMMARY

The majority of archaeological features and artefacts recovered during the excavation were medieval in date. Evidence of property boundaries, ovens (one of which was re-used for making daub), quarry pits and lined pits were found. A significant number of graves were also recorded – perhaps a 14th-century plague over-flow site from the church of St. Andrew's.

Introduction

Norfolk Archaeological Unit (now NAU Archaeology) was commissioned by Abel Developments Ltd to undertake a programme of archaeological work on an area in the north of Thetford at the junction of Norwich Road and Croxton Road (TL 8705 8340 centre) (Fig. 1). This was necessitated by the planned redevelopment of the land for housing. In October 2004, the archaeological potential of the site was evaluated (Wallis 2004a), following this further excavation undertaken early in 2005. All of the archaeological work was carried out to meet Briefs set by Norfolk Landscape Archaeology and followed Project Designs prepared by NAU.

This report summarises the results of both the evaluation and excavation works. Also considered is the information gained from nine machine excavated test pits (TH 1-9) that had been dug for site investigation purposes prior to the commencement of any archaeological work. Modern features and finds (17th to 20th century) have not been included. Further details of the excavations are available in the archive that is currently held by the Norfolk Museums and Archaeology Service (Site 40819).

Location, Topography and Geology

The site lay to the north of and on the upper slopes of the River Little Ouse valley at a height of *c*. 23m OD. It is located just beyond the northern limits of the Late Saxon and medieval core of the town of Thetford, in an area that was only substantially developed from the 19th-century onwards. It lay at a pivotal point on the approach into Thetford, where the roads from Norwich, Croxton and the Fens converge. The natural sub-soil across the site, which in some places lies only 0.2m below the present ground surface, is of chalk overlain by sand. The upper surface of the chalk is uneven and was seen to outcrop in bands that cross the site on a north-east to south-west alignment. The site itself lay on a slope rising from *c*. 21.8m in the south-west to *c*. 24.4m in the north-east.

Summary of Archaeological and Historical Background

Settlement in the area around Thetford stretches back to the Iron Age and beyond, the confluence of the Rivers Thet and Little Ouse combined with a fording point across the rivers making it an important location. Settlement occurred along the river valleys during the Iron Age, Roman and Saxon periods, however it was not until the Late Saxon period that Thetford first developed into a major centre, with defended areas on both the north and south banks of the river. Early in the Norman period Thetford was the seat of the East Anglian Bishop, however in the late 11th century the See was moved to Norwich and the scale of activity at Thetford declined. The south bank of the river was abandoned while the settlement on the north bank of the rivers became increasingly important. Despite an increase in the number of churches and the foundation of several religious establishments it appears that the settlement never spread beyond the town defences during the medieval period.

Excavation Methodology

Initially eleven evaluation trenches each measuring 4m x 4m were excavated (Tr 1-11, Fig.2). These were located across the available area in order to sample all parts of the site. Following this two areas (Areas 1 and 2) were targeted for further excavation.

Area 1 was located in the south-west part of the development area, behind any roadside settlement that may have developed along the Norwich Road and Croxton Road street frontages. This area was L-shaped and covered *c*. 380 sq. m. The upper deposits were removed by machined until a clear archaeologically horizon was identified. Across much of the site this was the natural chalk and sand. The archaeological deposits that were revealed were excavated by hand and recorded.

Area 2 was sited in the north-west part of the site and was located in order to further investigate quarry pits identified during the evaluation work. A single trench *c*. 4m wide and 17m long, orientated on a north-east to south-west axis, was machine excavated into the natural subsoil and the exposed deposits recorded.

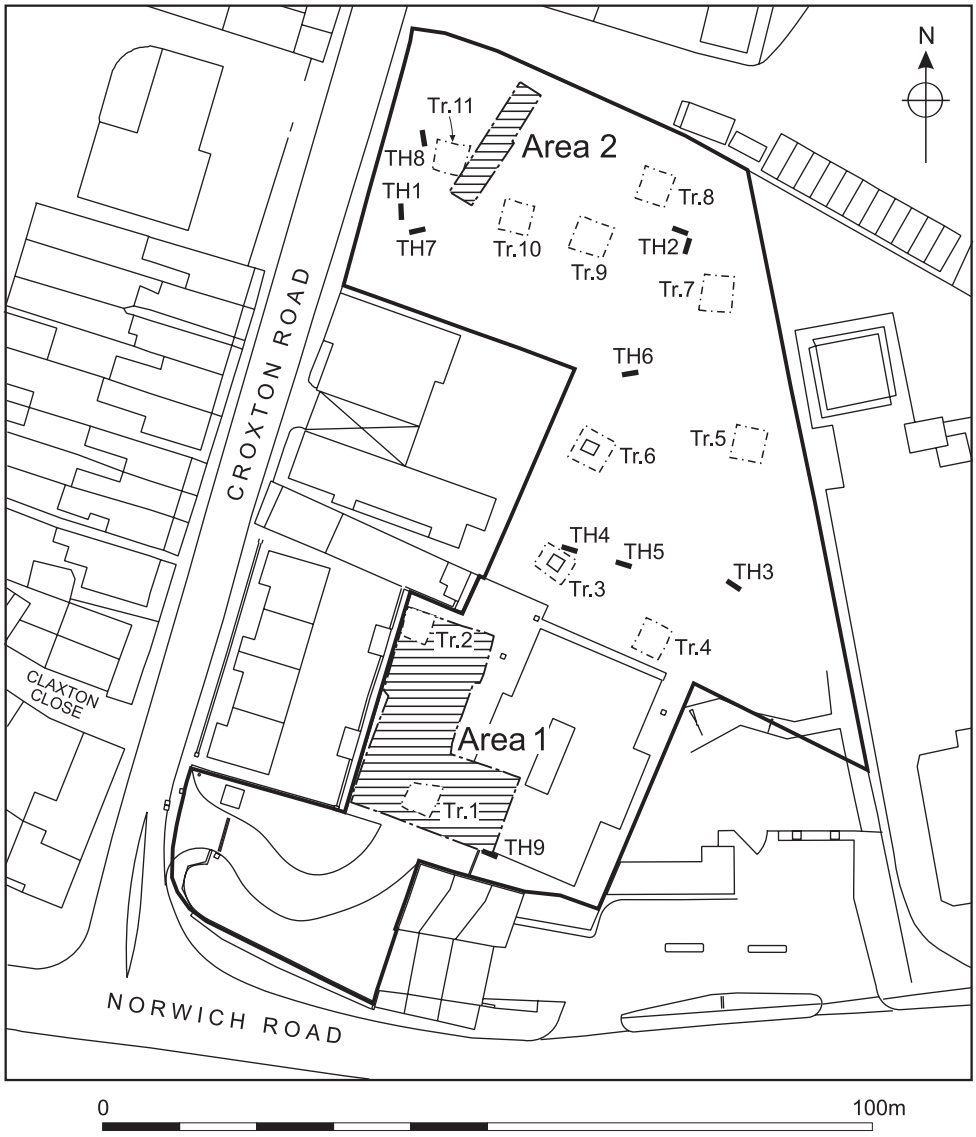

Figure 2. Areas of excavation. Scale 1:1000

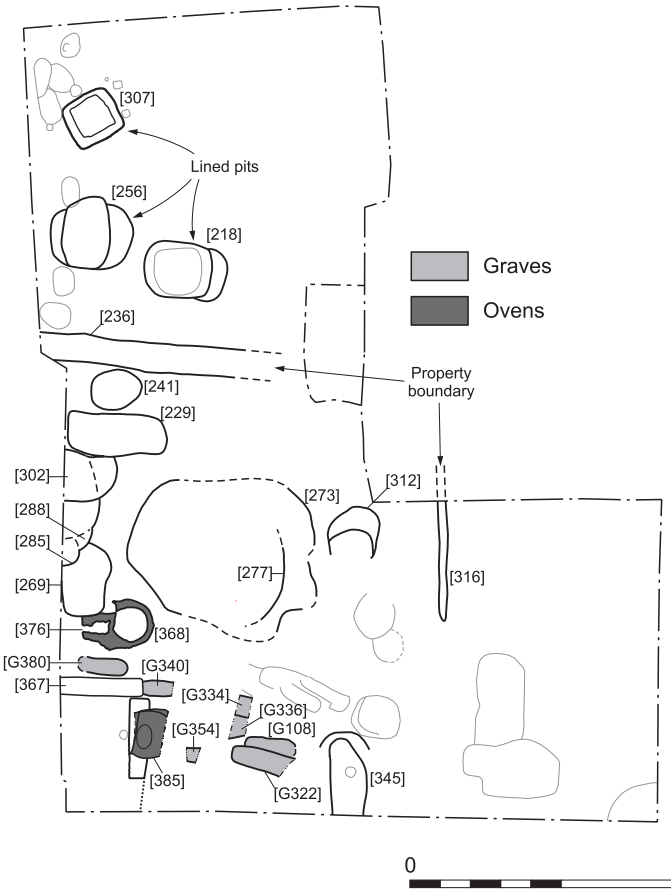

Figure 3. Features mentioned in the text. Scale 1:250

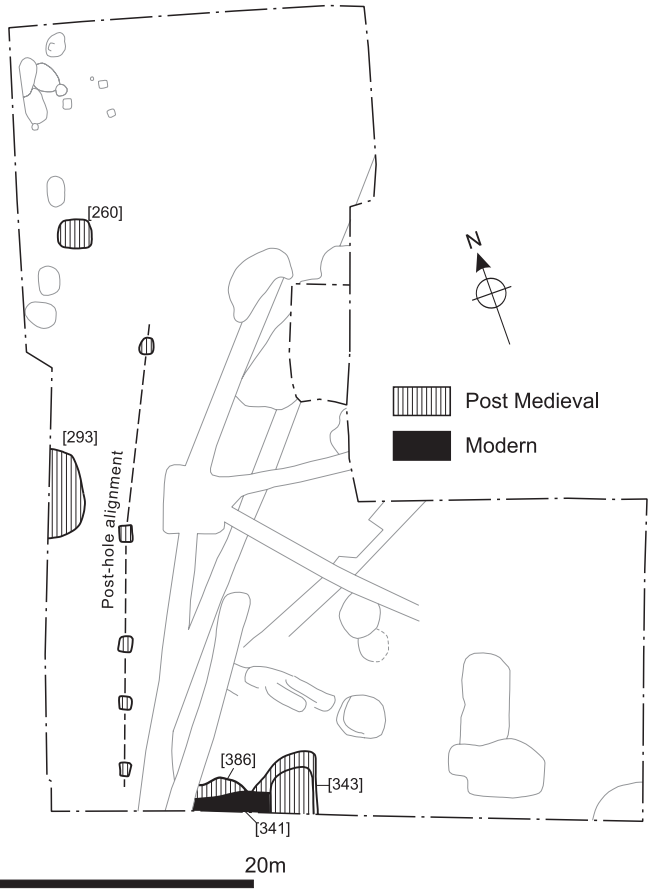

Figure 4. Features mentioned in the text. Scale 1:250

Excavation Results

This section is divided into two parts the first dealing with the south-west part of the site (Excavation Area 1, Evaluation Trenches 1 and 2), while the second section summarises the evidence from across the rest of the site (Excavation Area 2, Evaluation Trenches 3-11).

South-west part of site (Excavation Area 1, Evaluation Trenches 1 and 2)

Pre-medieval activity (not illustrated)

A single prehistoric feature was located in western part of Area 1. This shallow, oval scoop was cut into the natural sand and sealed below a buried soil horizon. This buried soil was not present across the whole site, but was particularly apparent towards the south and east of the area. Where this horizon was noted, all other features were seen to cut through it. The earliest of these was a wide and shallow pit located in the south-west part of Area 1. This has tentatively been assigned to the Late Saxon period due to its stratigraphic location and the presence of a single sherd of un-abraded Thetford ware pottery within its fill. Elsewhere on the site Thetford ware was always found associated with medieval and later pottery.

Medieval (mid 11th to early 16th centuries) Fig. 3

It is during this period that much of the activity on the site occurred. Attempts were made during assessment and analysis to subdivide this period in order to show a dated, chronological progression of the use of this site. Precise dating for most of the features however, could not be established. This was because few features contained dateable artefacts and, where pottery was recovered, it was present in small quantities and was often abraded. The evidence for activity across the site during this period is therefore presented by feature type. Where dating evidence or stratigraphic location suggests a position in an overall site chronology this is mentioned.

Property boundaries

Two ditches appear to define the edges of a property located in the angle of Norwich Road and Croxton Road. Ditch *236* crossed the site on and east-to-west alignment extending beyond both the east and west limits of excavation. At right angles to this was ditch *316* of which a 4m length was recorded. The lower fills of both these ditches were very similar being a creamy-grey clay/sand/silt mix with frequent chalk flecks.

No dating evidence was found within these features, but it is suggested they are early features on this site, as the medieval features appear to respect them, with the majority to the south and west of them. Only three features lay to the north and these were all similar chalk-lined pits.

Ovens

Two possible ovens were excavated. Although no finds were recovered from their fills, their stratigraphic relationship with other features suggests they were part of the initial use of the site.

The more complete of the two (Plates 1 and 2) was made up of two elements, a circular pit (*368*) and a linear channel (*376*). The pit (1.2m in diameter and 0.4m deep) had regular concave sides lined with chalk blocks set in a creamy mortar. The blocks were dressed on their internal face and were arranged in four even courses. It had a flat base that was covered with a patchy deposit of creamy mortar. A linear cut (?flue) was constructed on its west side and was 0.6m wide, 0.8m long and 0.4m deep (maximum). This again was constructed with chalk blocks lining the sides of the cut. The flat base sloped down towards the main body of the circular pit. Changes in the setting of the chalk blocks suggest that the south-west part of the pit and the south part of the linear channel were, at some time refashioned.

At a later date the 'entrance' between the linear channel and the circular pit was blocked using three large, closely fitting blocks of chalk. Following this the main body of the circular pit became filled with a greyish yellow chalk and clay mix. Above this filling the remainder of the pit and linear feature was a deposit of chalk blocks in whitish grey silty clay.

The original use for this was probably as a drying oven although, in this instance, evidence of burning is slight. After the rebuilding of the south side it probably continued to be used for the same purpose. At a later date the use was changed with the pit being used to mix clay and chalk to form daub. After its first use as such the 'flue' was blocked to form a fully circular pit that continued in use for the mixing of daub, the final

batch of which was not fully used, remaining as the fill of the pit. Once abandoned the remainder of the pit was backfilled with chalk blocks.

The second of these features (*385*) did not survive as well having been truncated on both its east and west sides. It was probably circular in shape (*c*. 1.6m diameter) with concave sides, a fairly flat base and was lined on its south side with chalk blocks set in a pale pink mortar. There was no such lining on its north side, although the feature was cut into chalk at this point so a constructed lining was probably unnecessary. A thin mortar layer was spread across the base and partially up the sides with the exception of a central oval area (0.8m x 0.6m). This area had been covered with a mid brown to dark yellow clay, the surface of which had been burnt red and black indicating *in situ* heating. There was no evidence of later re-use.

Pits

Only one pit (*273*) can be assigned a definite early medieval date. Located within the boundary ditches and to the north and east of the ovens it was *c*.6m in diameter and 0.75m deep. This pit may have been a quarry pit for the extraction of sand. Six sherds of pottery were recovered from its fill indicating a possible 11th to 13th century date.

In the south-west corner of the site part of a wall-lined pit (*367*) was recorded (Plate 3). This had regular straight edges, was *c*.1.3m deep with an uneven undulating base. It was cut through natural chalk on its east side and sand on its north side. The upper part of its north and east sides were retained by low chalk block walls made up of small chalk blocks and chalk fragments in a pale pink mortar. Along the edges of the pit and overlying the walls was a deposit of tumbled chalk blocks that may have been material derived from the collapse or demolition of the walls. No dating evidence was recovered from its fills, although it was stratigraphically later than oven *385*.

A group of six pits (*241, 229, 302, 288, 285* and *269*) some of which were intercutting were located close to the west edge of excavation. It is thought that these pits, which were *c*.1m deep, were quarry pits, dug for the extraction of chalk and possibly flint. The fills of all these pits were similar being made up of either degraded chalk with chalk fragments or yellow/brown silty sand with some clay and chalk flecks. The first of these was probably the waste material from the quarrying while the latter appeared to be a mix of topsoil with natural sand. Few finds were recovered. Only eleven sherds of pottery were recovered from these features that ranged in date from 10th-11th century to 15th-16th century.

Three other pits dating to this broad period were excavated. Pit 345, on the south edge of the excavation may also have been a quarry pit, while pits *277* and *312* are different in morphology and may have served a different function.

Graves

Seven east-to-west aligned graves were recorded all of which had been truncated by later features or machining prior to excavation. These contained eight articulated skeletons.

The most westerly grave (*G380,* sk*379*) was located just to the north of the walled pit. The grave survived to a depth of 0.2m deep having been heavily truncated by the machining of the site. Fill of the grave contained a single sherd of Iron Age/Early Saxon pottery. Located 1.2m east of this was grave *G340* (sk*339*). The relationship between this and the adjacent walled pit *367* was unclear, however it had been cut by a post-medieval post-hole that had removed the skull of the skeleton. Two small finds (SF9 and SF11) were found from the fill of this grave one of which, an arm from a 'locking buckle', dates to the 14thcentury.

Further east were three adjacent heavily truncated graves (*G334* sk*318*, *G336* sk*319* and *G354* sk*353*). The upper torso and skulls from these burials had been removed during the digging of modern drainage trenches.

The most complete grave (*G322*) (Plate 4) contained three skeletons, one above the other. The lowest skeleton (sk*356*) was placed on the base of the cut and was sealed by a 0.3m thick deposit of mid brown chalky sand. The second skeleton (sk*321*) was laid on this deposit but had been disturbed by the deposition of the third skeleton (sk*320*). It is thought that the lower two may have been deliberately deposited in the same grave, either at the same or different times. The upper skeleton (sk*320*) however was a later intrusion. Adjacent to this was grave *G108* (excavated during the evaluation) that contained a single inhumation burial (sk*110*).

Lined pits

Located to the north of the boundary ditch were three pits. These were all similar, with a rectangular shaft, which was lined with chalk blocks where the pits were cut into the natural sand, but not where they

were cut through the natural chalk. In the case of pit *307* this lining was present on all four sides at the upper levels but continued down only on the south and west. This pit was loosely filled with chalk blocks and some flints in a sand/mortar/clay mix. It was excavated to a depth of 1.35m, however the full depth of this feature could not be established as the chalk blocks within the fill prevented it being augered. No finds were recovered from the fill.

The second of these pits (*256*) had shallow (0.3m deep) cut projections to east and west of the main shaft. This was excavated to a depth of *c.* 1m and augured until chalk was reached at total depth of 1.65m. Only two sherds of pottery were found within its fills, both of which date from the 11th to 14th centuries.

Pit *218* was similar in form with a rectangular shaft and a shallow cut to the east. This pit was excavated to a depth of 1.2m and then augered. Its total depth was *c.* 3.25m. Of the five pottery sherds recovered one dates from 11th or 12th century, three from 11th to 14th centuries and one from 13th to 15th century. It is possible then that this pit is slightly later in date than pit *256*.

Post-medieval (mid 16th century to 17th century), Fig. 4

Post-holes

Row of five square post-holes *c.* 0.5m x 0.5m and *c.* 0.35m deep were recorded aligned north-to-south. One contained a padlock slide key dating from the 12th to 14th centuries while pottery of 15th- to 17th-century date was recovered from another. These represent a fence line, which was located on the same alignment as the east edged of walled pit *367*.

Pits

Located to the west of this fence line were two pits (*293, 260*) both of which cut earlier features. Pit *293* was the only pit on site to have been backfilled with soils that contained occupation material such as charcoal and shell. An assemblage of pottery was also recovered dating from the late 15th to 17th century. Three small finds were also found within it; a pointed bone implement, a knife blade and a flesh hook. These are all commonly associated with medieval and early post-medieval deposits.

On the east side of the fence line, located towards the south of the site and extending beyond the edges of excavation were two pits. Both of these had disturbed burials and therefore contained disarticulated human remains within their fills. Pit *343* was partially excavated and then augered, its total depth was *c.* 1.5m. The fill from here contained a small quantity of pottery of a 15th- to 16th-century date. Pit *386* was shallower (*c.* 1m deep) and contained no artefactual dating evidence.

20th century

One feature of this period is worthy of note; a drainage trench (*341*) located at the south edge of the site. A quantity of human bone including three skulls was recovered from its fill. The remains probably originated from burials disturbed the when pipe trenches were dug across the site, (the upper parts of graves *336*, *334* and *354* had been truncated). The Norfolk Historic Environment Record (NHER) 5922) records that in April 1970 skeletal remains were found during the digging of a sewer on the corner of this site. It is possible that the material found in this trench relates to that event.

Central and north part of site (Evaluation Trenches 3-11, Excavation Area 2)

In the centre of the site the evidence from two of the evaluation trenches (Tr3 and Tr6) and two of the site investigation holes (TH4 and TH5) suggests that a large part of this area had at one time been a quarry pit. Excavation in T3 and T6 extended to a depth of 2.25m. S4 indicated a depth of 4.2m of made ground, while TH5 appears to be located closer to the east edge of this pit as made ground was only 1.8m deep. The overall dimensions of the pit were probably in excess of 5.5m x 7.5m. This quarry was backfilled with silty sand. Only a very few finds were recovered from the uppermost fills, these included a few fragments of post-medieval ceramic building material, an iron nail and a possible heckle tooth (SF1). It is thought that this pit was probably originally dug in the medieval period.

Smaller quarry pits were recorded in the northern part of the site (Evaluation T8 and T11, Excavation Area 2). In total ten such pits were recorded. The majority were wide and shallow (less than 1m in depth), although one exception to this (Tr11, pit *31*) was over 1.6m deep.

No medieval or earlier features were found in the other evaluation trenches (T4, T5 and T 7).

Artefactual Data

The finds assemblage from this site was remarkably small. This is probably due to the fact that the site was located outside the main settled area of both Late Saxon and medieval Thetford. In addition to the finds reported on below sixty-seven pieces (5.202kg) of ceramic building material was recovered. Five of these were medieval in date, the remainder of the assemblage being post-medieval or modern. Clay tobacco pipe was also recovered, the assemblage being made up of eleven stem fragments and two bowl fragments, one of which was datable to the 18th century.

The Small Finds (Appendix 3)

by Julia Huddle

A total of twelve small finds were recovered from medieval, post-medieval and modern contexts. Apart from a post-medieval coin all the diagnostic finds are dated to the medieval period although one, a whittle to tang knife, is of a type which continued in use throughout the post-medieval period. The medieval finds are discussed below by feature type.

Graves

Three small finds were recovered from grave fills. Part of an arm from a 'locking buckle' (SF10) dated to the 14th century (Margeson 1993, 28, fig 13, no 139) and a piece of lead sheet probably an offcut (SF9) came from grave *340*. A lead plug (SF 11) that would have been used to plug a hole in a ceramic vessel was found in grave *322*.

Pits

Finds from pit *293* include one bone implement (SF 4) and two iron objects (SF5 and SF6). The bone artefact (SF4) is a goose radius that has been modified by oblique cuts at the distal end, so forming a point. Excavations at Norwich Castle Mall (Huddle forthcoming) produced a total of forty bird bones (the vast majority goose radii) that had been modified in a similar way. Most of these were from a well, the fills of which are dated to the 15th and 16th centuries. Other examples from Norwich include those from a 13th- to 14th-century pit (Hurst 1963) and contexts ranging in date from the 14th to 16th century (Margeson 1993, 68 to 9). It has been suggested that these pointed bone items were best suited to boring or were a form of cheap medieval stylus. Other suggestions for their use include pens, scoops, measures and pipettes.

Both of the iron objects probably had a domestic use. The first was a whittle tang knife (SF5). It has a pointed tang and a blade with a horizontal back angling down to the tip. This type typically occurs throughout the medieval period (Goodall 1993, 124). The second item is a flesh to hook with socket for a wooden handle (SF6). These were a regular feature of any medieval kitchen, and were used to examine and taste the food while it was cooking in large cauldrons over open fires (Ward Perkins 1940, 125, plate XXIV no 2).

Post-holes

The single iron find from post-hole *333* is part of a padlock slide key with an angled bit with circular aperture and corroded finial at opposite end (SF8). This type of key has been recovered from contexts dating from the mid-to-late 12th century through to the mid-to-late 14th century (Egan 1998, 88 to 101, fig 267, nos 260 to 266) making it a residual find within a post-medieval feature.

Post-Roman Pottery

by Richenda Goffin

A total of 123 fragments of pottery, weighing 4.694kg, were recovered from the excavation and evaluation. The ceramics are mainly medieval and post-medieval in date, although a small quantity of earlier material is also present.

Methodology

The ceramics were quantified by recording the number of sherds present in each context by fabric and form, the estimated number of vessels represented and their weight. Other characteristics such as condition and decoration were noted, and an overall date range for the pottery in each context was established. The pottery was catalogued based on fabric, form and decoration based mainly on those identified in *Eighteen*

centuries of pottery from Norwich (Jennings 1981), and supplemented by additional ones compiled by the Suffolk Unit (S Anderson, unpublished fabric list). The typology used for Stamford fabrics is based on Kilmurry (Kilmurry 1980).

Pottery by ceramic period

Iron Age or Early Saxon

A single thick-walled hand-made sherd of a sandy fabric with sparse flint inclusions was identified, which is Iron Age or Early Saxon in date. It was present as a residual element in the fill of a grave (*380*).

Late Saxon

Only a small quantity of the assemblage dates to the Late Saxon period (eleven fragments weighing 1.125kg) all of which were Thetford ware. This pottery makes up 23.96% by overall weight of the total assemblage, but only 8.94% of the overall sherd count. This disparity is due to the presence of four large fragments from the base of a Thetford ware storage vessel that were present in medieval pit *241*. The remainder of the assemblage is made up only of body sherds, some with applied strips. A single body sherd was recovered from a shallow pit fill that is Late Saxon in date. The remaining sherds were all found in later features.

Medieval

A total of thirty fragments of pottery, weighing 0.389kg, are medieval in date (8.28% by fabric weight, 24.39% by sherd count). The pottery ranges in date from the 11th century through to the 14th or 15th century at the latest. Most of it was recovered from the fills of pits, with a fragment of Local medieval unglazed ware in the grave fill *380*. Some fragments, such as those found in *344*, were deposited into post-medieval pits.

The early medieval wares comprise handmade sandy wares, some of which contain additional inclusions of coarse quartz inclusions, and sand and shell. A fragment of possible Yarmouth-type dating to the 11th to 12th century ware was also identified. Other medieval coarsewares of a slightly later date comprise Grimston coarseware, Local medieval unglazed ware, as well as unspecific sandy coarsewares. In addition several fragments of Ely coarseware were identified, which have a broadly medieval date range. A bowl fragment with a thickened rim was recorded in this fabric, although the remainder of the pottery of this date range consists almost entirely of body sherds.

A small quantity of glazed medieval wares was also present. This included a single fragment of Stamford type B, probably a jug with an applied strip. The sherd is made from a fine fabric that is covered with a green-yellow glaze, and dates to the mid 11th to mid 13th century. A burnt fragment of Yarmouth Glazed ware was found. The fabric is similar to Grimston ware, but does not contain the ferrous inclusions that are diagnostic of this major Norfolk production site. In addition the ware usually has a more watery glaze coverage that is yellow green rather than olive green. Although frequently found in small quantities on sites in Norfolk, especially in the city of Norwich and eastwards towards Yarmouth in deposits dating to the 13th to 15th century, the origin of this ware remains as yet unknown (Anderson 2005). A small fragment of a highly decorated medieval glazed ware likely to be a London ware jug fragment dating to the 13th to 14th century was also found.

Post-medieval

Eighty-one fragments of pottery, weighing 3.032kg, are post-medieval in date. These make up 64.59% by overall weight of the total assemblage and 65.85% by sherd count. The pottery is wide ranging in date, from the late 15th to 16th century through to the 19th century or modern era.

Twenty-seven sherds were excavated from pit *293*. This group includes a number of redwares, as well as the frilled bases of two Raeren stonewares (a mug/tankard and a jug) dating to the late 15th to first half of the 16th century. In addition there is a heavily knife-trimmed faceted redware base, similar to those produced in Late medieval and transitional ware fabrics, but much more likely to be a late Hedingham variant (S Anderson, pers. comm). The vessel is made from a fine micaceous fabric and has a clear glaze, with a pedestal base, and has a very waisted profile. The sherd is similar to a published example of a cup with faceted pedestal base from Colchester (Cotter 2000, fig. 99, no. 185). Here, goblets or chalice-shaped cups of a similar form are found in late 15th- and early 16th-century contexts (Cotter 2000, 150). Cups with fluted/facetted pedestals are also found in late 15th-century contexts at Chelmsford (Cunningham 1985, 71,

fig 9, nos 59-60). Several fragments of a deep bowl or panchion made of a hard redware fabric of general Essex type were also present. The vessel has an everted, thickened rim and is glazed internally. A wide range of similar bowls were produced in the later part of the Colchester-type redware production. This particular form is present in deposits in Colchester which date to the late 15th to early 16th century, but it is more frequently found in deposits which date to the later half of this date range (Cotter 2000, 149). Several sherds of an Essex redware jug or cistern with spiky foliate slipped decoration were also recovered although only the strap handle and fragments of rim and body sherds survive. It is possible that the vessel is a Colchester fabric, perhaps a fabric variant. Such cisterns are often associated with Raeren stonewares dating to the *c.* 1475-1550 in Colchester (Cotter 2000, 134). A large fragment of a Late medieval transitional jar or pipkin was also identified in the fill, and several sherds of very well burnt redwares. Three abraded sherds of Thetford ware were also recorded.

Eight fragments of pottery were recovered from pit *343*. In addition to residual Late Saxon and medieval wares, a small rim sherd from a Tudor Green-type cup and two fragments of early post-medieval redwares were present, and a single sherd of an unglazed redware that is likely to be from a late earthenware plant pot.

Seventeen fragments weighing 0.979kg were given a wider period grouping of 18th to 20th century. The material is mixed, and comprises a number of stonewares and glazed redwares. The stonewares include a Frechen bottle of mid 17th-century date, the base of a Nottinghamshire stoneware bowl or jar dating to the 18th century, and a fragment of Westerwald ware with manganese colouring and a decoration which is likely to be late 17th to 18th century in date. A small redware chamber pot is also present. The latest vessels in the group are a late slipped redware bowl, a fragment of Yellow ware and a sherd of a pearlware plate or dish decorated with blue and white transfer-printed design, indicating a date of post 1770 for the latest deposition. Two fragments of a translucent bowl with lilac coloured spring decoration are made from a very highly fired fine fabric which may be porcelain or perhaps, bone china, dating from the very late 19th to the 20th century.

Discussion

The ceramic assemblage recovered from the site is wide-ranging in date, and is similar to the smaller group of pottery that was excavated during the evaluation. Only small quantities of Late Saxon pottery are present, but were nearly all found in pits with pottery of medieval and later date. Few ceramics of Late Saxon date were recovered from deposits that date to this period (Period 3). A wide range of medieval wares were deposited into the pits of Periods 4 and 5, but the pottery consists mainly of body sherds which are often abraded, indicative of considerable movement of the ceramics before their deposition on the site.

The most intact group in terms of ceramic integrity is the pit fill *300*, which contains pottery of late 15th- to early 16th-century date. In addition to the Raeren stoneware, the presence of Essex redwares as far north as Thetford is worthy of note, although not surprising. Such wares are part of a long tradition of pottery known more generally as East Anglian redwares, many of which are decorated with slip. It seems that on this occasion, the depositors of the pit-group were mainly using redwares made in Essex, rather than the micaceous redwares from the Waveney valley. Redware products such as slipped cisterns rarely reach sites in Norwich itself however, where Late medieval and transitional wares are by far the most frequent early post-medieval redwares.

The medieval assemblage recovered shows a wide range of fabric types, which reflects the position of the town on the South Norfolk border. It seems that it was far west enough to be receiving ceramics from Cambridgeshire, and far south enough for the products of some of the Essex and London kiln sites to be reaching the site as well, in addition to wares which were made in Norfolk.

Flint

by Sarah Bates

A total of eighteen pieces of struck flint were recovered from the site. They included thirteen small flakes, one with a retouched edge and an irregular sub-square scraper with steep retouch of its distal edge and some retouch of its two sides. The remaining pieces were a spall and two irregular shattered fragments, one of which has traces of mortar adhering to it and might be a fragment from a piece of building material.

The flint indicates activity in the vicinity, probably during the later Neolithic period or Bronze Age. Three pieces came from a buried soil deposit *422* which overlay a feature that was possibly of prehistoric date. The rest of the flint was found residually or in unstratified contexts.

Human Skeletal Remains

by Francesca Boghi

Methodology

The skeletal remains were analysed according to the Standards for data collection from human skeletal remains (Buikstra and Ubelaker 1994) and includes suggestions from the Guidelines to the standards for recording of human remains (Brickley and McKinley 2004). The inventory and all recorded data are available in the site archive. A summary of the results of the analysis is presented below.

Quantity and condition

A total of twenty-one contexts containing skeletal human remains were analysed, including articulated skeletal remains from eight discrete inhumation burials and fourteen contexts containing disarticulated remains. The articulated skeletons exhibit varying levels of preservation (25-75% of bone elements present) regardless of age at death, a medium level of fragmentation and generally none-to-minimal cortical damage.

The relative representation of individual skeletal elements shows a low representation of skulls and dentitions available for study. The skulls and upper body region were the worst affected by truncation by later features and post-depositional disturbance.

The disarticulated remains (10.25 kg) derive from general cleaning (*200* and *201*), the fill of a modern pipe trench (*342*), fill of later pits (*235*, *344*, *387*, *388*) or grave fills (*110*, *323*, *338*, *378*). Skeleton *320*, context *321* and skeleton *356* were found one above the other in the same grave cut *322*. The disarticulated remains from context *321* were found redeposited at the base of skeleton *356* and represent over 75% of bones from a single individual. For this reason, they were analysed with the articulated sample.

Context	Weight (kg)	Contextual information	Description	Minimum number of individuals (MNI)	
				Adult (> 20 years)	Juvenile (< 20 years)
110		Second individual represented in grave *108*	Elements of lower limbs		1
200	0.267	Finds from cleaning	Elements of limbs	1	1
201	0.174	Finds from cleaning	Elements of limbs, pubis, metacarpals	1	
235	0.029	Fill of pit *234*	Elements of humerus, metatarsals, ribs	1	
321	3.087	Secondary burial within grave *322* also containing skeleton *320* (top) and skeleton *356* (bottom)	> 75% of bone elements from 1 adult	1	
323	0.167	Fill of grave *322*. Bones from skeleton *321* and perhaps also *320*	Elements of ribs, pelvis from 1 adults and upper limbs bones from 1 juvenile	1	1
338	0.499	Fill of grave *340*	Elements of ilium, ribs, scapula	1	
342	2.910	Fill of pipe trench *341*	Elements of skull from at least 2 adults, elements of adult and juvenile limb bones	4	2
344	2.134	Fill of large pit *343*	Elements of limbs, vertebrae, ribs, skull	3	3
378	0.020	Fill of grave *380*	Elements of pubis, hands, feet	1	
387	0.313	Fill of pit *386*	2 complete adult skulls, part of 1 juvenile skull, elements of 1 adult pelvis, torso. Elements of upper and lower limb from at least 2 adults	2	1
388	0.203	Fill of pit *389*	1 adult L tibia	1	
427	0.430	Unstratified	Elements of ribs, upper limbs, pelvis, torso, mandible	1	
428	0.017	Unstratified	Elements of vertebrae, ribs, ilium		1

Table 1: Disarticulated Human Skeletal Remains (HSR)

Skeleton	Grave	Completeness	Age at death	Sex	Stature	Pathologies
110	108		Middle adult (35-50 years)	Male (M)	177.2 ± 2.99 (R femur + R tibia)	Cribra orbitalia, sinusitis, possible osteo-artritis of the hip, Schmorl's nodes, some osteo-arthritic changes of the spine, compression fracture of one thoracic vertebra. Dental disease.
318	334	~ 75%	5-10 years	-	-	
319	336	~ 50%	10-15 years	-	-	
320	322	~ 75%	Middle adult (35-50 years)	Female (F)	159.8 ± 3.55 (R femur + R tibia)	Probable Paget's disease, secondary multiple fractures, secondary extra-spinal osteoartritis. Dental disease (enamel hypoplasia, calculus)
321 (disarticulated)	340	> 75%	Young adult (20-35 years)	Female (F)	165.2 ± 3.55 (R femur + R tibia)	Cribra orbitalia, Schmorl's nodes, extraspinal joint disease, possible trauma /congenital hip dislocation. Dental disease (enamel hypoplasia, calculus)
339	354	< 25%	Adult (> 20 years)	Possible Female (F??)	160.1 ± 4.24 (R radius)	
353	322	< 25%	Adult (> 20 years)	Probable Female (F?)	-	
356	380	~ 50%	Middle adult (35-50 years)	Male (M)	-	Dental disease (calculus, periodontal disease)
379		~ 50%	15-20 years	-	-	Non-specific infection (both healing and forming periostitis in the lower limbs and left foot)

Table 2: Articulated skeletons. Summary table

Age and gender

The articulated assemblage was formed by three juveniles (<20 years), and by five adults of both genders. The minimum number of individuals, which combined the articulated and the disarticulated remains and calculated on the basis of the inventory, was of nineteen individuals. It showed the presence of at least eleven additional individuals (two 0-5 years olds, one 5-10 years old, one 15-20 years old and six adults). The minimum number of individuals shows a larger buried group than that indicated by the number of burials and confirms that the burial ground extended beyond the edges of excavation. This buried group showed the expected levels of infant mortality for the period but does not reflect a normal population in that no old adults were present.

Gender could be determined in four adult articulated skeletons and in disarticulated skeleton *321*. One male, two females and one probable female composed the group. Skeleton *339* lacked all morphological features needed for the determination of sex and was classified as a possible female on the basis of metric criteria as in Bass (1987). Stature could be determined in three female adult skeletons. Their mean stature (1.617m) (calculated according to Brickley and McKinley 2004) is slightly higher than the mean for females in late-medieval Britain (1.59m) (Roberts and Cox 2003, 248), though even significant variations can be expected in a very small sample.

Pathological conditions and results of trauma

A number of pathological conditions were noted in both the adult and the juvenile sample. They include anaemia (*cribra orbitalia*), spinal and extra-spinal joint disease as well as dental disease (Table 2). Skeleton *321* was that of a young adult female and though from a secondary deposition was nearly complete and well preserved and showed a marked degree of spinal disease (compression fracture of two thoracic vertebrae, consequent kyphosis and Schmorl's nodes) as well as osteoarthritis of the hip. Skeleton *379*, a 15-20 years old individual, showed signs of recurrent episodes of non-specific infection in both right and left lower limbs and left foot. Unfortunately, as the upper body and the right foot were not available it was not possible to achieve a more precise diagnosis.

Skeleton *320*, a middle adult female-showed skeletal change that have been attributed to Paget's disease, a condition seldom recognised in excavated remains though common in modern British population. The pathological changes across the body included an increased bone density and cortical thickening with encroachment on the medullary cavity in the right radius. Bone enlargement, widened and deformed bone were noted in the right upper and lower limbs and in the left humerus. The mandible also showed enlarged osseous contours but the rest of the skull was unavailable for observation. Several pathological fractures (right and left humerus, right radius, right proximal femur, right proximal tibia) lateral bowing of the right and left humerus and an exaggerated anterior curvature of the right tibia were also recorded. The type, location, asymmetric distribution and typical pattern of deformity in association with frequent pathological fractures are consistent with the changes typical of Paget's disease (Resnick 2002, 1947-1990). The diagnostic features of Paget's disease are the radiographic appearance of the altered bone structure in the long bones and vertebrae. Additional histopathological analysis can offer a conclusive diagnosis (Bell and Piper 2000, 260-261). The differential diagnosis for this condition includes skeletal metastasis, myelofibrosis, fluorosis, mastocytosis, renal osteodystrophy, fibrous *dispasia*, tuberous sclerosis, axial *osteomalacia*, fibrogenesis *imperfecta ossium*, familial expansile osteolysis and hyperostosis generalisata, though other findings are associated with these diseases (Resnick 2002, 1991-1995). The cause of this disease is unknown, though a viral origin has been recently demonstrated (Roberts and Cox 2003, 284).

Dental health and disease

Four adult skeletons had preserved dentitions. The dentitions from these skeletons comprised seventy-six permanent teeth; twelve teeth were lost *ante-mortem* (11.6% of the available tooth positions) and fifteen teeth were lost post-mortem. None of the available teeth were carious and none of the available teeth positions (tot. n.103) had abscesses.

Calculus or calcified plaque that is associated with levels of dental hygiene was evident in 67% of the teeth. Periodontal disease, caused by inflammation of the gingival tissue was recorded in three of the four individuals with preserved dentitions. The changes affected fifteen tooth positions (14.5%). Enamel hypoplasia which indicates a disruption in the enamel formation as a consequence of episodes of stress including fever, starvation, congenital infection and low birth weight, occurs during tooth formation (Lewis, 2000, 46) and affected three of the four adults with preserved dentitions. Seventeen teeth (22.3%) had hypoplastic defects, though it was noted that at times calculus depositions partially masked the hypoplastic defects. Congenital defects included one individual with an extra dental cusp and another individual with a mandibular canine with two roots.

This assemblage of human remains constitute a small-sized, relatively well preserved assemblage comprising eight articulated skeletons and fourteen contexts containing disarticulated remains. They derive from a previously unknown burial ground located at an out-of-town crossroad and their finding is therefore of great interest. With the exception of Paget's disease the rates and range of pathologies encountered in this group are normal for a group of this age composition and period.

Faunal and Environmental Evidence

Animal and Fish Bone

by Julie Curl

The evaluation and excavation produced a total of 7.567kg of faunal remains. Bone was produced from forty-six contexts, mostly of a medieval date. The assemblage is dominated by the butchered remains of cattle and sheep/goat, which were found in far greater numbers than any other species. Elements from equid, pig, dog, cat, rabbit, domestic fowl and goose were found, many of which had been chopped and cut. Generally the assemblage is in good condition, although fragmentary due to butchering and wear, some slight burning was noted in one context. Canid gnawing was noted frequently which would suggest that some of the butchering and food waste was given to domestic or working dogs, or it is possibly as a result of scavenger activity. The majority of the assemblage represents primary and secondary butchering and food waste.

Overall the most common species at this site is sheep/goat. Most of the sheep/goat remains are from adult sheep and were heavily butchered, with much of the waste from these species being primary butchering waste. Some secondary and food waste was also found. Sheep were present in similar numbers to cattle in during the medieval period, but there was a marked increase in the numbers of sheep from post-medieval contexts. The increase in number and frequency of sheep/goat during the post-medieval period

suggests an increased interest in keeping sheep for providing wool for the local trade; in addition to wool, sheep would have also been kept for breeding, horn, milk, lanolin, meat, hides and other by-products.

The cattle remains were predominantly from adults, although a juvenile mandible was recovered from grave *108*. Tooth pathologies on the cattle, including heavy calculus deposits on the teeth and extensive tooth wear, would suggest that the cattle at this site had been kept until they were mature, possibly as traction or milking animals. Further age and stress related pathology was seen on a cattle proximal phalange in post-medieval pit *343*.

Both cattle and sheep/goat bore cut marks indicative of skinning. One medieval quarry pit contained a chopped sheep horncore and a modern pit produced a sheep skull (probably residual) with the horn removed, suggesting that horns may have been removed for working.

Chicken remains were produced from three fills; no butchering marks were observed, but they probably were eaten, as little butchering is needed for chickens. Goose bones were retrieved from two contexts. The remains from post-medieval pit *386* had been butchered. It is probable too that both chicken and goose were kept for a supply of eggs, as this was their primary function during the medieval and post-medieval periods. Equid foot bones were produced from four contexts, these elements along with probable cut marks, would suggest that these horses had at least been skinned, although not necessarily used for human consumption. Sparse remains of dog, cat and rabbit were found; the later is most likely to be from food remains, the cats and dog would have probably been animals kept for domestic purposes or for vermin control.

Conclusion

The purpose of the analysis was to identify the extent and scale of the medieval quarrying, to investigate the evidence for craft activities and also to consider why a number of burials may have taken place here and how this may reflect the social hierarchy and religious beliefs of the medieval population. The analysis has to some extent addressed each of these, and in addition has allowed a pattern of land use to be proposed.

The evidence for quarrying on the site shows that two different methods were employed resulting either in a number of small quarry pits or one large pit, while other areas were not quarried at all. These differences may reflect a variance in the date for the quarries, none of which have been more firmly dated than medieval, and so would reflect differences in the (probably local) demand for such material through this period. It can perhaps be suggested that they may, have originated in the 12th or 13 centuries when the medieval town was thriving, and the demand from the construction of the many religious establishments was high. This may be particularly so for the one very large pit. On the other hand it may reflect land ownership and therefore a variation in an individuals approach and need for quarried materials.

Land use in the south-west part of the site was distinctly different. A boundary ditch divided this area. Three chalk-'lined' pits were found immediately to the north of this. This type of pit is not unusual in Thetford other examples having been found at sites across the town: Mill Lane (Wallis 2004b, 29), Brandon Road (Dallas 1993, 45), Redcastle Furze (Andrews 1995, 78), Ancient House Museum (Wallis in prep. a). Their use has never been clearly defined but in most of these cases it has been suggested that they be associated with storage and as in some cases where possible malting ovens have been found nearby, with brewing. To the south of the boundary two small ovens represented the earliest activity. The use for these is unknown, although the paucity of evidence for burning suggests that these were only subject to gentle heating. A chalk-lined feature of similar plan and profile (but significantly deeper) has been excavated at the site the Library in Thetford (Crowson 1999). The conversion of one of the ovens to a daub-mixing pit indicates the likely presence of medieval buildings nearby, possibly on the adjacent street frontages. A number of small quarry pits, many of which exhibited a noticeable uniformity in their form and fills, were also located in this part of the site to the south of the boundary ditch.

The most remarkable discovery during this excavation was the presence of a number of burials. A date for these is indicated by one iron find, a 14th-century 'locking buckle' from the fill of one of the graves. The presence of these outside the limits of the town raises the question as to why a series of burials should be made at this location.

One consideration is that they may be associated with a gallows. This site is a typical location for a gibbert being at a major crossroads and beyond the core of the town. However the location of two other gallows sites on the northern fringe of Thetford have already been identified. One, to the east (NHER 34733), is marked on Martins 1760 plan of Thetford (Crosby 1986, plate 1). The other site, marked on Ordnance Survey maps as Gallows Hill, is alongside the Mundford Road to the west. Excavation here uncovered post-medieval skeletons (NHER 5744).

An indicator of the status of the person during life can is often reflected in the rites afforded to them at the time of burial. Excavation of one known burial ground of criminals at St Margaret *in combusto*, Norwich

(Stirland in prep.) uncovered a high proportion of unusual burials that included variation in alignments, group burials, non-supine burials and those with objects placed in their mouths. Another possible gallows burial site of the medieval period has been excavated on the edge of Brandon, Suffolk (Tester 2004) where burials were predominantly male, with variation in alignment and in one case a skull placed between the legs. The only 'unusual' characteristic noted in the limited sample at Croxton Road was that of multiple burials in one grave, a phenomenon that on its own is not an unusual occurrence (cf Ormesby, Wallis in prep. b). This evidence then does not support the interpretation of the Croxton Road burials as criminal burials. It is necessary therefore to consider whether there is evidence to support these inhumations being part of a consecrated graveyard. The uniformity of the layout of the burials indicates that this is likely, as do the skeletal remains themselves, which appear to represent a cross-section of a 'normal' medieval population. If this is accepted then which of Thetford's medieval churches may have had part of their graveyard in this location? The obvious consideration is St Andrew's, the church nearest to the site. This is one of Thetford's gate churches that were located to the south of the site, just within the medieval town.

Very little is known about St Andrew's (see Davison 1993, 208 for a more complete summary from which these details are taken) but by 1338 it had been impropriated by the Cannons' of the Holy Sepulchre. By 1368 it has been suggested that it had lost its parochial status, as it had no pyx (Watkin 1947) although bequests continued to be made to St Andrew's until the early 16th century. In 1546 the church was amalgamated with St Peter and the site of the church became common land. A separate document indicates that the tithes were to go to the parson of St Cuthbert's. This implies that the parish of St Andrews was split between St Cuthbert's and St Peter's, a situation which can be read from the Tithe map of 1846 (Davison 1993, fig.173). This shows St Peter's owning the site of St Andrew's church, while St Cuthbert's hold land immediately to the south, west and north of the church, including the area of excavation, and implying that the area of the burials could once have been part of St Andrew's parish. If this is accepted the next question is why did St Andrew's need to expand its graveyard to such an extent that land outside the town defences had to be utilised?

St Andrews church occupied a very restricted site, bordered to the west and north by major routeways and the Earl's seat to the east and south. It is possible that this became a problem, particularly in times when there was an unusually high death rate. A sharp increase in the number of deaths will have occurred at the time of the plague, which swept through Norfolk during 1349. Little detail is known of the extent to which Thetford was affected, but it can be presumed that the number of deaths in the area was similar to that in the rest of the county where between a third and a half of the population died (Alan Davison pers com.). This mid 14th century date accords well with the single datable artefact found within the graves.

This excavation has shown that the area beyond the heart of the town was never densely occupied, but was exploited to provide for the medieval population, either by the quarrying of resources for building materials or providing land for burials in times of crisis.

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