Medieval development and the cemetery of the Church of the Holy Trinity, Logies Lane, St Andrews

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with contributions by Amanda Cardy, Peter Cheer, Catherine Smith and Adrian Cox

Historical background

St Andrews was established as a non-royal burgh by Bishop Robert between AD 1144 and 1153 and developed westwards from the eastern wedge-shaped promontory (Illus 1). The origins of the town almost certainly lie in its development as an early religious centre, the focus of which lay at the eastern extent of the present burgh, close to the site of the castle and the site presently occupied by the cathedral ruin and its grounds. Traditional accounts pertaining to this early religious focus are found in the legends of three different saints, St Cainich, St Regulus and St Adrian (Skene 1860–62, 301).

There has been some debate as to the early origins of the secular settlement and the subsequent development of the medieval burgh. Dr Nicholas Brooks and Graeme Whittington suggest that the burgh developed in four stages with an early market as its focus at the eastern extent of North Street. The burgh then grew westwards with North and South Street being roughly contemporary, developing during the 12th century (Brooks and Whittington 1977, 278). Dr Ronald Cant has provided an alternative view, suggesting that the earliest secular settlement grew southwards down North and South Castle Street and Abbey Street (Cant 1971). Whichever theory is correct, Market Street would have developed later from a back lane separating the backlands of North and South Street possibly sometime in the late 12th century.

There is a record of a charter in the 1190s of Roger, Bishop elect of St Andrews, allowing the transfer of the Market Cross from its early location, thought to have been at North Street, to the lands of Lambin, which are thought to have been in the vicinity of Logies Lane (Turner Simpson and Stevenson 1981, 6). Logies Lane most likely developed later still in order to allow passage from South Street to the new market area.

The original parish church, the Church of the Holy Trinity, lay within the cathedral precinct on the east side of the burgh. It is thought to have been established and recognised as the parish church by the early 1160s. Various records confirm this, such as an undated charter of Malcolm IV (AD 1153–1165), and a mention of Bishop Richard granting the church to the Augustinian Priory as a vicarage in AD 1163 (Turner Simpson and Stevenson 1981, 28). This building became inadequate and inconvenient for the needs of the population sometime in the late 14th century, and the church was transferred to the site of the present parish church at South Street. This also helped to maintain the exclusiveness of the original enclosed precinct for the use of the Augustinian priors.

The new Church of the Holy Trinity was built between 1410 and 1412. The land on which the church was built was granted by Sir William Lindsay in an indenture dated 14th November 1410, in which he gave

All of his lands lying in the city of St Andrews in South Street on the north side thereof, between the lands of the heirs of the deceased Rankoner braboner on the west, and the common vennel leading to the Market Cross of the said city on the east, lately purchased by him... so that the parish church might be transferred for its betterment onto the said lands... (Rankin 1955, 22).
Church Square was granted to the church in 1430 by Bishop Wardlaw for the enlargement of the cemetery. The church and cemetery were then enclosed by a wall to the south, east and west, and by a row of houses to the north. The churchyard was closed to further interments at the beginning of the Reformation in the second half of the 16th century.

Logies Lane, or Logies Wynd as it was known until the mid-19th century, was then widened and the cemetery cobbled over. In the early part of the 20th-century tarmac was laid over the cobbles and it is now a pedestrianised area.

The town of St Andrews has preserved more of its medieval buildings and layout than any other major Scottish town of the Middle Ages (Brooks and Whittington 1977, 278). This is mainly due to the lack of substantial redevelopment in the historic core of the burgh from the 19th century to the present day: the type of development that so often has reduced the archaeological resource in other Scottish burghs. For this reason St Andrews
offers an ideal opportunity for the study of medieval burgh development.

**Excavation background**

In December 1988, SUAT carried out an archaeological evaluation close to the entrance of the District Library in Logies Lane. This work was required as part of an investigation by Fife Regional Council to determine the viability of a proposed environmental improvement scheme. Articulated human skeletons were uncovered at a depth of only 0.2m below the existing road surface. A small rescue excavation was then carried out, which established that the human remains dated from the medieval period, confirming the presence of a cemetery surrounding the Church of the Holy Trinity (Clark 1988).

As subsequent work during the improvement scheme was likely to displace further burials, this excavation was initiated. The main objective was to recover all the human skeletal remains which would otherwise be destroyed. It was hoped that through specialist examination of these remains data on the population structure could be retrieved and information relating to possible disease and diet indicators could be identified. This would provide a revealing insight into the character of the population and could provide a valuable contribution to archaeological and socio-historical research on early St Andrews. Of particular interest would be the opportunity to compare and contrast the data.
from this excavation with that recovered from another cemetery site located in St Andrews, at Kirkhill, which was excavated in 1980 (Wordsworth and Clark 1997). Although the Logies Lane assemblage is of secular origin and Kirkhill of a primarily monastic origin, together they reflect the lifestyles of the burgh’s population spanning over eleven centuries, from the 5th to the mid-16th centuries. Comparisons could also be made between the Logies Lane assemblage and those from contemporary Scottish contexts, such as Whithorn (Cardy forthcoming), Aberdeen and Linlithgow (Cross and Bruce 1989), which would highlight trends within the population on a countrywide basis.

In addition, the depth of disturbance which was anticipated was likely to provide an opportunity to investigate whether the graveyard had destroyed all trace of earlier activity on the site. Evidence of such earlier activity might help to shed light on how this part of the medieval burgh developed and, in turn, help to substantiate one of the two possible alternatives for early burgh expansion.

The excavation (Illus 2)

Excavations were mainly focused in two narrow pipe trenches, which had a maximum width of only 0.6m. The first trench was cut along the length of Logies Lane from South Street to Market Street, designated sub-divisions A, B, C and F. The second trench, designated E was located in Church Square. A small trench, designated D, was opened on Church Street, but only a watching brief was carried out as it lay outside the project brief. Seventeen smaller trenches were cut to link the mains water pipe to individual properties. Archaeological remains were identified in only three of these trenches, designated G, H and J. Additionally, as part of environmental improvement work, two tree pits were excavated, both measuring 2.5 sq m. One was located at the east end of Church Square, Tree Pit 1, and the other at the south end of Logies Lane, Tree Pit 2.

The excavation was carried out in two phases of work. The first phase (Site Code – SA12) investigated the route of the mains water pipe trenches A – F, and tree pits 1 and 2. It was carried out during September and October 1991 and was directed by Colm J Moloney. The second phase (SA13), carried out in November 1991, investigated the routes of the connecting pipes from the mains to individual properties, trenches G – J, and was directed by Alan Williams.

Method

The existing street surface and foundations, consisting of paving slabs or tarmac, overlying sand, hardcore and rubble, were removed by machine until the top horizon of the archaeology was encountered. At that level, excavation then continued by hand, reducing the soil profile to the maximum depth of disturbance intended by the Water and Drainage Division, or to the subsoil, whichever was reached first. A watching brief was carried out in areas outside the brief of the project, which were disturbed by the activities of the Water and Drainage Division.

The identification of grave cuts in such narrow trenches was difficult as the graveyard soil had been considerably disturbed by 150 years of recurring burials. For this reason the graveyard soil was excavated in spits 0.15m deep. Nearly all of the skeletons found were from Trench A, which was aligned north to south and so at a right angle to the direction of burial. Unfortunately, only those portions of the skeletons exposed in the 0.6m wide trench could be excavated.

The archaeological sequence

The archaeological sequence has been divided into five separate phases of activity spanning some 600–800 years.

Phase 1. South Street and backland activity (Illus 3)

The earliest evidence of human occupation on the site was represented by a series of heavily truncated deposits and cut features directly overlying and cut into an undisturbed raised beach deposit comprising coarse orange sand. This undisturbed deposit was found at approximately 20m OD across the site.

At the southern extent of Trench A, underlying the present South Street, was a medieval precursor to this street comprising the disturbed remains of a metallised surface (103). This surface consisted of a dark clay loam that contained pebbles and sandstone fragments, some of which showed a high degree of polish. There was a thin build up of dark silty sand and orange sand compressed over this surface.

Approximately 6m to the north of the remnant street surface was a linear cut (247), 0.8m wide and 0.5m deep. This cut had almost vertical sides meeting a flat base. The shape and form of the cut, combined with its silty primary fill, indicates that it may have been a drainage gully associated with the early South Street.

Further to the north in Trench A were three heavily truncated, cut features. The most noteworthy of these was a circular pit (217), 1.1m in diameter, which contained a fill (218) of cess material. Within the cess were two almost complete cooking pots, deposited upright, one of which has been illustrated (Illus 9). The fabric of
the pottery has been identified as East Coast White Gritty ware, confirming a pre-15th century date of deposition (see Cheer below). The two other features represented a cut of indeterminate function (245) and a probable post-hole (233).

In Trench F, three truncated cut features were found. The most substantial of these comprised a shallow L-shaped slot (292), 0.3m wide, which may represent a beam slot. Close to this L-shaped feature, on its north western side, were two small
features representing a post-hole (288) and a stake hole (290). It is difficult to speculate on the form or function of these features when examining such a limited area and with so little evidence. The features may not be associated, or they may bear some relation to each other and may represent the south-western corner of a wooden structure.

In Trench H, a circular pit (64), 1.6m in diameter and 0.9m in depth, was found. This pit contained a single inorganic fill of dark sandy loam. It is unclear what function this pit may have served. Evidence for a possible gully feature (52) was also recorded in this trench. The remains were very heavily truncated and, therefore, little could be determined about its shape or form.

In Tree Pit 1 was an irregular, roughly circular post-hole, 0.8m in diameter (268). At its base was a horizontal sandstone block which may have functioned as a post pad. Overlying, and partially filling this post-hole, was a layer of silty sand and cesso-like material.

Throughout Trenches A, F, G and H and Tree Pits 1 and 2 were truncated deposits of buried garden soil and isolated small patches of midden material. Pottery sherds recovered from these deposits also indicate a pre-15th century date of deposition.

Discussion. Due to the isolated and badly truncated nature of the archaeological remains in Phase 1, it is impossible to arrive at any specific conclusions. It is clear, however, that South Street had been established and that the land was being utilised before the 15th century. It is possible that some of the cut features found in the backlands relate to insubstantial wooden structures of unknown function.

Phase 2. A developed frontage (Illus 4 and 5)

At the beginning of this phase a number of thinly spread sand and midden levelling deposits were laid, sealing the deposits and features identified in Phase 1. This was in preparation for the construction of a substantial stone building located close to the South Street frontage.

Unfortunately the remains of this building had been heavily disturbed by later activity, but both the southern frontage wall (40), and the northern rear wall (159) could be identified. Both walls were 2m thick. Only two courses of the walls survived, comprising a rubble core of small and medium fragments of sandstone bonded with a silty sand. The walls were faced on both sides with roughly squared blocks of white sandstone, set on a pink clay bedding. The internal width of the building, from front to rear, was c 7m.

Within this building was a layer of compacted silty sand (160). This layer probably represents the bedding for an internal floor surface or occupation level. A substantial post-pit (170), measuring 1.7m x 0.5m, was cut through this floor surface. The fill of the post-pit contained large rounded boulders, packed and wedged solid with smaller, flatter fragments. No post-pipe was recorded but it is possible that the post-pit contained a supporting timber post for a ridge roof.

Evidence of a small hearth (243) was also identified within the building on the northern side of post-pit 170. This hearth comprised a circular arrangement of burnt red clay fragments surrounded by, and enclosing, deposits of ash. Adjacent to this was a patch of bright red silty sand which had been affected by heat.

Located almost 7m to the south of the building, overlying thinly spread midden deposits, was a layer of compacted stone and clay, which probably relates to a later South Street road surface (89, 90 and 94). Between this remnant street surface and the building was a heavily truncated cut (125). The fill of this cut consisted of lenses of cesso, sand and clay. This feature may represent a single cesso pit. Alternatively, due to its position, it may represent a sewer associated with the road surface.

Discussion. The foundation remains found on the South Street frontage indicate that there was a developed street frontage between Logies Lane and Church Street prior to 1410. This can be determined because the stone building pre-dates the Church of the Holy Trinity, which was built in the early part of the 15th century. Such a substantial stone building, dating from this early period, is unusual when set within the context of current knowledge regarding the inception of stone-built town houses during the medieval period. From the evidence of archaeological and historical sources it can be seen that wood, thatch and wattle were the predominant building materials of the period (Lynch, Spearman and Stell 1988, 73). Even by the time of the Reformation all-stone construction was likely to have been the exception rather than the rule. Exceptions to this rule may be secular buildings of some importance or those belonging to wealthy merchants. They could also have been built for a specific industrial use. As there is no clear evidence for the building being utilised for an industrial purpose it most likely represents a town house. A building of such a type, pre-dating the 15th century, is an indicator of the wealth and status of the inhabitants of this part of the burgh during that period. This is in keeping with its location close to the relocated Market Cross, an area most likely populated by merchants.

Phase 3. The relocation of the Church of the Holy Trinity (Illus 6)

The beginning of this phase coincides with the con-
Ilus 4. Phase 2: a developed frontage.

struction of the new Church of the Holy Trinity. In preparation for this development the building identified in Phase 2 was first demolished. Evidence for this was found in Trench A, overlying the building foundation remains, as a deposit of compacted demolition rubble (93), although it is also possible that this rubble layer represents construction debris from the church. Whichever is the case, from the date of the indenture by William Lindsay we know that this activity took place in
the years immediately after 1410. To the south of this rubble debris were two clearly defined post-holes (92 and 96), possibly representing the line of a perimeter fence defining the southern extent of the grounds associated with the church. Unfortunately, this was impossible to confirm due to the narrowness of the excavation trench. It must be noted, however, that they do lie in close proximity to part of the perimeter fence marked on Geddys's town plan of 1580. Outside this fence, underlying South Street, was the remnant of a third metalled road surface. This surface was more substantial.

than the earlier surfaces and comprised large slabs of yellow sandstone and polished cobbles in a pink clay bedding (73 and 84).

Between the fence and the road surface was a linear feature 1.2m wide and 0.6m in depth (37).

This feature was of a similar form and was filled by a similar silting sequence to that of drainage gully 247 identified in Phase 1, and is therefore similarly interpreted as a drainage gully. If this interpretation is correct, then it is likely that
Illus 7. Phase 4: the cemetery of the Church of the Holy Trinity (groups 1–4).

South Street shifted slightly to the south at this time by some 2–3m. Located between this feature and the perimeter fence were isolated small patches of midden or cess like material (37 and 38).

Discussion. It is obvious that this part of South Street was subject to substantial change in the early 1400s. An already developed frontage had to give way in order for the new Church of the Holy
Illus 8. Phase 4: the cemetery of the Church of the Holy Trinity (groups 5–8).

Trinity to be established. Land that may have been utilised by merchants was purchased and then transferred for use by the church. To demolish such substantial buildings seems an unusual step and may indicate that the surrounding area was also so well developed that there was no suitable vacant site available for the church.

At the time of this major development there
is evidence that South Street was upgraded from a rough metalled surface to a heavier-duty surface. This is another indicator of the expansion of the medieval burgh in the 14th and 15th centuries.

Phase 4. The cemetery of the Church of the Holy Trinity (Illus 7 and 8)

This phase of activity began immediately after the building of the church was completed. The cemetery, in part defined by the perimeter fence identified in Phase 3, lay on the western and northern sides of the church.

For ease of reporting, the cemetery has been divided into eight separate groups within Phase 4. These groupings represent eight different layers of burial, which are not necessarily chronological divisions. They are illustrated sequentially from the lowest to the uppermost (Illus 7 and 8).

The burials were all cut into, and through, an imported graveyard soil of dark grey, sandy silt, which had a maximum depth of 1m. This graveyard soil sealed the demolition and construction debris identified in Phase 3.

The majority of the inhumations conformed to standard Christian burial practice, that is extended, supine, with the head to the west and the feet to the east and with no grave goods. Slight exceptions to this rule were a series of seven burials identified in group 3 (Illus 7) that were aligned south-west to north-east. These burials may respect the orientation of a path leading to the west porch of the church. One other exception was burial no 199, which lay face down. Only two burials could be positively identified as being buried in wooden coffins. The occurrence of small bronze pins in association with skeletal remains indicates that burial in shrouds would have been common practice.

Phase 5. Post-Reformation to the present day

The beginning of this phase represents the closure of the cemetery for interments in the middle of the 16th century and the subsequent cobbled over of the area, resulting in the widening of Logies Lane. This last phase represents over 400 years of activity, when, apart from cosmetic changes, very little else altered in the layout of area.

Both Logies Lane and South Street have been resurfaced, probably several times, resulting in the presence of remains of various layers of cobbled, stone setts and, finally, tarmac. The area has also been heavily disturbed by a series of Victorian drainage features and 20th-century services.

The finds

The human skeletal remains

Amanda Cardy

A total number of 121 individuals was recovered during the excavation: 87 in Trench A; 12 in Trench H; 5 in Trench G; 3 in Tree Pit 1; and 1 in Trench J. The amount and type of information obtained from the groupings as a whole was influenced by the condition of the remains. Unfortunately, due to the width restrictions of the trenches and their alignment no complete skeletons were recovered. The condition of the partial skeletal remains varied from very poor to good, with most of the remains being moderately preserved. Of the 121 individuals, 31 (26%) were immature and 90 (74%) were adult. The proportion of immature skeletons recovered from archaeological sites varies greatly: 20% at Kirkhill, St Andrews (Bruce et al 1997); 30% at St Helen-on-the-Walls, York (Dawes and Magilton 1980); 32% at Whithorn (Cardy forthcoming); and 58% at Linlithgow (Cross and Bruce 1989). These bald figures do not reveal the large differences in the proportions of child mortality at different ages. The Logies Lane assemblage demonstrates that of the total 26% of immature individuals represented, 3% died close to birth, 22% died as children and 66% died as juveniles. This contrasts with the nearby Kirkhill assemblage where 33% died close to birth, 54% died as children and only 13% died as juveniles. It is unlikely that such different mortality patterns reflect true population differences. Sampling bias is a more likely reason for such differences, especially when considering the restricted nature of the Logies Lane excavation. Of the 74% of adults identified, only 61% could be aged beyond the broad category of adult. Two thirds of those died before middle age and only 4% survived to late middle age or old age. Between 5% and 8% of adults survived to old age at Whithorn (Cardy forthcoming), Aberdeen and Linlithgow (Cross and Bruce 1989).

No attempt was made to sex immature individuals and only 52 of the 90 adult individuals could be sexed. From these it could be established that the sex of the population was divided almost
equally (24 females and 28 males).

The stature of the population that could be estimated from the partial remains resulted in a mean for males of 169 cm (5'6 1/2") with a range of 160–177 cm. The mean for females was 157cm (5'2") with a range of 151–158 cm. It should be noted that the female sample size where stature could be established was very small, only 4, compared to a male sample size of 14. These mean statures fit well with those identified at other contemporary Scottish sites.

The cause of death could not be positively determined for any skeleton. Most individuals from urban archaeological populations are likely to have died of infectious diseases, which kill quickly and leave no bony trace. Archaeological evidence for infectious disease was found, however, in association with burial no 172 (Illus 7, group 4). This burial was covered with a large quantity of lime, indicating that the individual required a quicker than normal decomposition. This would have been necessary if the body was putrefying or, more likely, if the individual had died of a contagious disease. The use of lime for such a purpose is known to have occurred as late as the 18th century when cholera victims were buried with quicklime. Some evidence of infectious disease was present in other individuals. Of these, two in particular; skeletons no 183 and no 199 (interestingly the skeleton buried face down) had evidence of bone inflammation. This kind of inflammation is characteristic of diseases such as tuberculosis and typhoid, although the exact causal organism could not be positively identified.

Evidence of pathological conditions was detected in the Logies Lane assemblage. Conditions such as healed fractures, bony roughening, osteochondritis dissecans and degenerative joint disease were present. Males predominantly had the most obviously traumatic injuries, which is in keeping with the evidence recovered from other medieval sites such as Aberdeen and Linlithgow (Cross and Bruce 1989), Kirkhill (Bruce et al 1997) and Whithorn (Cardy forthcoming). Interestingly, evidence of a condition known as Schmorl's nodes was present in approximately equal numbers of men and women; 57% of males and possible males and 54% of females and possible females. Schmorl's nodes occur on the spine and develop in response to trauma, usually thought to be of a sudden, compressive nature such as in heavy lifting, particularly in young adults. The fact that this condition affects both male and female skeletons in almost equal numbers demonstrates that the sexual division of heavy labour was equitable. Men and women most likely shared much of the heavy work although the precise nature of the tasks need not have been the same.

All of the skeletal remains that had dentition that could be examined showed signs of diet deficiency. This was mainly in the form of enamel hypoplasia, which is represented by horizontal grooves or pits that run around the tooth. These lines represent 'upsets' which occur when the tooth is developing and are indications of sporadic iron deficiency anaemia. A second indicator of anaemia involves the pitting of the eye sockets, a condition known as cribra orbitalia. This condition was present in a third of the assemblage. A further diet indicator, in the form of dental caries, could be ascertained from the skeletal remains. Caries was present in just over half of the remains examined and was most commonly found at the neck of the molar teeth rather than on the occlusal (chewing) surface. This indicates that the diet was unrefined as this causes rapid wear on the chewing surface reducing the chance of food debris settling and causing caries. Debris, however, could still settle between the teeth causing caries close to the gum.

Discussion

The area of the cemetery most intensively used during its approximately 150 years of activity lay adjacent to the western porch of the church. It can be seen from the remains found in Trenches F, G and J, and TP1 that the cemetery was used less intensively further away from the western porch. The single burial found in Trench J may indicate that the cemetery contracted slightly soon after its inception. This is possible as, from J Geddy's town plan (c 1580), it can be seen that the burial in Trench J actually lies outwith the 16th-century cemetery perimeter.

The age and sex assessments from this assemblage of skeletal remains imply that the cemetery was used for the general population, although infants were undoubtedly under-represented, perhaps having had their own area of burial. The proportion of immature deaths and the few adults apparently reaching old age indicates that environmental conditions during life were far from ideal. It has been established that frequent episodes of malnutrition and ill health affected almost everyone. This is in broad agreement with the results from other more or less contemporary populations and also the earlier site at Kirkhill.

The skeletal evidence from this group indicate that the population had limited access to food resources and was probably subject to frequent episodes of 'stress' during childhood which restricted growth. Men and women were similarly exposed to trauma in their lives, but males were more likely to suffer the effects of accidents. However, there was a tendency for women to die at an earlier age than men. This may be due to the physical stresses associated with repeated pregnancy, childbirth and lactation.
The pottery (Illus 9)

Peter Cheer

The importance of this assemblage lies in the material that can be confidently said to pre-date the construction of the church in 1410. Thin section analysis has shown that White Gritty ware was made in Fife (Haggerty et al 1984, 395–7) and although material from this site has only been subjected to visual examination it is assumed in this report to be of local manufacture. Until now, the study of White Gritty ware from Fife has suffered from a lack of well-dated material such as the cooking pots from context 218, the fill of cess pit 217 (Phase 1; nos 1, 2, 3) which therefore supplement the information in Hall 1997.

Nearly all of the sherds from this pit showed external sooting to some extent, most heavily on base sherds. This sooting must have been deposited on the vessels before destruction, most probably during their use as cooking vessels. However, the nature of parts of the surface soot deposits suggested that some of the sherds had not seen extensive handling between the deposition of the soot and arrival in their archaeological context.

An unstratified rim sherd from a White Gritty ware vessel identical to no 2 has been found at Kirk Close in Perth (MacAskill et al 1987, pottery catalogue no 246). The Kirk Close excavation revealed mid- to late 13th- and 14th-century deposits (Blanchard 1987, 18–45) that would not be out of place with the pre-1410 date for this form shown here.

Catalogue

   SA12; Context 218; Find no 00001 (Illus 9).

2. Filled cooking pot rim with external sooting. White Gritty ware.
   SA12; Context 218; Find no 00002.

   SA12; Context 218; Find no 00003.

The animal bone

Catherine Smith

Animal bone was recovered only from Phases 4 (the cemetery, c 1410 to late 16th century) and 5 (post-Reformation to the present day). The species found in Phase 4 were mostly domestic, being from cattle, sheep/goat, pig, horse, dog, domestic fowl and probable domestic goose. Fish bones and a single bone from a mouse-sized small mammal were also found in Phase 4, as were a few stray fragmentary human bones. Species represented in Phase 5 were cattle, sheep/goat, pig and cat. The numbers of bones found in each phase are shown in Table 1 while the minimum numbers of animals present, based on the most commonly occurring bone in each phase, are shown in Table 2.

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<thead>
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<th>Table 1. Numbers of animal bones (including teeth), by phase.</th>
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<td>Phase 4</td>
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<td>Cattle</td>
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<td>Large ungulate</td>
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<td>Small ungulate</td>
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<td>Sub-total</td>
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<td>Total</td>
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Somewhat unusually for a Scottish urban site of the medieval period, the number of sheep/goat bones in Phase 4 is equal to that of cattle. However, the very small sample size (162 bones in total) is probably to blame for the apparent discrepancy, and it would be unwise to infer a preference for mutton over beef based on such a small assemblage. In Phase 5 the quantity of bones recovered was even smaller (15 in total).

Evidence of butchery

Evidence of butchery was not plentiful, due perhaps to the generally small size of the frag-
Table 2. Minimum numbers of animals based on the most commonly occurring bones in each phase.

<table>
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<tr>
<th>Minimum number</th>
<th>Phase 4</th>
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<tr>
<td>Cattle</td>
<td>5</td>
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<td>Sheep/goat</td>
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<td>Rabbit</td>
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<td>Domestic fowl</td>
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<td>Goose</td>
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Pathological bone

A horse calcaneum from Phase 4 was affected by pitting and erosion of the articular facets for the astragalus as well as new bone formation on the shaft of the bone, suggestive of an infection of the hock joint. The animal probably exhibited some degree of lameness.

One cattle phalange from Phase 4 was affected by a small interarticular lesion in the proximal articular surface similar to those described by Baker and Brothwell (1980: 109–14) and commonly seen in the feet of cattle from medieval sites throughout Scotland.

In Phase 5 a sheep cervical vertebra exhibited massive exostoses around the centrum accompanied by small lesions on both the proximal and distal articular surfaces of the centrum. It is likely that the new bone formation may have affected mobility of the joint and hence of the spine at this point of the animal’s neck.

Conclusion

The animal bone assemblage from Logie’s Lane, although small, exhibits features in common with other, larger, samples from sites throughout medieval Scotland, particularly in the reliance on the domestic livestock, cattle and sheep. The absence of evidence of utilisation of wild species such as red and roe deer indicates that meat produced as a by-product of the hide and wool trade, of vital importance to the economy of the medieval burghs, was the major meat source of protein for the inhabitants of the site.

Illus 10. Artefacts: nos 1 and 4, scale 1:1; nos 9 and 10, scale 1:2.

Artefacts (Illus 10)

Adrian Cox

A small assemblage of artefacts was recovered from these excavations. Those associated with inhumations include a copper-alloy pin (Catalogue no 2) and a number of iron nails, found in isolation from each other, which may relate to coffin burials. The pin may have been used to secure a shroud, but as it is the only example found in direct association with a burial its presence cannot be interpreted as an indication that shroud burial was common practice. Another pin of a similar type (no 3) was found in the fill of a linear cut which post-
dated the graveyard and may possibly have originated in the graveyard deposits. A further example, also of a similar type (no 4), came from one of the earliest deposits encountered, a buried topsoil pre-dating the graveyard. Each pin was made from drawn wire, its head formed by wrapping a short length of wire tightly around the top of the shaft. The heads of all three pins exhibit signs of pinching to secure them to the shafts.

Apart from the pins, the only clothing accessory recovered was a copper-alloy lace tag fragment (no 1), which came from deposits overlying the graveyard soil.

Other finds include a possible horseshoe fragment (no 9), found in a midden deposit lying outside the southern limits of the graveyard, a stone disc which may have functioned as a counter (no 10) and a small fragment from a decorative stone moulding (no 11). A folded lead-alloy strip (no 7) and a bottle base (no 12) came from post-graveyard deposits.

Catalogue

A catalogue of the artefacts is presented below by material type. Each of the catalogue entries includes a site code (either SA12 or SA13), referring to the phase of excavation to which the artefact belongs. Measurements are expressed to the nearest 1mm, except where they are less than this, when they have been expressed to the nearest 0.1mm.

Copper-alloy objects

1. Lace tag fragment. Length 11mm; surviving width 2mm.
   Fragment of a lace tag, with its long edges folded inward at one end.
   SA12; Context 13; Find no 1.

2. Pin. Length 35mm; width at head 2mm; diameter of shaft 0.8mm.
   Complete pin with a wire-wound head and a circular cross-sectioned shaft. (Not illustrated.)
   SA12; Context 55; Find no 11.

3. Pin. Length if straightened c 31mm; width at head 2mm; diameter of shaft 0.8mm.
   Pin in two conjoining fragments with a wire-wound head and a circular cross-sectioned shaft. The shaft has a 90° bend at approximately mid-shaft. (Not illustrated.)
   SA13; Context 16; Find no 5.

4. Pin. Length 36mm; width at head 2mm; diameter of shaft 0.8mm.
   Complete pin with a wire-wound head and a circular cross-sectioned shaft. Traces of a white metal plating survive on the shaft.
   SA13; Context 49; Find no 4.

5. Wire. Length 30mm; diameter 2mm.
   Fragment of circular cross-sectioned wire. (Not illustrated.)
   SA12; Context 43; Find no 8.

6. Wire. Length 82mm; diameter 2mm.
   Fragment of circular cross-sectioned wire, irregularly bent. (Not illustrated.)
   SA12; Context 50; Find no 9.

Lead-alloy objects

7. Folded strip. Length (folded) 57mm; width 46mm; thickness (folded) 15mm.
   Tightly folded strip. (Not illustrated.)
   SA13; Context 41; Find no 12.

Iron objects

8. Curved bar. Length 62mm; width 10mm; thickness 7mm.
   Curved bar of irregular cross-section, increasing in thickness towards one end. (Not illustrated.)
   SA12; Context 103; Find no 10.

9. Horseshoe fragment. Length 45mm; width 17mm; thickness 12mm.
   Possible horseshoe fragment with a pronounced cailin.
   SA12; Context 72; Find no 3.

Stone objects

10. Disc. Max diameter 33mm; thickness 5mm.
    Roughly circular disc in micaceous stone, abraded at its edges.
    SA12; Context 52; Find no 2.

11. Moulding. Length 80mm; width 104mm; thickness 54mm.
    Fragment of a moulding in medium-grained, white sandstone with one convex face, one flat face and broken edges. (Not illustrated.)
    SA12; Context 157; Find no 6.

Glass

12. Bottle base. Surviving depth 72mm; max diameter 84mm.
    Circular bottle base in green glass. The kicked-up base bears a small pontil scar at its centre. The surface has been subject to only slight deterioration. (Not illustrated.)
    SA12; Context 53; Find no 7.
Conclusion

These excavations at Logies Lane have demonstrated how much can be achieved from what, at the outset, would appear to be a very limited opportunity for excavation. Evidence of activity pre-dating the cemetery was found and provided a useful addition to knowledge of the development of this part of the burgh.

The isolated remains identified in Phase 1 clearly indicate that this part of the burgh was developed and utilised prior to the 14th century. Datable pottery provides a time bracket for such activity between the 13th and 15th centuries. It is likely that the remains relating to South Street development, found in Phase 1, date from the earliest part of this time bracket. This is in keeping with the time scale for the development stages suggested by Brooks and Whittington (1977).

The evidence for an early stone structure, identified in Phase 2, shows that this area had been subject to significant development by the 14th century. The nature of such a stone structure from such an early date indicates that this part of South Street must have been considered important. This is also in keeping with what is known about the burgh’s development, as this part of South Street lay close to the relocated Market Cross and therefore would be the area most likely to house merchants.

The primary objective of the excavation was to recover all the human remains from the trenches being cut through the cemetery associated with the Church of the Holy Trinity. The evidence has shown that once the church was established at its new location the associated cemetery was intensively used; in one metre’s depth of soil, eight separate layers of burial were identified. The skeletal assemblage represents a cross-section of the population, as both sexes and all age groups, with the exception of the very young, are represented. It is possible that the very young had their own place of burial but it is most likely that the under-representation can be attributed to sampling bias.

The pattern that emerges from the detailed skeletal study shows that the population must have had to contend with a generally ‘harsh’ environment. This probably accounts for the high mortality rate in children and the short life span and stature of the adults. An early exposure to arduous physical activity must have been a part of many peoples’ lives.

With regard to diet, it is interesting to compare the results from the study of the human bone assemblage and the animal bone assemblage. Although both are small samples when compared to some other excavations in Scotland, they still provide a useful comparison. It is apparent from the animal bone assemblage that meat and dairy produce from domestic livestock was available. However, it is not necessarily the case that this meat would supply the local population, as animal husbandry would have been dependent on economic factors governing the hide and wool trade. Meat was in effect a by-product of these animal-based industries. In addition, periods of dearth and famine certainly occurred during the late-medieval and post-medieval periods (Yeomans 1995; Whyte 1995). Such episodes would account for the dietary deficiencies such as iron deficiency anaemia, noted in the human skeletal material.

Evidence of specific infections was tenuous, but lung infections such as tuberculosis, pneumonia and bronchitis were likely to have been present. Occasions of poor nutrition probably made people more vulnerable to infections which are not generally considered serious today under modern western nutritional conditions. There was no evidence of medical intervention, although there were probably herbalists and undoubtedly bone-setters in the society as indicated by successfully treated fractures from other sites of similar and earlier date.

In general the information retrieved from the human bone assemblage has provided an interesting insight into the life of the population of St Andrews during the years in which the cemetery was in use. It shows, when compared to the assemblage from Kirkhill, that the population structure of St Andrews changed little over a period of eleven centuries. It also falls broadly in line with the pattern of health seen throughout other Scottish and British skeletal samples.

This excavation, as with previous excavations within the early focus of St Andrews, has again demonstrated how little the core of the burgh has changed from its original plan. This reinforces the position of St Andrews as one of the main centres for the study of medieval burgh development.

The results from this excavation have also illustrated that within the core of our medieval burghs even small intrusive excavations, such as this example of a 0.6m wide pipe trench, can provide us with a valuable source of information. This can enhance our knowledge of how our ancestors lived and died; how they built and developed their towns; and how these have changed or continued down to our own times.

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Abstract

The Scottish Urban Archaeological Trust Ltd (SUAT) was commissioned by Fife Regional Council to carry out a rescue excavation at Logies Lane and Church Square, St Andrews (NO 5089 1665), from September to November 1991. The excavation was jointly funded by Fife Regional Council, North East Fife District Council, and the Boots Company plc, and took place in advance of the renewal of water services and environmental improvements, situated on the north and west sides of the Church of the Holy Trinity. A total of 121 inhumations was recovered from a cemetery associated with the church, dating from its inception in c 1410. Evidence relating to a phase of medieval burgh development pre-dating 1410 was also found sealed below the cemetery.

Keywords: St Andrews, cemetery