

Site name: St Stephen's Lane

Site ref: IAS 3104 HER ref: IPS 228 CIMS Accession No: IPSMG:R.2009.65

NGR: TM16334448 Extent: 4177 sq m

Circumstances of excavation

The site was excavated prior to the Ipswich Central Area Shopping Scheme (planning application I/0/13/87). This large development, by Legal and General Assurance Society Ltd, was mainly west of St Stephen's lane (IAS 3104) but included an area fronting the Buttermarket, east of the lane (IAS3201).

The site was excavated by the Suffolk Archaeological Unit between October 1987 and December 1988. The excavation was conducted in three main phases as buildings were removed: the middle of the site, followed by the St Stephen's Lane frontage, and finally the whole northern section.

The only previous investigation of the site had been a watching brief carried out by Miss Nina Layard in 1899 (Layard 1900), during an extension to the Cowell's premises fronting the Buttermarket.

Site Constraints

Although the eastern half of the site was largely free of post medieval damage, the western half had been badly damaged by basements under the Cowell's print works, fronting Falcon Street and under Cowell's Department Store, fronting Buttermarket, and a Second World War air-raid shelter. There was further damage in the northern central area of the site caused by the Post Office Sorting Office building and its underground petrol storage tanks.

Although the developers granted a time extension, there was insufficient time and resources to totally excavate the north-western corner of the site, below the Carmelite friary church. Added to this was a need, by the demolition contractor, to maintain a through road, which took in much of the eastern side of the cloister, and only a quickly machined trench through the roadway on the last few days of the excavation was possible.

Funding bodies

The excavation was funded by Legal and General Property, the Manpower Services Commission (Community Programme), English Heritage and Suffolk County Council.

Stratigraphic sequence (by period)

The site sloped 1 in 40 from north to south. On the eastern half of the site, where preservation was better, the underlying sands and gravels were overlain by layers which varied in their depth, nature and sequence from one location to another. The lowest layers (2185, 2248, 3232) were a leached sand (podsol), c.30cm deep, overlain with layers of sands and gravels, derived from natural processes, such as hill wash and wind-blown sand (2278, 4502) and human activity, such as the levelling of the EMS cemetery mounds and the preparation of level house plots on a sloping site during the MS period (2147, 2161, 2185, 2192, 2193, 3109, 3161, 3095, 4476, 4470).

Prehistoric (PREH)

A localized spread of 11 sherds (50g) of Beaker pottery (3175), close to the east edge of the site, was recorded in a layer (3057) sandwiched between podsol layer 3232 and re-deposited sand/gravel layer 3026. There were two adjacent post holes (3058, 3068), also sealed below layer 3057. A single flint flake (0503/3104STF) was recovered from posthole 3068.

Early Middle Saxon, c.600-700 (EMS)

Cemetery

A total of 67 certain inhumation burials, plus 7 possible graves, were excavated from across the site. Further burials were excavated on the site of the former ABC Cinema (IAS 3201), lying to the east of St. Stephen's Lane. The cemetery has been fully published (Scull 2009). Five of the graves were surrounded by ring ditches and there were remnants of two other ring ditches with no associated burial.

High precision radiocarbon dating of a selected group of these burials dates the life of the cemetery to between *c.610-635* and *c.665-688* (Scull 2009, 270). A penny of Offa (*0103/3104N*), originally identified as belonging to the assemblage of goods within grave *4152*, and which would have extended the date of the cemetery to the 790s, was later discredited on the basis of conflicting radiocarbon results as intrusive or a mix up during excavation or finds processing.

Although burial appears to have been heaviest on the eastern half of the site, the west half of the site had been heavily truncated by the LMED Carmelite friary, and PMED disturbance and, originally, an even distribution is likely.

Other than graves, and their associated ring ditches, there were no other features of certain EMS date across the site. Pit *0514*, which is recorded as the remnant base of a pit, with one handmade EMS sherd, is more likely to be the base of MLS pit *0496* which lay above it.

There were 154 sherds of handmade EMS sherds from the site, only five of which were in the EMS graves, including associated ring ditches, plus a whole pot from grave *3571*. The remaining 125 EMS sherds were residual, in later features, including 23 sherds from MS features.

Middle Saxon, c.700-850 (MS)

The area of the EMS cemetery was comprehensively redeveloped during this period with two north-south roads, up to fourteen buildings, one well, and 51 pits, associated with craft production, including a pottery kiln, metal, bone and antler working. The large number of post holes recorded in the area fronting road *1825* was almost exclusively MS.

This period of activity was associated with 24 sceattas and 25,331 sherds of Ipswich ware. 13 of the sceattas came from MS contexts with the rest were residual in later contexts. 18 of the 24 sceattas were deposited *c.750-65*, three were *725-45*, one was *710-25* and two *700-710/15*. There was only one pre 850 penny. This implies that the majority of activity was during the period *c.750-850*. All the buildings had Ipswich ware in their foundations suggesting that it had been deposited on the site area prior to any buildings being constructed.

Dense later pitting had almost certainly destroyed other buildings and there were small groups of postholes and short lengths of foundation trench across the site which could represent further buildings. Eight of the buildings fronted St Stephen's Lane (*5122, 5124, 5125, 5126, 5127, 3130, 5132, 5133*), with one certain building (*5129*) fronting road *1590*, to the west and two at the south end of the site (*5128, 5144*).

There was sufficient stratigraphic evidence for some phasing to be deduced.

Adjacent to the road (*1825*) frontage, two buildings overlapped (*5122* and *5126*). Six layers of fill (*2309, 2193, 2192, 2161, 2147, 1978*) were recorded within the area of building *5122*, and only the top layer (*1978*) post-dated its demolition whereas the others (alternate layers of loam and sand/gravel) either related to its construction period or had accumulated during its life. These layers (*2309-2147*) contained 36 sherds of Ipswich ware confirming an MS date.

The post holes belonging to the south end of building *5126*, and north end of building *5125*, cut layer *1978*, confirming that these two buildings were later than *5122*. No other relationship between the MS buildings was recorded.

Some occupation layers survived in patches which had survived truncation by later pits. Layers *2248-1978* all terminated successively in east-west lines in a 1.4m zone at the north end of building *5122* and were not recorded to the north indicating that they had

been truncated, by a lowering of ground levels to the north, presumably to create a level area for building construction on the sloping site.

Some MS pits were clearly earlier or later than buildings. Only building 5129 clearly cut an MS pit (1322) but other buildings are cut by pits. Building 5127 was cut by two MS pits (4026 and 4360) and the foundation trench (4956) of a later (MS) building. A further three buildings have MS pits within their floor area, but no stratigraphic relationship: building 5124 (pit 3330), building 5126 (pits 1824 and 1973) and building 5128 (pits 0933 and 0998).

On the west side of road 1590, the LMED friary remains had heavily truncated any earlier deposits and no MS structures were identified.

Road 1825

This road, the precursor of St Stephen's Lane along the eastern edge of the site, was laid directly above burials in the EMS cemetery. The base of the road surface comprised a compacted layer of greenish-brown sand and gravel (1827) held together by iron-panning and laid upon re-deposited natural sand (2266) above the podsol subsoil (2248). A layer (2374) above was stained green, most likely by cess deposition, and could indicate the movement of livestock up and down the road. The road surface above this was made up of small rounded cobbles and incorporated 15kgs of iron slag. The six separate layers of road surfaces, up to 50cm thick in total, were associated with 185 Ipswich ware and only 8 Thetford sherds indicating that it was virtually unused after the MS period. However, only the western edge of the road lay within the excavation area (a maximum of 4m of its width) and the eastern edge of the MS road must lie under St Stephen's Lane. It must be assumed that the west edge of the road moved eastward thereafter as it clearly continued in use up to the present day as St Stephen's Lane

Road 1590

This road was roughly parallel to and some 35-45m west of road 1825. It differed from 1825, however, being only 2-3m wide and sunken in profile. This implies that it was not originally metalled and had been eroded into a hollow way which may well have acted as a surface water drain. The hollow way cut the tops of four MS pits (0377, 4098, 4843, 4935) and one ELS pit (4096), which had all been sealed by the ELS road metalling. South of the site, Silent Street appears to continue the road line and surface water probably drained along this route and Cutler Street into the River Gipping.

Building 5122

This surface-laid building, 5m by 2.8m+, was parallel to, and 40cm back from the edge of road 1825, and probably contemporary with the road constructions. It was of individual posthole construction, with evidence of post replacement including multiple postholes at the north-east and south-east corners. It was not possible to establish a west wall with certainty and it may have been open on this side. A row of twelve stakeholes (2694, 3167-69, 3220-3230) were recorded along the south half of the assumed west wall line. On the inside edge of the stake holes, there was a pronounced edge to the fill layers, within the building.

Horizontal layers of sand and gravel, interspersed with layers of sandy loam, had been laid within and around the building raising ground surface levels. The lower layers (2309, 2193, 2192, 2161) were only present within the building, whereas the top layers (2147, 1978) extended beyond the walls of the building and were probably post demolition. Layer 2147 was certainly cut by the posts of building 5125 to the south. The lower layers of fill (2309, 2193, 2192, 2161) contained Ipswich ware only (16 sherds). Posthole 2154, which is highly likely to belong to this building as it was the earliest in a series of postholes at the north-east corner, contained a coin (0075/3104N) of Beonna, deposited 749-57.

Building 5124

This surface laid building, one metre north of building 5126, was of individual posthole construction. It was parallel and one metre back from road 1825 and 4.2m long by 2.8m wide. Only the north-west, south-west, and south-east corners and the south wall remained intact. Most of the east and north walls and the middle section of the west wall had been removed by later pits.

Only two of the 16 post holes contained pottery (3 sherds of Ipswich ware from 1882 and 2 from 1883).

?Boardwalk 5123

Along the south side of building 5124, two east-west, parallel lines of four small postholes (1807, 1808, 1894, 1901, 1909, 2015, 2016, 2017) indicate a structure, 4m long by 50cm wide, which could have supported a wooden boardwalk, providing access from road 1825 between buildings 5124 and 5126.

Building 5125

This surface laid building, 4m wide and c.6.8m long, was parallel to and cut the west edge of road 1825. It was a combination of individual post hole and post in trench construction. The south and west walls had been removed by later (ELS/MLS/EMED) pits. A line of postholes, and short lengths of foundation trench, lay down the centre of the building and presumably represent an internal, north-south partition or line of ridge supports.

The foundations of the building cut layer 2147 which post-dated MS building 5122, and contained a total of ten Ipswich ware sherds.

The north wall comprised a foundation trench (2551) with two posts (2548, 2549) set into it. There was a large post pit (2550) at the north-west corner and two intercutting post holes at the north-east corner (1897, 1898). Foundation trench 2551 was cut by a row of later (EMED) posts (1860-1862).

The east wall comprised a short foundation trench (1835), at the north end, and a line of individual post holes to the south (1840, 2456, 2499, 2455, 2500, 2501 and 2454) cutting the edge of the road surface 1825.

The internal partition comprised a short length of trench (2900) with a posthole (2503) and three further postholes (2508, 2511, 3932).

Building 5126

A complex of 37 postholes, north of building 5125 and south of building 5124 represented one, or more likely two, surface laid buildings of individual post hole construction, gable end on to road 1825 (St Stephen's Lane). Like building 5125, its east wall cut the west edge of the road and was also later than building 5122.

Definition of the building(s) was further complicated by the west end of the complex being truncated by a large EMED pit (1804). It is likely that one building had been replaced by another on the same site. The stratigraphic relationship between the two phases was ambiguous

5126a

This building, 2.6m wide by 3.4m long, comprised 12 postholes (1841, 1915, 1917, 1920, 1980, 2074, 2078, 2079, 2090, 2154, 2158, 2201), associated with 2 sherds of Ipswich ware.

5126b

This building, 3m wide by 4m long, comprised 22 postholes (1905, 1906, 1910, 1911, 1914, 1926, 1927, 1939, 1965, 1968, 1993, 2039, 2040, 2057, 2058, 2083, 2084, 2089, 2104, 2145, 2153, 2156), associated with 9 sherds of Ipswich ware.

Building 5127

This surface laid building, north-west of building 5124, was 7m long by 4.5m wide, orientated east-west and of continuous foundation trench construction. It had been truncated on all four corners by later pits, removing the evidence for the relationship between them.

Only the middle section of the north foundation trench (4495) survived for a 1.8m stretch and only the south side of the trench was intact. Only the lower profile survived of a 3m length at the west end of the south trench (4537). Only a 1m length survived at the south end of the west trench (4971) and 1.4m at the south end of the east trench (4452). The foundations were associated with 13 sherds of Ipswich ware and 1 MS import. The east wall was cut by two MS pits (4026 which was cut by 4360). The west wall was cut by an east-west foundation slot (4956, with a posthole 4977). This slot produced 5 sherds of Ipswich ware but no other associated building features were recorded which relate to it.

Just east of the west wall was the remnant of a further north-south foundation trench (4928), 70cm wide, implying that the building had two phases and that in one of them it was only 5.5m long. Unfortunately, the relationship between 4928 and the other foundation trenches had been destroyed by later features. Trench 4928 was associated with 16 Ipswich ware sherds.

Building 5132

This surface laid building, of individual posthole construction, lay 7m west of road 1825 and was orientated north-east/south-west. Only a 3m length of the north-west wall and 2m of the south-east wall survived truncation by a series of pits (ELS and later) particularly on the east side.

The north-west wall comprised 15 post/stakeholes (3754-6, 3760-3767, 3769-70, 3779-80) and there were 8 recorded in the south-east wall (3391, 3742-3, 3747-48, 3750-52). The only pottery associated was one sherd of Ipswich ware from 3762.

Building 5133

This surface laid building, 3.6m by 2.5m, lay 6m west of road 1825 and was orientated north-east/south-west. It comprised 15 individual post holes (1875, 1995-1998, 2002, 2163-2165, 2830-2832, 2859, 3006, 3023), which contained no pottery.

Building 5128

This surface laid building lay 18m east of road 1590 and was orientated from north to south. It was 7.4m long by 3.8m wide and of individual post hole construction. The south and east walls had been completely removed by pits of MLS and later date.

A possible doorway lay in the west wall between postholes 1501 and 1503.

At the middle point of the north wall, there was a gap in the post holes with post holes 1475 and 1211 returning towards the south, indicating a recess with a hearth (0924) just inside. The roughly oval hearth of fired clay, 1.5m across, had been largely cut away by later (MS) pit 0933. The north wall was cut by MS pit 0998. Three post holes (1200, 1354, 1519) produced a total of 5 sherds of Ipswich ware.

Building 5129

This surface laid building lay just east of road 1590 at the south end of the site. It was of post in trench construction. The south wall had been removed by a series of pits (ELS and later). It was 4.7m east-west and survived for 4m north-south.

The north foundation (0872/0899) was continuous with that along the east (0871). The west trench (1298) petered out before reaching the post hole 1309 marking the north-west corner. A number of post impressions were recorded in the base of the trenches (0896, 0908, 0928, 0931, 1261, 1310). There was a row four postholes (0920, 0921, 0922, 0927) on the inner edge of the north trench.

The building cut MS pit 1322 and was cut by ELS pit 1285 and ELS building 5131. The foundations produced 31 sherds of Ipswich ware, confirming the MS date. Boundary fences 5142 and 5143, along the east side of road 1590, defined its western tenement boundary.

?Building 5130

This surface laid building, 3m by 3m, was of individual post hole construction. The large size of the post holes suggests that they belong to a building rather than a fence, but the latter can't be discounted, especially as the north 'wall' was a continuation of fence line

5140. While the north and east walls were intact, only single postholes of the south and west walls were recorded and the south-west corner had been removed by EMED building 2022. Only posthole 3272 contained any pottery (2 Ipswich ware sherds). Postholes 2326 and 2327, in the south wall, cut into or had been set within a linear feature (2333), which was part of another possible building (2362) of MS date.

? Building 2362

This possible building trace comprised a 1.4m length of north-south foundation trench (2362), with one posthole (2341). At right angles to its south end, was a line of three short trenches (2333 and 2335, with posthole 2328, and 2329). The only pottery associated was one sherd of Ipswich ware from 2329 but trench 2333 was cut by postholes 2326 and 2327 of building 5130.

?Building 0498

This group of postholes survived in a small area surrounded by LMT pits (0033, 0435, 0463, 0494). It comprised a line of four post holes (0504, 0505, 0509, 0510), orientated NE/SW, with the remnant of a slightly burnt clay surface to the west (0535) and two postholes (0507, 0508) running NW from 0509. There were two further post holes (0502, 0506/0536) outside of the two lines.

The base of the structure appeared to be slightly sunken, but no by more than 15-20cm. They probably represent the north-east corner of a surface laid building.

There was only one sherd of pottery associated with the structural features (Ipswich ware from posthole 0508). The fill (0498) above the floor was of ELS date (59 sherds of Ipswich ware and 30 sherds of Thetford ware), but this could not be securely associated with the structure.

? Building 0591

A short length of foundation trench (0591), 10cm deep, ran from west to east, 4.5m east of, and at right angles to, road 1590. Only a 1.7m long section survived truncation on its west, north and east sides by LMT pit 0011, and by LMT pit 0413 to the south. It was dated by two sherds of Ipswich ware.

?Building 5144

This possible surface laid building, 5.4m long by 2.4m wide, was orientated north-south, 12m west of road 1825. Only the south end of the west wall remained, comprising a foundation trench (2588), 1.4m long, with two postholes (2590, 2596) to the north. Only the north end of the east wall remained, comprising a foundation trench (1949), cutting a posthole (1959) at its south end and two postholes to the north (1950, 1951). In addition, at the middle point of the building, there was an east-west foundation trench (2609), 70cm long, but truncated by EMED pit 2589 at its west end, and a posthole (2608) on its north edge. There were 7 Ipswich ware sherds from the foundations and a sceatta (0062/3104N) from 1950, providing a *terminus post quem* of c.725-45.

Boundaries 5134 and 5137

These north-south fence lines were probably contemporary.

The western fence (5134) ran for 6m just outside of the east wall of building 5127 and comprised 13 postholes (3808, 3832, 3855, 3888, 4451, 4458, 4462, 4466, 4472, 4479, 4483, 4488). It was associated with 10 sherds of Ipswich ware and the post pit (4479) for posthole 4462 was cut by the east wall trench of building 5127.

Fence 5137, which was parallel to and 1m east of 5134, could be traced for 16m. The most northerly section comprised 14 postholes (3861-3865, 3869, 3883, 4433-6, 4480, 4532-4) and ran for 4m. There was then a 3m gap where it was cut by MLS pit 3656. The next section ran for 4.8m and comprised 4 postholes (2284, 1960, 1996, 3078). There was then a gap of 5m where it was cut by EMED pit 1817, followed by the final section of 2m, comprising postholes 3164 and 3184, terminating at posthole 3282, in the north-west corner of building 5130. It was associated with one Ipswich ware sherd from 4433 and posthole 1996 cut a posthole in building 5133.

Boundary 5136

This line of five postholes (4467-8, 4523, 4525, 4535) ran for 3.4m, north-south between fences 5134 and 5137. There was no associated pottery or stratigraphic relationship with those fences.

Boundaries 5135 and 5140

These two fences ran east-west and were parallel to each other and 1m apart. The northern fence line (5140) could be traced for 9m, and terminated at the north-west corner of building 5130. It comprised 6 postholes (0077, 0840, 3708, 3613, 3616-17). The southern fence (5135) could only be traced for 4m and comprised 9 postholes/stake holes (3606-3612, 3618-19). There was no pottery associated with either fence line.

Boundary 5141

This area of postholes appears to represent the west end of two parallel fence lines, 1m apart, running east from road 1590, and parallel to fence 5140, 9m to the south. The northern fence comprised 3 postholes (0592, 0599, 0802) and there were 7 in the southern one (0594, 0595, 0597*, 0820, 0822, 0825, 0832). The south line was associated with 3 sherds of Ipswich ware and 2 with the northern line.

Boundaries 5138 and 5139

Just east of road 1590, two parallel lines of post holes ran west to east across an area undisturbed by later pits. The double line may indicate an access way fenced on both sides.

The south fence (5138) comprising postholes 1562-1565, 1569, 3710, 4655, and 4993, had no associated pottery, but posthole 1569 was cut by MS pit 1534.

The north fence (5139) comprising postholes 1228/1561, 1524-5, 1527-8, 1540, 1545, 1557 and 1589/1588, had one sherd of Ipswich ware in 1527 and postholes 1527 and 1528 cut MS pit 4919.

Boundary 5143

This fence was parallel to and 1m south of building 5126. It comprised 7 postholes (2032, 2624, 2633, 2833, 3080, 3166, 4876). It ran for 8.5m from road 1825, in the east, to the north-south fence 5137 in the west. Its central section was either cut by MS well 2117 or deliberately terminated either side of it, allowing access to it from the tenements both north and south. There were 6 sherds of Ipswich ware from 2032 and one Thetford ware sherd from 1996 which was probably derived from ELS boundary trench (1925) which cut it and replaced it.

Boundaries 5142 and 5145

These north-south fences ran along the east edge of road 1590 at its south end.

Fence 5142, which ran for 11m on the actual road edge, comprised a line of 37 stakeholes (1323-26, 1599, 1601-02, 1605-06, 1608-1612, 1624-1633, 1641-2, 1644-1654), set in a foundation trench (1587) in its central section.

Fence 5145 was a second north-south line of 14 stake holes (1613-1619, 1622-3, 1637, 1655-1659), 1.5m long, parallel to 5142 and 40-50cm east of it. The only dating evidence was three sherds of Ipswich ware from trench 1587.

Well 2117

This probable well pit was 3.5m deep and oval in shape, 2.2m from north to south by 2.8m from east to west at the surface, tapering lower down to a maximum of 2m. Excavation was carried out in four spits (2117, 2131, 2279, 2305). No evidence of a timber lining was revealed, and the base of the feature was dry, so that no organic material had survived *in situ*. 518 sherds of pottery were recovered from the pit.

Layer	Depth	H M	Ips	Imp	Thet
2117	0-0.7m		96	2	1

2131	0.7-1.4m		207	2	2
2279	1.4-3m		114	2	6
2305	3-3.5m	1	83	2	

The very low quantity of Thetford ware implies contamination and the use of the well was most likely restricted to the MS period. Its final fill was cut by ELS boundary trench 1925 and there were two sceattas from layer 2279 (0065/3104N, 0066/3104N) deposited c.750-760.

Pottery Kiln 2062

This single flue, up-draught kiln, partially sunk into the ground, was well preserved, with only the stokehole, the north-east corner of the oven and the upper part of the dome missing. The lower part of the oven was divided into two flues by a separating spine wall of clay which stopped short of the north wall and from which arches sprang to form the firing platform.

Two arches remained *in situ* at the north end of the east flue, and the confused remains of several others were found collapsed into the layer below. One intact and one collapsed arch were found *in situ* in the west flue, with evidence of the missing arches in the form of scars and protuberances on the central ridge. No trace of these arches was found in the bottom of the west flue, and they must have been removed before the end of the life of the kiln.

The kiln had been covered with a clay dome, the walls of which survived to a height of c.60cm, except in the north-east corner, where they had been removed by a later pit. The dome was probably capped with a removable roof and some sort of simple chimney. The lower west wall showed extensive evidence of repair, with the added clay having been tamped into position using the rim of a pottery bottle of a type associated with the kiln. The kiln wall sealed layers of ash and charcoal from an earlier firing. Impressions left in the clay show that it had been built using arches of withies as formers for the flues, arches and dome, with the non-removable part of the dome packed against the sides of the pit.

1109 sherds of Ipswich ware were recovered from the kiln, comprising jars, jugs and highly decorated bottles, which are of quite different forms to 'normal' Ipswich ware, but have the same fabrics (Blinkhorn 1989).

The largest group of Buttermarket-type Ipswich ware recorded from outside the town was excavated at the high status MS settlement at Brandon. The ware was absent from the earliest phase of MS occupation, but formed 6.1% of the assemblage in phase 2.1, which it is argued is 9th century (Blinkhorn pers com).

Dating for kiln 2062 is poor but would support the evidence from Brandon. It did not cut any other MS features, and was only cut by ELS pits. However, a sherd from the kiln was found to join another from MS pit 0933. This pit cut hearth 0924, which was associated with MS building 5128. This suggests a later MS date for the kiln, although the sherd from pit 0933 could be residual.

Metalworking

Although no *in situ* metalworking hearths were recorded of MS date, 205kg of iron slag was recovered from MS contexts. Assessment of the slags from pits 4026 and 0377 indicated both iron and copper alloy working on the site. The 125kg of slag from pit 0377 included vitrified hearth lining and crucible fragments (Starley 1993). Pit 4026 was probably late in the MS sequence.

Pits

18 of the 51 pits were in two distinct clusters whereas the rest were distributed across the whole site. The first group, comprised seven pits (3326, 3351, 3824, 3825, 4911, 4919, 5002) at the south end of the site and the second group comprised 11 pits (0324, 0377, 0500, 0975, 1322, 1455, 1526, 3342, 4098, 4843, 4935) clustered along the roadway 1590, and three of which (0377, 4098, 4935) were cut by the metallised surface (ELS).

Discussion**Chronology**

It remains uncertain what time period had elapsed between the last burial in the EMS cemetery and the expansion of occupation across the site. Scull argues that burial in the cemetery had ceased by c.690 and the coin evidence suggests further activity on the site from c.700.

Sceatta Deposition Date	No
700-710/15	2
710-725	1
724-45	3
750-765	18
Total	24

The stratigraphic evidence indicates at least three phases of building activity prior to 850, with the majority of occupation in phase 3.

The life of timber buildings at this period, in London, Hedeby and Hamwic, unless cut short by fires, has been estimated between 5 and 50 years (Malcolm and Bowsher with Cowie 2003, 158), but experimental reconstructions suggest the higher end is more likely, especially with oak construction and vigilant maintenance. Assuming 20-40 years for each of the phases on this site, and assuming continuous occupation, the following sequence can be modelled.

Phase	Date	Building	Other
1	c.700-750		No occupation - casual rubbish disposal
2	c.750-790	5122 5133 5132	Road 1825 Southern pit group
3	c.790-820	5125 5126 (phase 1) 5127 (phase 1) 5128 5129	Road 1590 (hollow way) Well 2117 Pathways:5138/5139; 5134/5137;5135/5140 Kiln 2062?
4	c.820-850	5126 (phase 2) 5124 5127 (phase 2)	
5	c.840-860	0434 0776	Continue into ELS period

Phase 1

The proposed sequence would leave a break of 60 years between the end of the cemetery, which was c.690 according to Scull, and the redevelopment of the site c.750. The Ipswich ware in the foundations of the phase 1 buildings implies rubbish disposal on the site area prior to any buildings being constructed. This rubbish disposal could have started while the cemetery was still in use. Five of the graves in the EMS cemetery contained Ipswich ware sherds (a total of 10 sherds), only one of which (2297) was radiocarbon dated (610-660, at 95% probability). This could indicate that the cemetery continued in use into the period of Ipswich ware production and that Ipswich ware was produced prior to 700, and probably by 660. Alternatively, the Ipswich ware in the graves could be intrusive from later features cutting the graves.

The three sceattas with deposition dates 700-725 could be seen either as casual losses, as part of rubbish disposal across the site during the period, or from graves, if burial continued that late.

Phase 2

It is likely that the initial occupation, represented by road 1825, and buildings 5122, 5132 and 5133, dates from c.750. The site lies on the southern margin of the MS 'new town', with its grid iron pattern of streets, and this is the best evidence so far recorded to date its foundation. This dating is comparable with that suggested for the economic development of Lundenwic, during the reign of the Mercian King Aethelbald, c.730-770. Building 5133 was orientated NE/SW unlike building 5122, which follows the alignment of roadway 1825. The probable building 5132 also has this NE/SW alignment as does the southern group of seven pits (3326, 3351, 3824, 3825, 4911, 4919, 5002) suggesting that they are all phase 1. Posthole 1528, at the east end of the alleyway 5138/5139 appears to cut pit 4919 in this group giving additional weight to the EW/NS orientated buildings and paths being later.

Phase 3

The St Stephen's Lane site was fully developed during phase 3 (c.790-820). Buildings 5125 and 5126 (phase 1) replace building 5122 on the St Stephen's Lane frontage. Building 5127 (phase 1), to the north, was separated from them by alleyway 5134/5137. Buildings 5128 and 5129 occupy the southern part of the site with east-west alleyways 5135/5140 to their north and alleyway 5138/5139 to their south.

Phase 4

In this phase, building 5124 was constructed, north of 5126, and buildings 5126 and 5127 were enlarged.

Phase 5

Three sunken featured buildings (0434, 0776, 0883) were probably constructed very late in the MS period and abandoned early in the ELS period. This raises the question of whether they were contemporary with the latest MS surface laid buildings. They occupy the space to the rear of these buildings and this possibility seems quite likely.

This reintroduction of sfbs to the town could be associated with the Danish occupation but the dating evidence isn't good enough to associate the two events.

The dating hinges on the changeover date from Ipswich ware to Thetford ware which is still not certain. It has been dated to c.850 for over 50 years and there is still no further evidence to refine this. The dating evidence from Ipswich could allow it to be as late as the 870s, during the Danish occupation of the town. It remains possible that the introduction of the Thetford ware industry was a Danish initiative. Blinkhorn has argued against this but with little convincing evidence (Blinkhorn 2013).

Craft Activity

The Ipswich ware pottery kiln was an isolated example, probably late in the MS sequence. The only other example, outside of the known area of pottery production south of Carr Street, was excavated south of the river in Stoke (Brown and Dodd 2014) Slags recovered from the MS pits indicate both iron and copper alloy working on the site but no *in situ* hearths were located.

Early Late Saxon, c.850-900 (ELS)

The two north-south roads continued in use throughout this period with four buildings, 81 pits and both iron and copper alloy working hearths.

There were 21 coins dating to the period but only five were associated with ELS features, with the remainder being residual in later features.

Three of the buildings were sunken featured, and the pottery assemblages in their pits indicate the date of their abandonment rather than construction.

	Ips (%)	Imp (%)	Thet (%)	Total
0434 sunken feature	353 (61.1%)	2 (0.4%)	222 (38.5%)	577
0434 postholes	23 (100%)			
0776 sunken feature	71 (88.8%)		9 (11.2%)	80
0776 postholes	4 (100%)			
0883 sunken feature	27 (39.1%)		42 (60.9%)	69
0883 postholes	1 (100%)			

The high percentage of Ipswich ware in the sunken features implies abandonment very early in the ELS period and the Ipswich ware only from the construction features implies a late MS construction date.

Road 1825

This road clearly continued in use although it may have moved slightly eastwards as little material of post MS date was recovered from the excavated western margin.

Road 1590

The metalled surface of this road, 2-3m wide, belongs to this period as it sealed the east end of ELS pit 4096 and ELS pit 3291 appears to cut its eastern edge.

The metalling comprised heavily compacted small cobbles, with no obvious bonding matrix, and incorporated 27 kg of iron slag.

The remains of a walkway, or base of a drain, 50cm wide and composed of horizontal timbers (0089/3815), overlay the metalling on the west side of the road. It survived for c.11m at the north end of the road.

A considerable depth of debris (0085) of ELS to MLS date was allowed to build up above the metalled surface. This appeared to correspond to a similar raising of the ground level on either side of the road. This was especially noticeable on the west side of the street where layer 0385 provided a continuation of these layers off the street. Layer 1303, on the east side of the road, contained much iron slag.

Sunken Featured Building 0434 (see scanned plan IAS3104_0434.tif)

This sunken-featured building was 3.4m in long, from north to south, 2.5m wide, with a pit 65cm deep. It was probably a six-poster as three postholes were recorded in the surviving west wall (0537, 0539, 0547). Two survived in the east wall (0455, opposite 0539, and 0538, opposite 0537). The north-east corner of the pit had been removed by MLS pit 0021.

Evidence for a planked lining behind the posts, on the south side of the building, was indicated by a vertical line, close to the edge of the pit, with a sandy filling (0446) behind it, representing the backfill material between the planking and the edge of the pit. There was a stepped entrance (0445) on the north-west corner of the pit, with a layer of silt on its base.

A layer of dark sandy loam (0450), on the base of the pit was probably contemporary with its use, and appeared to seal a number of small post holes (0456, 0457, 0459) cutting the natural. These were very shallow and appeared to be non-structural. Two additional posts (0458, 0447) were more substantial but 0447 appeared as a void and was described as a possible modern bore hole.

A number of carbonized timbers, including the bases of two posts (0469, 0470), were found within the filling of the pit, 30cm above the base, and not cutting the floor surface. They were most likely part of the rubbish thrown into the pit during its backfilling on demolition.

The building was probably constructed in the late MS period, as the postholes contained Ipswich ware only, and was abandoned early in the ELS period, as its fill contained over 60% Ipswich ware and less than 40% Thetford ware. Three ELS pits (0319, 0325 and 0528) cut the backfilled pit, confirming this. These pits had assemblages comprising 86% and 95% Thetford ware respectively.

Building 0776 (see scanned plan IAS3104_0776.tif)

This sunken featured building lay some 22m west of roadway 1590 but not on the same orientation. Only the eastern edge of the building, 3m long and 60cm deep, survived truncation by LMED friary features and the south-east corner had been removed by MLS pit 0661. The bases of two possible post holes (1015, 1016) below the pit could belong to the south wall of the structure, but the acute angle formed with the known east edge of the building argues against this.

The east wall comprised three regularly spaced post holes (1015, 1010, 0686), each separated by a row of four stake holes. Only one posthole (1002) survived in the north wall, separated from the north-east corner post (1005) by two stake holes. Posthole 1002 appeared to be set into the east end of a deeper footing trench (0799).

A fragmentary clay spread on the base of the pit probably indicated the floor surface. As with building 0434, the postholes contained Ipswich ware only, suggesting a late MS construction date, whereas the filling contained 89% Ipswich ware and 11% Thetford ware indicating abandonment early in the ELS period.

This building is unlike any of the other ELS/MLS/EMED sunken featured buildings from Ipswich, and is more like the EMS building (IAS 5203 0125) found on the St. Peter's Street site.

Building 0883 (see scanned plan IAS3104_0883.tif)

This sunken featured building had been almost totally removed by pits to both the north and south (0033, 0859, 0880, 0867) and only a narrow east-west section survived in between, revealing a pit, 80cm deep. The orientation of the building was uncertain, but the surviving section appears to contain the full width, implying a north-south orientation. The survival of a post hole on both the east (0956) and the west (0957) sides of the pit provided a width of 2.5m. No evidence of any floor surfacing was found in the remnant of the cellar. A small post hole (0958), cut into the side of the pit may have been related. The stratigraphic evidence for dating was of little use as the cutting pits were considerably later and but the associated pottery assemblage was ELS, with one Ipswich ware sherd from posthole 0955.

The proportion of Ipswich ware (40%) to Thetford ware (60%) in the small amount of remaining fill was not as high as with building 0434 and 0776, but much more than in the later ELS building 5131 (with 23% Ipswich ware). On balance it seems likely that building 0883 was contemporary with buildings 0434 and 0776, and like them had a construction date in the late MS period and abandonment early in the ELS period.

Building 0434 is more likely to have been similar in size and construction. Both had relatively shallow pits (80cm for 0883 and 65cm for 0434) and were similar in width (2.5m).

Building 5131

This surface laid building, orientated north-south, cut the MS building 5129. It was 4m wide and over 6m long (the north end was truncated by later pits). The east wall comprised a foundation trench (1267), 70cm wide and 10cm deep, with one posthole (1269). Only the east end of the south wall foundation trench (1349), 60cm wide and 10cm deep, had survived truncation and contained one posthole (1460). The north end of the west wall comprised a foundation trench (0530), 40cm wide and 20cm deep, with an adjacent posthole (0532) and the south end was marked by three postholes (0905, 0907, 0926). The foundations contained 9 sherds of Ipswich ware and 30 of Thetford ware, confirming the ELS date.

The building overlapped ELS building 0883 but the critical area of overlap had been destroyed by later pits. As building 5131 had a lower proportion of Ipswich ware to Thetford ware compared with building 0883, it is likely to be later, especially when the pottery from the latter represents the abandonment date and the former is a construction date.

Boundary 1925

After the filling of well 2117, fence line 5143 was replaced by an 8m long foundation trench, running west from road 1825, presumably to hold fence posts, although no post holes were located in the trench fill. It was truncated at its west end by EMED pits 1878

and 1934. The associated pottery assemblage comprised 58% Ipswich ware and 42% Thetford ware suggesting a construction early in the ELS period. As there were no ELS buildings found along the road frontage. This may be the only evidence for at least some of the MS buildings, on this street front, continuing into the early ELS period.

Metalworking

A total of 269kg of iron slag was recovered from ELS features but only one hearth was identified (3052).

There was only one certain copper alloy working complex (3009) but there was widespread evidence of copper alloy working across the site, including over 1000 crucible fragments, 48 fragments from moulds, five 'heating trays' and large amounts of pottery which was associated with metalworking activity.

The bulk of metalworking material from the site came from ELS contexts and it is likely that much of the material found in later periods was residual.

Most of the metalworking evidence related to the melting and casting of non ferrous metals, the majority of which contained copper, zinc, tin and lead in various proportions. Other processes included refining and melting of silver.

Shaped and vitrified pieces of baked clay from pit 1899 may be fragments from a copper alloy working furnace, and smaller pieces of slagged and vitrified material may be furnace lining, fuel ash or slag (Mortimer 1994).

Iron Working Complex 3052

This comprised an irregularly shaped pit (3052), some 2.6m long, from north to south, by 1.5m wide, lying 7m south-east of building 0434. Pottery from the pit indicated an ELS date, with 53% Ipswich ware and 47% Thetford ware. ELS pit 2671, which cut it, contained an assemblage with 19% Ipswich ware and MS imports with 81% Thetford ware. Hearth 3052 is therefore likely to be early in the ELS period.

The pit was flat-bottomed, and 40cm deep, with a hollow (2713), 50cm deep, at the south end (2713). The pit was filled with 11kg of iron slag and charcoal, topped with a 20cm thick layer of charcoal rich sandy loam. This was partially overlain by a hearth (2726) of fired clay, which contained a further 1kg of iron slag. This hearth was extensively cut away on its north side by EMED building 2022 and on its south side by ELS pit 2671, which contained carbonised timbers and from which a further 36 kg of iron slag was recovered. The backfill of MLS building 4081, lying only 1.5m to the south-east, produced almost 23 kg of iron slag, presumably residual from 3052, and some of which was recovered from its constructional features.

Copper Alloy Working Complex 3009

This complex of burning and metal working residues lay 8m west of road 1825 and covered an area 4.6m, from north to south, by 3m, from east to west. The complex was heavily truncated by later features to the north, east, and south-west, and was bisected by LMT pit 2144, which interrupted the stratigraphy between the two areas.

The Northern features

The north end of the complex was covered by an extensive area of charcoal (2979), with a small hearth of burnt reddened sand (2934). Directly below the hearth and cutting the charcoal layer was a small pit (2978). The removal of charcoal layer 2979 revealed two further small pits (3136, 3170), three post holes and numerous stake holes, and a compacted gravel surface (5032), in the south-east corner. This gravel surface was cut by pit 3170 and ELS pit 2182, to the east.

The numerous stake holes across the area formed no regular pattern and most likely indicate the positions of movable screens, which acted as wind breaks, or the position of semi-permanent, free-standing equipment associated with the metalworking process. Post holes 3134, 3135 and 3182 were also associated as they contained large quantities of charcoal within their fills. In the case of double post hole 3135, the bases of the two posts had been carbonized *in situ*.

Pit 2978

The extent of the pit closely matched that of hearth 2934, and possibly implies that the hearth was merely the top layer of fill. The pit was 30cm deep, inclusive of the reddened sand of the hearth above, and perfectly circular at its base, with a diameter of 26cm. The bottom of the pit was flat and covered with a thin layer of clay (3008) which had been heavily fired to a uniform very dark grey. Above the clay base was a layer of grey sand and charcoal, with a thick deposit of charcoal, overlain with a layer of dirty orange sand, which was probably the unfired base of the overlying hearth.

Pit 3136

This small pit was circular, 40cm in diameter, and 18cm deep. The base was surrounded by a series of nine adjacent stake holes, which suggest a timber lining, but there was no obvious lining on the base. A section across the pit showed charcoal around the sides of the pit, indicating a carbonization of the lining *in situ*. The pit was filled with mixed loam and charcoal, sealed with layers of ash and charcoal, probably derived from layer 2979 above.

Pit 3170

This rectangular pit was 90cm long, from east to west, by 50cm wide and 50cm deep. A shallower channel, on the south-west corner, was lined with stake holes on its eastern side, and cut away to the south by pit 2144. Stake holes also lined the west end of the main pit, effectively cutting the pit into two separate halves. The base of the west end, within the stake hole circuit, was lined with clay, which had been fired to a hard dark grey surface. The clay base had been laid after the timber lining had been inserted. Covering this surface was a large quantity of oxidized copper alloy waste mixed with ash. This appeared to constitute only the finest fragments of alloy, and had given the fired clay base a bluish tinge. It seems likely that this ash had fallen out from a hearth suspended directly above the pit.

The eastern end of the pit had no clay lining on the base, although there were some stake holes cutting the base. These were however restricted to the north-eastern end and do not necessarily reflect the remains of a lined edge to the pit at this end. This end had been subject to heavy burning evidenced by charcoal and discoloured natural sand.

The Southern features

Oven 3038

This oven comprised an area of reddened fired clay (3038), surrounded on its south side by unfired yellow clay, and, on the north side by a layer of grey ash (3036). Large pieces of charcoal were located above this surface and the clay was cut by a linear channel filled with ash (3050). The structure was 1.5m, from north to south with 80cm of deposits surviving from east to west (the west side was removed by later pits).

Excavation through the loose top layers of clay exposed the residual traces of the oven wall (3037) on the north side. It was hard fired on its inside face, and grey in colour.

Two post holes (3065, 3066), against the north side of the wall of the furnace, may have been inserted to hold the wall in place at its time of construction.

To the north of the oven, there was an ash filled shallow pit (3036), presumably the stoke pit. This was linear in shape, with a flat bottom, and set 50cm into the natural. At the eastern end of wall 3037, there was a truncated flue arch, linking the oven to the stoke pit.

Excavation of the ash filling the linear channel (3050) revealed a heavily fired grey clay base to which adhered vitrified material.

Both the stoke pit and oven had been slightly recessed into the ground surface. At the far south end, the fired clay floor lay on a base of flint cobbles (3067), set into sand which had reddened under the intense heat.

Discussion

The features in the northern complex were certainly engaged in copper alloy working. There were crucible fragments in layers 2934, 2287 and 3141.

The function of the oven in the southern complex is uncertain as is its relationship to the northern complex.

The stratigraphy isn't clear between the two areas as it was bisected by pit 2144. If the area of cobbles (5032), cut by the northern complex, is the same as the cobbled area (3067), underlying the southern oven, then the two complexes are likely to be contemporary. However, the associated pottery assemblage casts doubt on this.

		Ips	Imp	Thet	StN
2287	Charcoal spread-north complex	3			
2934	Hearth over pit 2978-north complex	3			
3036	Ash-filled stoke pit-south complex	38	6	7	2

Taken at face value, the pottery evidence suggests that the northern complex is MS and the southern complex is MLS, but this is unlikely. The presence of two St Neot's ware sherds in the pottery group from 3036 is odd in the context of the other pottery. A typical MLS pottery group would be dominated by Thetford ware which only forms 13% of this group. The group is dominated by Ipswich ware which, with the MS imports, forms 83% of the group. Such a group is far more likely to indicate an early ELS date (with the St Neot's ware being contamination).

The northern group is associated with Ipswich ware only (6 sherds) and could be MS, but the proximity of the two complexes and the fact that they both post-date a cobbled surface implies that they are contemporary or close in date.

On balance, it is more likely that the two complexes are contemporary and early ELS in date, or they represent a continuum of metalworking from the later MS period into the early ELS period.

The function of oven 3038 is also an issue as no metal working residues were recorded from it. However, the runnel (3050) with vitrified waste adhering implies the high temperature firing usual in a furnace rather than a domestic oven, and this makes the association with the metalworking industry most likely.

The Pits

The 81 pits were not evenly distributed across the site. There was dense pitting to the west of road 1590 and to the south and east of building 0434.

Some of the deeper pits were probably wells but the lack of any preserved linings makes their identification more difficult. Pit 1964, for example, was 3m deep with the steep tip lines in its upper fill which are characteristic of wells.

Middle Late Saxon, c.900-1000 (MLS)

Seven sunken featured buildings and 69 pits belonged to this period. Two buildings and a metalworking industry belonged to the first half of the tenth century and five buildings to the second half of the century. Roads 1825 and 1590 clearly continued in use throughout this period, although road 1590 was not re-metalled and was covered with occupation debris.

MLS Phase 1 (c.900-950)

One building (0643) lay 14m west of road 1590, and was associated with a metalworking complex (0362/0876) fronting the street. A second building (4081), which had burnt down, lay 13m west of road 1825, at the south end of the site. Up to three graves, two of which cut the west edge of road 1825, lay in an east-west line, 7m north of building 4081.

Building 0643 (see scanned plan IAS3104_0643.tif)

This sunken featured building was 4.5m long (west-east), by 2.9m wide and 80cm deep. A wall footing trench of the LMED friary had cut the building from north to south, close to its eastern edge, and only the north half of the foundation trench (0708) with two post holes (0715, 0728) survived of the east wall.

The intact western end of the structure however confirmed a structural arrangement of individually positioned, evenly spaced post holes along the gable ends.

The north and south walls were set in foundation trenches but the west wall comprised individual post holes. No traces of any posts survived in the south foundation trench (0673, 0674), probably due to heavy disturbance above. Five post impressions (0737, 0738, 0739, 0740, 0741) were recorded in the north trench (0773). All were rectangular in profile, and probably reflected the sizes of the original posts. The largest (0737) measured c.30cm by 16cm, and 0740, was 34cm by 6cm.

The west wall comprised four individual postholes (0713, 0714, 0752, 0753).

No evidence of any flooring was found on the base of the pit, but one of the horizontal layers filling the pit and some 30cm above the base, comprised a thick layer of orange / brown sand which was overlain by a layer of loam with charcoal patches. The horizontal nature of the layers implies that they were occupation layers, rather than backfilling after demolition.

The building was probably constructed early in the MLS (phase 1) as the pottery assemblage from the construction features contained only one sherd of St Neot's ware. The sunken feature also cut MLS pit 0711 with a very low proportion (0.5%) of St Neot's ware. The infilling of the cellar pit was also MLS apart from six EMED sherds which were from the top layer which also included one sherd of Scarborough ware which must be contamination from the LMED foundation trench which cut the building.

Building 4081

This sunken featured building had been burnt down leaving extensive carbonised remains of its timbers. It had been partially cut away by EMED sunken featured building 2140 to the south, and its eastern end was truncated by later pits (1937, 2865). It was 3.4m wide, at the west end, 1.4m deep, and a maximum of 3.5m of its length survived. A thin band of sand, gravel and clay (4372) below the burning in layer 2929, formed the floor surface on the base of the pit.

The walls were of regularly spaced posts set into foundation trenches on the north (4371), west (4370) and south (4362) sides. These walls appear to have been a replacement for earlier walls of individual post hole construction as two postholes (4540, 4541) were cut by the west wall foundation trench and one (4542) by the north trench.

Burning had preserved the bases of most of the wall posts above the floor and the two lowest levels of horizontal planking. The heat of the fire had been intense enough to carbonize the outer faces of the posts and planks, and the un-burnt interior of the posts had rotted away and the subsequent voids had filled with soil.

There were six carbonised posts in the west wall (from south to north: 4230 above posthole 4354, 4294 above 4353, 4293 above 4352, 4292 above 4351, 4291 above 4350, and 4287 above 4338). Two carbonised posts survived in the north wall (4288 above posthole 4339 and 4266 above 4340) and two in the south wall (4232 above 4357, and 4230 above 4454). The lowest course of horizontal planking survived behind the west wall posts, two courses behind the north wall (4285, 4286) and two behind the south wall (4228, 4229).

The largest surviving post was c.20cm square, but it was unclear how much had been burnt away prior to the reduction of wood into charcoal. All the posts had been squared along their back edges, where they joined exterior planking, and the shape of most of the carbonized outer corners were also square. Below floor level, the posts rotted rather than burned and it is unlikely that the shape of the post voids adequately reflected the shape of the posts as the filled voids in soft soil would tend to erode over time.

The maximum thickness recorded for the carbonized wall planking, behind the posts, was 22mm, which is likely to underestimate their original thickness. The width of each plank was 18-20cm.

The lowest 20cm of building fill (2975/4082) comprised burnt debris overlying the cellar floor. Most of the debris was ash and pieces of carbonized planking that had fallen into the pit from the fabric of the building during the fire. The carbonized timber represented only a small proportion of the timber structure most of the wood would have been reduced to ash and small charcoal flecks. Little of the timber was of any value

in providing any structural detail, although post 4206, which might represent the collapsed upper portion of the south-west corner post (4230), contained two peg holes, which might indicate how the horizontal wall planks were attached to the posts. Traces of textile (4265), found within the burnt layer above the floor, had probably been coated in a pitch-like substance, and may have been used as caulking between the wall planks.

Remnants of a circular wicker basket (4093) lay in the south-west corner of the cellar but no associated contents were retrieved.

Above the burnt debris, the pit was back filled with domestic rubbish.

Dating

The building pit cut ELS (phase2) pit 4538 and the building construction features had a similar late ELS pottery assemblage. The pottery from the burnt layer included one sherd of St Neot's ware suggesting that the final occupation was in the first half of the tenth century.

Building 4081	Ips	Imp	Thet	StN	EMW
Pit backfill	55	9	458	55	19
Burnt layer	84		68	1	
Construction features	30	1	86		

A group of eight coins (87-93/3104N, 120/3104N), which had probably been within a purse or pouch and found at the base of the backfilling, above the layer of burning, was probably deposited c.930-40. They were not affected by the fire, indicating that they were probably lost or concealed during the initial levelling of the pit.

Backfilling of the building pit appears to have happened over a long period and was not completed until the EMED period, as there were 19 Early Medieval ware sherds in the associated pottery assemblage.

Copper Alloy Working Complex 0362/0876

This area of hearths, fronting the west side of road 1590, was associated with copper alloy working. The hearths lay upon layer 0385, which was a continuation westward of layer 0085, above road 1590. To the west, the layers of burning were heavily truncated, mainly by the LMED footings of the Carmelite friary. The surviving area of burning covered an area of about 45m², extending 9m from north to south. This was not defined well in plan but separate areas of more intense burning could be isolated.

Burnt clay spread 0362, at the north end of the complex and heavily truncated by LMT pit 0331, graded into a charcoal spread (0485) on the west side of road 1590. To the south-west, the most intensely fired area (0277) was almost totally removed by friary footings 0278 and 0652.

Complex 0876, further south, produced crucible fragments, a slag nodule (0743/3104Cu), as well as objects (0668/3104/Cu, 0702/3104/Cu, 0711/3104/Cu, 0834/3104/Cu). A section, running from the north-west to south-east across the complex, showed an extensive spread of burnt clay, a central clay hearth (0893) sitting on a base of cobbles, with a charcoal spread (0890) on the eastern periphery.

To the east of the complex, five clay mould fragments (0002/3104/Cl, 0003/3104/Cl, 0005/3104/Cl, 0021/3104/Cl, 0028/3104/Cl), and at least 14 crucible fragments, were recovered from layer 0085, above the metallated surface of road 1590. Bronze working slag and a total of 26 copper alloy objects, were either incorporated within the road metallating or found in the accumulated layers above. Of these, seven were fragments of balances (0247/3104/Cu, 0292/3104/Cu, 0369/3104/Cu, 0370/3104/Cu, 1174/3104/Cu, 1670/3104/Cu, 1844/3104/Cu). There was also an antler brooch mould (1288).

Three coins provided evidence for the period of metalworking: an Edmund Memorial Penny (0022/3104N) from layer 0385, an Alfred penny (0013/3104N) from 0362, and a coin of Charles the Bald (0006/3104N) from layer 0317. They suggest a narrow range of c.900-915 for the metalworking industry. The large quantity of pottery within the layers

confirms this with over 1800 Thetford ware sherds but only 8 St Neot's ware sherds, suggesting an early tenth century date.

MLS Phase 2 (c.940-1000)

In this phase, four buildings were constructed west of road 1825, three of which were rebuilt in the EMED period, and one building west of road 1590.

Building 0029 (Phase 1) (see scanned plan IAS3104_0029.tif)

The first phase of building 0029 was a sunken featured building, c.5.2m east-west by 3.2m north-south and 55cm deep, 17m west of road 1825.

The foundation trench for the south wall (0461, 0484) was indicated by a 1.4m wide and 40cm deep trench, sealed under the floor of the phase 2 building. The base of one posthole was recorded on its base, towards the east end, but all traces of any others had been removed, presumably broadening the foundation trench in the process. The extent of the phase 1 building was defined by the extent of the 55cm deep sunken feature, which indicated that the phase 1 north, west and east walls had been incorporated into the phase 2 building.

The pottery assemblage from the south wall foundation trench (0461) and the fill (0401) in the sunken feature, below the higher phase 2 building floor level, was MLS and the building cut two MLS pits (0007, 0355). The high proportion (5%) of St Neot's ware in pit 0007 suggests that the construction of building 0029, phase 1, was late in the MLS period.

Building 2022 (Phase 1) (see scanned plans IAS3104_2022_1.tif and IAS3104_2022_1_Sect.tif)

This sunken featured building lay end on to and 14m west of road 1825 (the St Stephen's Lane frontage).

The original sides of the sunken feature had been lost, when it was enlarged as part of a rebuilding (Building 2022, phase 2), but the foundations for all four walls survived. The building was 5.6m long (north-south) by 3.9m wide and 1.5m deep. Fragmentary traces of a floor surface (3310), comprising a thin band of red burnt clay and unfired greenish-grey clay, were recorded on the base of the pit. Within this, at least one area of burning (3317) was a probable hearth.

The walls comprised individual post holes set in narrow footing trenches (2816, 3095, 3312, 3384), c.40cm wide by 30cm deep, which respected the position of the entrance in the north-east corner. Not all the post settings survived within the foundation trenches but, where they survived along the west wall, they were closely spaced and never more than 25cm apart. Along the south gable end wall, there were a maximum of six posts, more widely with spaced (25-40cm).

There was a sloping entrance (3366) to the building at the east end of the north wall. It extended further eastward than the east wall of the building implying a staggered entrance. There was a line of post and stake holes along the west side of the entrance and one posthole remaining on the east side (the others removed by later pits). These, presumably, indicate either the side posts of a wooden staircase or a roofed porch over the entrance.

The entrance (3366) cut MLS pit 3892, with a high percentage (8.3%) of St Neot's Ware, suggesting a MLS phase 2 construction date. The pottery assemblage associated with the construction features was ELS, presumably as a result of the cutting of three ELS pits during construction, but the backfill of the sunken feature was MLS, with one sherd of EMED pottery.

Building 2140 Phase 1 (see scanned plan IAS3104_2140_1.tif)

This sunken featured building, 16m east of road 1825, was 5.1m long, north-south, by 4.4m wide and 1.2m deep.

The wall posts were set in foundation trenches (3734, 3735, 3800, 3899), up to 1m wide, on all four sides of the sunken feature. The north (3800) and south (3899) trenches were 40cm deep, the west (3735) was 30cm deep and the east (3734) was 65cm deep. They had been filled with re-deposited natural (sand, gravel and clay) in sequence,

starting with the east trench, followed by the north and south, and ending with the west trench.

Only one post hole (3638) remained in the north wall as the others had been removed by later pits.

The south wall had comprised five post holes of which four remained (3736, 3794, 3793, 3689) with one cut away by pit 2137, between posts 3736 and 3794. Post holes 3736 and 3793, in particular, are extremely large and may have been enlarged by removal of the posts for re-use. Three additional posts (3790, 3791, 3792) had been inserted into the row at the east end, probably in an attempt to remedy the failing structure of the building.

The west wall comprised five post holes (3639, 3640, 3641, 3642, 3643), with no packing, and probably original to the structure.

The postholes in the east wall were surrounded by packing and were replacements belonging to the phase 2 building, but no doubt in the same positions, mirroring the five in the west wall.

There was evidence of an entrance (2321) at the south end of the east wall in the form of sloping layers of fill, cut on the east side by pit 1853, and to the north by the cut of the phase 2 entrance (3338).

The sunken feature of building 2140 cut MLS phase 1 building 4081 to the north and the entrance to the phase 1 building 2140 cut MLS pit 4053, which had a high percentage (7.7%) of St Neot's ware, suggesting a late MLS construction date for the building. There were two sherds of EMED pottery from the phase 1 backfill (2167) behind the plank revetment in the north-east corner but as these were the only EMED sherds from its construction features, it is more likely to be contamination from EMED pit 2139, which cut it at this point.

Building 4165 (see scanned plan IAS3104_4165.tif and IAS3104_4165_Sect.tif)

This sunken featured building, orientated north-south, was parallel to and 22m west of road 1825. It was 5.2m long by 3.3m wide and 1.1m deep. Entrances down to the pit floor were recorded at both the north and south ends. From the sections, it was apparent that the southern entrance had been filled at the same time as the sunken feature, following the demolition of the building and that the north entrance was the earliest. It had been blocked, during the life of the building, by the insertion of an additional wall post (4582) in the north wall. This is further substantiated by the cutting of the west wall of this entrance through the construction filling (4166) behind the wall planking along the south side of the cellar.

The walls comprised regularly spaced individual post holes other than along the south wall where some remnant traces of a slot were recorded. Post ghosts were seen within post holes along the north, west and east cellar walls, but not along the south wall.

Evidence for a clay floor (4585) directly above the base level of the cellar was fragmentary over much of the structure but increased in thickness towards the north.

Post impressions, seen along the north, east and west sides of the cellar, protruded through this surface, but the post packings were sealed below.

Along the south wall, there was no evidence for the position of any of the posts within their post holes, and both post holes and slots appeared to be predominantly covered by a thin spread of clay flooring. It seems likely that the south wall had been modified when the new entrance was inserted and presumably a new wall had been built, or the remnant of the original had been underpinned, with a ground beam at floor level.

There was a scatter of post and stake holes of unknown function over the pit floor.

While the larger post holes (4651, 4574, 4575) cut the clay floor, the stake holes appeared to be predominantly below. Post holes 4574 and 4575 were centrally positioned and could have provided support for a floor level above.

Both the construction fills and the backfill of the pit were associated solely with MLS pottery assemblages. As the sunken feature cut MLS pits 3351, 4550 and 4906, the life of the building must have been restricted to MLS phase 2. The in-filled cellar was cut by early medieval pit 4306.

Building 3524 (see scanned plan IAS3104_3524.tif)

This sunken featured building lay 5m west of roadway 1590. It had been cut away on both its southern and western sides by later features, leaving 4.6m of the north wall and 2.6m of the east wall. Excavation to the south of modern concrete footing 5029, that had removed the south side of the building, failed to reveal any traces of the structure, indicating that the building could not have exceeded 5m from north to south. As 4.6m of the north wall was revealed, with no sign of a return for the west wall, it would seem probable that the structure was orientated at right angles to street 1590. The building was only cut 60cm into the surface of the natural, but was also cut through an 80cm thick occupation layer 80cm (3475) above that appeared to be contemporary with fill layer 0085, deposited above the metallated street surface (1590). This would give a depth for the sunken feature of 1.4m below the contemporary ground surface.

The walls were constructed of regularly spaced posts in a continuous foundation trench (4755 along the north wall and 4756 along the east wall). The north trench had five postholes (4749, 4750, 4752, 4753, 4754) and the east wall had three (4748, 4751, 4767). From the size of the post impressions in the clay floor and their elongated shape, it would appear that the building was dismantled and the posts pulled out for re-use elsewhere. This could indicate a short life for the building, if the timbers had not disintegrated sufficiently to be of no further use.

The base of the sunken feature was lined with a clay floor (4747) which had straight edges along the outer edges of the postholes indicating the line of the plank revetment behind them (of which there was no trace).

The building cut MLS pit 4791 (with 2.9% St Neot's ware), the base of which was sealed below floor 4747, and the construction features were associated with an MLS pottery assemblage (4.9% St Neot's ware). This suggests an MLS phase 2 construction date. The backfill of the building appears to have been very early EMED (only 10 sherds of EMED pottery with nearly 2300 Thetford ware sherds). The backfilled building was cut by two EMED pits (3564, 4735).

MLS Unphased

Grave 1947

An east-west orientated grave, 2.1m long and 1m deep, cut the south end of road 1825. A skull (1992) was found on the base but no other bones. The grave fill contained 12 Ipswich ware sherds, 31 Thetford ware and one St Neot's ware, confirming an MLS date.

?Grave 1943

This east-west orientated, grave-shaped pit, 1.6m long and 90cm deep, also cut road 1825, just 2.5m south-east of grave 1947. No human remains were recovered but a decayed infant/ child burial is possible. The grave contained a whole Thetford ware pot (1975) in the north-east corner and a total of 10 Ipswich ware, 169 Thetford ware and 1 St Neot's ware sherds, confirming an MLS date, and probably MLS phase 1.

Grave 1675

This small grave, 21m west of grave 1947, contained a child's skeleton (0846). There was no pottery associated but it cut ELS pit 0854.

Pits

69 pits belonged to this period including one (0073), which was not bottomed, but had vertical tip lines characteristic of a well. It lay 4m south of MLS phase 2 building 0029. Other pits, which were not bottomed, might also be wells.

There is little robust evidence to phase most of the pits within the tenth century. Only two pits contained useful coins: 0559 (which is not planned but intersects with pits 0550, 0478) and 0501 produced Edmund Memorial pennies, numbered 0029/3104N, and 0030/3104N, with likely deposition dates c.895-920, and pit 0865 produced a fragment of a clipped silver penny (0084/3104N) of 10th century date.

There were few examples of intercutting MLS pits but pit *0501*, with one of the Edmund Memorial pennies, was cut by two other MLS pits (*0084* and *0496*), confirming that it is likely to be MLS phase 1.

It is possible that the percentage of St Neot's ware in the MLS ceramic assemblages could provide an indication of date on the assumption that the market share would have increased through the period. If true, the assumption should be used with caution, but the pits with assemblages containing less than 1% St Neot's ware, which would be early MLS (phase 1) do appear to cluster where they might be expected. Of the 16 pits with less than 1% St Neot's ware, eight lie in an arc west of MLS phase 1 building *4081* and they include pit *0501*, with the associated early coin. A further three pits lie close to the other MLS phase 1 building (*0673*). The remaining five lie in the north-east of the site, where no building belonging to MLS phase 1 was recorded.

Phase 1 of building *0029*, which belongs to MLS phase 2, does cut MLS pit *0355* which has less than 1% St Neot's ware, and lies in this northern group of suggested early MLS pits.

The remaining 53 pits with more than 1% St Neot's ware (up to 10%) have a wider distribution including 23 between the buildings and road *1825*.

Discussion MLS

The MLS phase 2 buildings had no evidence of deliberate destruction but buildings *0029*, *2022*, and *2140* were replaced in the following EMED period.

There were two Danish attacks on Ipswich at the end of this period (991 and 993) and it is clear that this was a cause of concern in the town as evidenced by the hoard of c.500 silver pennies found north of the Buttermarket in 1863 and which comprised First Hand Issue pence of Aethelred II, dated 979-985 (Sadler 2010, 35) (HER ref IPS 199, IAS2601).

Early Medieval, c.1000-1200 (EMED)

Two phases of activity can be identified for this period. In the first phase four buildings fronted road *1825* but there were none fronting road *1590* and it appears to have gone out of use. In the second phase, there were no buildings anywhere on the site and only pit digging is represented.

Phase 1 c.1000-1100

Building *0029* (Phase 2) (see scanned plan IAS3104_0029.tif)

This sunken featured building, 5.6m north-south by 5.2m east-west, and 30cm deep, was created by the extension southwards of the phase 1 building *0029*. It had been burnt down leaving carbonised remains of some of its timbers.

As the sunken feature was shallower than that of the phase 1 building, the fill of the phase 1 building was sealed under the northern half of the floor of the phase 2 building. The south wall of the phase 1 building had been removed and foundation trenches cut for the extended east and west walls and new south wall, which contained posts at regular intervals. There were carbonised remains of the middle section of the west wall and north end of the east wall. Where the posts had not been burnt, post impressions were clearly visible in the post holes.

There was no evidence for a clay floor but a thin band of charcoal (*1474*), on the base of the sunken feature, could be the carbonized remnants of an organic floor covering. A raised layer of intense fired burnt clay and chalk (*0076*) in the centre of the building was probably a hearth. There was a stepped entrance (*2325*) down to the sunken floor in the centre of the east wall.

Fire damage comprised mixed layers of ash, charcoal and fired clay filling the interior of the building above the remnants of structural posts and planking. There were *in situ* carbonized remains of four timbers in the west wall (*0343*, *0344*, *0345*, *0346*), with planking (*0347*) behind, and one post (*0050*) at the north end of the east wall, also with planking behind it.

There were additional carbonized wood fragments (0336, 0340, 0376) in the layers of ash, charcoal and fired clay filling the interior of the building. The intensity of burning clearly varied across the building.

The life of the building appears to be restricted to the EMED period. The construction features and the final fill of the building, after its destruction by fire, are both associated with EMED pottery. The building may well have been destroyed by the same fire that destroyed buildings 2022 and 2140.

The relatively small amount of recorded woodwork in this building, compared with buildings 2022 and 2140, was probably due to the relative shallowness of the cellar pit.

Building 0429

Very little remained of this possible sunken featured building lying 17m west of road 1825 and 3m south of building 0029 phase 2. The sunken feature was rectangular, flat bottomed, 60-70cm deep and 3.4m long, north-south. Although the east side had been completely removed by the later pits, 1.7m of its width survived (it could not have exceeded 2.7m wide). One posthole (2930) survived at the north end and another (2904), 30cm deep, at the south end.

The pottery associated with 0429 included 4 EMED sherds with 28 Thetford ware. It was cut by a sequence of EMED pits (0035, 2580, 3020) and cut an EMED pit (0311) with 7 EMED sherds and 2 Andenne ware sherds.

Its position in the stratigraphic sequence implies that it belonged to EMED phase 1. The fill was alternate layers of sandy loam and layers of sand with much charcoal which could imply that it had been burnt at the same time as building 0029.

Building 2022 (Phase 2) (see scanned plan IAS3104_2022_2.tif and IAS3104_2022_2_Sect.tif)

Building 2022, phase 1, was completely rebuilt in this phase. It was enlarged, on all four sides, creating a building 6.7m long by 4.7m wide, with an entrance in the east wall. A layer of light brown sand (2665), 45cm deep, was laid over the floor and foundations of the phase 1 building, and a new clay floor (2253) surface laid above. New wall foundation trenches, 80cm wide and 20cm deep were dug around the edges of the enlarged sunken feature. Few of the post impressions, within these trenches, survived to be excavated, but a line of four (3648, 2610, 2611, 2612) surviving along the western edge of the cellar, showed them to be more widely spaced (c.40cm apart) than those in the phase 1 building.

The creation of a new entrance to the cellar, facing road 1825, was mirrored in the contemporary buildings (0029 phase 2, 2140 phase 2). The new entrance was located towards the southern end of the east wall, and was cut away by later pits on its south side. The entrance was a ramp, surfaced with clay, with no evidence for any individual steps. No post settings or slots were found definitely associated with this entrance.

The building appears to have been abandoned following a fire which was apparently contained within the northern end of the structure. The fire has preserved some structural evidence of the north wall. A carbonized plank (2095) indicated the existence of horizontally laid boarding, lining the sunken feature. Evidence of vertical fill lines in section, incorporating more carbonized planking, indicated a filling of the northern entrance of the phase 1 building, after the laying of the revetment planking. No vertical posts were preserved by charring and the carbonized planks and posts, which had fallen on to the cellar floor, were restricted to the northern end of the building.

Various charred organic items survived *in situ* on the floor of the building. A barrel (2111), containing a quantity of grain (2112), with more spilling over the side (2355, 2356), appears to have sat on the floor, as the remnants of staves from the base and the grain inside were preserved directly above the floor.

More grain (2126, 2476) was found further to the north within the layer of burning (2081) overlying the clay floor (2253). This was sandwiched between two levels of wickerwork. Above was part of a fine woven structure, resembling a basket (2251,

2252). Below it, on the clay floor, more substantial material was used in the weave (2249, 2250), resembling hurdling rather than wickerwork. In addition, eighteen individual solid lumps of carbonized grain (2388), resembling bread rolls, were recorded, mainly lying above basket 2252, but with others to the south and east lying directly on the clay floor of the cellar. The hurdling, recorded directly above the clay floor, may have constituted a floor covering, or a collapsed partition within the cellar, whilst the finer weave may be the remnants of a basket of bread rolls or cattle feed suspended from the ceiling. The grain may have been stored in barrels similar to 2111, or even constitute the spilled contents of that barrel alone.

A number of broken pots (2110, 2421, 2509) also lay in the debris of the fire. Pot 2509 lay close enough to the floor surface to have been standing in that position, but the other two vessels lay within the layer containing most of the burnt timbering (2081) and may have fallen from a floor above.

Although a number of combustible items within the basement had burnt, the posts and planking around the edge of the cellar had not, implying that the fire may have been on a floor above and that only in the area where the floor had burnt through was there any effect on the contents of the cellar. The incorporation of some burnt planking, within the area of the carbonized wickerwork and grain, implies that the basket or baskets may have fallen from above, possibly from the ceiling, along with some of an intermediate floor.

The carbonized timbers, lying above the floor, comprised mostly planks, with some pieces of post or beams. There were a number of parallel planks (2342, 2343, 2344, 2345, 2347, 2348) at the south end of the burning, possibly connected to each other by a remnant of a beam or post (2346). The length of these planks got progressively shorter towards the north and some looked to have been cut diagonally at the ends. It is possible that they represent the top timbers of the northern gable end of the building, which fell back on itself as it crashed, in one piece, to the floor below. As there was little recognizable timbering sandwiched below these planks and the floor, their interpretation as a gable end would rule out a two-storied building.

No attempt had been made to clear out the contents of the building, and it had been backfilled with a fairly uniform layer of domestic waste.

The construction features were associated with an MLS pottery assemblage but the filling of the phase 1 building, under the floor of the phase 2 building, included one sherd of EMED pottery. The backfill of the sunken feature contained an EMED pottery assemblage

Building 2140 (Phase 2) (see scanned plan IAS3104_2140_2.tif)

The sunken featured building 2140 phase 1 had been rebuilt in this period and had been burnt down leaving extensive evidence of its structural timbers and contents.

The depth of the sunken feature remained unchanged, although a new clay floor (2258) was laid and a new entrance constructed.

A new south wall was built some 50cm north of the phase 1 wall. This was the same construction as in phase 1 with five posts set in large packed postholes.

The posts in the east wall had been replaced. The cutting of large postholes for the replacement posts implies that only the lower sections of the phase 1 posts were replaced. The large holes would have allowed for some manoeuvrability of the new posts when attaching them to the remnants of the old ones. The post holes were then packed once the posts were in position.

Post hole 3644 was the only recut post along the west side of the cellar, and must reflect the need to rebuild the south wall of the building.

Posts were evenly spaced along both the long sides of the building but had been reduced from eight to seven. The gables had five posts at each end.

A new entrance into the building (3338) was cut in the centre of the east wall, just north of the phase 1 entrance. The east edge of the entrance had been removed by pit 1853, and the north side cut away by pit 1937. A small remnant of the north-east corner (2350) did however appear to survive between the two pits.

When the building was destroyed by fire, the carbonized timbers collapsed into the sunken feature. Carbonized vertical posts survived to a height of up to 94cm above the floor, especially on the west side where the tops of posts 2663 and 3015 were discovered within the upper layers of backfill. With the possible exception of 3097, all the surviving posts were square or rectangular in profile and measured 20cm by 14-16cm in cross section. As they had probably suffered some shrinkage as a result of the fire, this might be less than their original size. Planking in the revetment of the sunken feature was horizontal, 25 - 30cm in wide and generally c.1cm thick, but this must have suffered heavily from burning and, carbonized planking from above the floor of the cellar generally exceeded 2cm.

Above the clay floor surface (2258), at the base of the cellar, the fill comprised a thick layer of burnt material (2071, 2054), containing carbonized structural elements of the building and its contents. The remains of an unidentified wattle or wicker work structure (2453) were located near to the entrance of the building, and the base of a wicker basket (2604) in the south-west corner of the cellar. A key (2324; 5648/3104F) was recorded west of entrance 2310. Two Thetford ware vessels (2262, 2267) were located at the interface between the layer of burning and the post-destruction fill (2114) above. In both instances these vessels could have been incorporated in the later filling of the cellar, rather than having been within the building at the time of its destruction. Some of the timber framing of the east wall had collapsed into the entrance during the fire which destroyed it. Timber 2322 lay due east of post 3097 and was probably the upper part of this post. This wall post had formed the south jamb of the doorway and a timber (3337) lying at right angles to the top of the fallen post was probably the lintel of the doorway. The length of the two post fragments suggests a doorway height of 1.65m for the doorway, although this would have been reduced in height by some 25cm by the continuation of the lowest level of wall planking across the bottom of the door, acting either as the riser of the lowest step or as a threshold, keeping silt from accumulating in the building.

A second timber (3336), parallel to the possible door lintel (3337) and running at right angles to the top of post 2322 might be a middle rail into which the wall posts were set. If so, the overall height from the floor to ceiling would have been some 2.1m. Planking survived to a height of 80cm above the level of the building floor and extended northwards from behind the south-east corner post (2569) to beyond the next vertical post (2570). Behind this planking, the sloping base of the phase 1 entrance had been backfilled.

The structure was most likely held together with wooden pegs, although the evidence is a scant. Certainly planking 2745, V-shaped at one end, showed clear evidence of dowel holes. Nails were certainly uncommon, although two (2441, 2442) were found still protruding from plank 2440.

Phase 2 c.1100-1200

Pits

There were 132 pits dating to the EMED period across the site. 12 of the pits contained very low numbers of LMED sheds, probably indicating a late 12th century date. Two of the pits (1976, 4903) were probably wells. 1976 lay just east of building 2022 and 4903 just north of building 0029.

There can be no doubt that some of the pits were used at the same time as the buildings in phase 1, while many were phase 2, after occupation on the site had ceased. All four buildings had been cut by phase 2 EMED pits.

Oven 2132

At the south end of the site and cutting the back-filled building 2140, there was an oven base (2132), 2.8m long by 1.2m wide and 30cm deep. The base was red fired clay with a charcoal layer above it and there was a tail-like flue running south from the south-west corner.

Discussion

All four of the EMED buildings belonged to the first phase of the period and had burnt down, presumably at the same time and all were cut by EMED pits of the second phase. Road 1590 had not been re-metalled in the MLS period and rubbish had accumulated upon it. It was cut by two EMED pits (3116, 3460) implying that it had gone out of use by the EMED period or was just a dirt track and property boundary.

In phase 2 (12th century) occupation of the site ceased apart from pit digging. It is likely that occupation during this period was concentrated on the more major streets in the town, such as Buttermarket.

The pits east of building 0029 are not evenly distributed and they cluster in two east-west lines at right angles to the St Stephen's Lane frontage suggesting that they had been dug alongside tenement boundaries and that those tenement boundaries continued in use after there were no longer buildings within the tenements.

Late Medieval, c.1200-1450 (LMED)

Phase 1, c.1200-1278

Pits

27 pits, all lying east of the LMED phase 2 friary, were LMED on the basis of their pottery assemblages, some of which were no doubt contemporary with the friary and others predated it. As Ipswich Glazed Ware was produced from c.1270-1325 (Blinkhorn no date), its presence or absence can be used to distinguish between the two phases, 21 of the 27 LMED pits probably belong to this period as they did not contain Ipswich Glazed Ware. Pit 0008, which was only excavated to a depth of 1m, was unusual being only 1m in diameter and filled with grey-green clay.

Phase 2, c.1278-1450/Late Medieval Transitional, Phase 1(c.1450-1538): The Carmelite Friary

During this period, the whole site was occupied by a Carmelite Friary, established in Ipswich in 1278, following a meeting of the Provincial Chapter in Norwich, and suppressed in November 1538. There is documentary evidence for a series of land acquisitions to expand the friary in the 14th century and for a rebuilding of the church towards the end of the 15th Century, with the new church being consecrated in 1477 (Zimmerman 1900).

The only previous investigation of the site was a watching brief carried out by Miss Nina Layard in 1899 (Layard 1900), on the site of an extension to the Cowell's premises fronting the Buttermarket and east of Market Lane.

The main features recorded were a stone wall running south from the Buttermarket and parallel to, and some 35m east of, Market Lane, and a number of skeletons between this wall and Market Lane, suggesting that this was the cemetery.

Financial, logistical and time constraints particularly affected the amount of excavation that could be undertaken on parts of the friary complex. This was also the area of widespread destruction caused by the late-Victorian basements. Inevitably, evidence for the development of the friary complex, most notably on the phasing of the church itself, its overall dimensions and internal features, including burials was partial.

The Church

The Choir

There were at least two phases of the choir. The first phase choir, c.8m wide by c.22m long, overlapped with the nave by 5m at the west end and was represented by foundation trenches 0160, 3414, 3499, 3469, and 3471. In the second phase, it was extended 7m to the east, represented by foundation trenches 0127, 3463, with angle buttresses (0132, 0166) on both the north-east and south-east corners.

The north and south wall lines had projections for buttresses along the outer edges. Only 7m of the east (3469) and 2.4m of the west end (3414) of the northern foundation trench had survived destruction by later basements, and it was only at the east end that any wall remains survived. The southern side of the wall had been destroyed by the

concrete footing (5029) of the Post Office Sorting Office, but the lower courses of the septaria and mortar wall (3478, 3479) survived on the north side.

Only a short section of the foundation trench (3496), 1.7m wide, for the west wall survived.

The second phase east wall foundation (3463) cut a linear footing (3462), which did not extend across the whole the east end. This was cut by a grave-shaped pit (3458), of LMT date, suggesting that the footing never supported a structural wall. The LMT date of the fill of this pit (or former grave) may however constitute a backfilled disinterment below a tomb cleared at the time of the dissolution for the reburial elsewhere.

One of the buttresses (0663) along the south wall had been removed when the sacristy was built on the south side.

The west end of the first phase south wall foundation trench (3499) had been cut by a LMED grave (3501) implying that, in the second phase, the west end of the choir had been moved eastward by c.4m, to line up with the east end of the nave.

A footing trench (3484), contemporary with the earliest choir, was traced running for 4m south of the south choir wall, on the line of the west wall of the chapter house.

There was evidence for a resonance chamber, 11.7m long by 1.5m wide, against the south choir wall. Residual traces of a dwarf retaining wall, built of brick and flint, were located at the east end (3518) and in the south-west corner (3508). As the corresponding area of the choir on the north side had been destroyed, there was no opportunity to locate any similar structure on this side.

Only one burial was recorded in the choir. A tomb (3802), containing skeleton 3803, an adult male, had been inserted through the north choir wall, with a new wall (3466) built to the north to enclose it. Its location, on the north side of the chancel, indicates that it functioned as an Easter Sepulchre.

The Nave

The north wall was recorded for c34m but only the eastern 25m was excavated by hand. There were two phases of foundation trench and some remains of the final phase wall. Only the south edge of the earliest foundation trench (3403, 5036) survived, cut by the later trench (3402, 3423), which had buttress extensions along its north side, at 4.2m intervals. The surviving section of wall (3425) was 88cm wide and buttressed on its north side. A boundary wall, running north towards the Buttermarket and 80cm wide, was butted onto the north edge of the buttress. Wall 3425 had been cut away to the west but machine trenching along the line of the wall revealed traces of walling and wall footing for at least a further 10.7m to the west (1691).

Only an 8m stretch of the south wall was excavated revealing a single foundation trench (4807) and 4.5m of surviving wall. There were buttresses on its south side, corresponding to those in the north wall. The wall (4769) was 68cm wide, occupying the full width of the footing, compared with 90cm for the north wall (3425). The insertion of a World War II air-raid shelter (1785) had cut away the west end of the south wall but a large septaria and mortar plinth (3547), 1.2m in width, cut away by the air-raid shelter to the north, was large to be the southern angle buttress at the west end of the church. The east end wall of the nave, on the north side, was indicated by foundation trench 1778. A north-south foundation trench (3420) 6m west of this, and on the line of the phase 1 west end of the choir, probably indicates a northern porch or chapel in the angle between the nave and choir.

In the LMT period, an extension, 9m long and 1.2m wide, was constructed on the north side on the nave at its east end. A new foundation trench (3401, 3416) was cut through the north wall line and its foundation trench (3402). Two fragments of wall, with buttresses projecting to the north, survived at either end (3148 at the west end, and 3147 at the east end).

This appears to have been mirrored by a similar extension directly opposite, on the south side. A footing (4839) was cut through both the nave and the cloister wall, and a new wall (4829) inserted above.

This new configuration suggests that walls at the eastern end of the nave were pushed out by some 1.2m to accommodate two new gabled walls, which were raised to create a wide cross passage or transept, between the nave and the choir.

A further extension to the north side of the church is suggested by a north-south wall, (5039), c.3m east of wall 1778. Only the eastern edge of the wall survived with an in situ limestone quoin (5040), at its north-east corner.

As excavation was only possible at the east end of the nave, evidence of internal divisions, floors and graves was very limited.

Only one certain column base foundation (4837), with evidence of a robbed out column base (4710) was recorded 3m north of the south nave wall and towards the east end. An oval area of septaria rubble (1699), 1.2m by 70cm, lay to the north, and 3m from the north nave wall, with another square area of rubble (1773) 3m east of it. These were not sectioned to record any foundation below. The width of the nave (13.5m) suggests that it was aisled but these column bases could be three of four supports for a tower above the walking place.

The earliest floor surface comprised a horizontal band of clay (4784) lying above levelling layers 4854 and 4855. This surface was not fully excavated but was picked up as a continuous layer over the whole area, and seen in section at the edges of excavated intrusive features. The majority of tiles had been robbed from this surface, and little remained of the bedding mortar, but some patches of tiled floor remained (4800, cut by graves 3592 and 3596, 3507, lying 7m further east, seated on a bedding layer of sand (3514) above a mixed clay and mortar layer (3517). probably corresponding to clay floor surface 4784, further to the west and south-west.

A later floor had been laid above this first phase floor, which had been stripped of its tiles, except in isolated areas. A layer of clay loam and mortar (4731), c.10cm thick, topped with a clay layer (3570) was laid as a bed for the new floor. An area of tiling (4834), directly overlying remnant column base footing 4833, adjacent to the south nave wall is likely to be associated with this replacement floor surface. It had been cut away at the east end by grave 4830.

Only 12 graves were identified within the nave, with nine in a small area of the south nave and three in the north nave. Only eight graves were excavated deep enough to recover skeletons (Mays 1991).

Grave 3404 cut the first phase nave foundation trench (3403).

Grave 3501, which was not excavated, cut the west end (3499) of the phase 1 choir wall footing (0160).

Graves 3575, 3591, 3592, 3596, and 4728 cut the latest floor surface (3570) of the nave, with only grave 4730 and possibly grave 4835 apparently predating this floor.

Two of the graves were flint and mortar lined (3502, 3504). Grave 3502 was empty, indicating that the body had been exhumed.

THE EASTERN RANGE

The "Eastern Range" is a collective term for a series of buildings, running north-south, to the east of the east cloister walkway (sacristy, chapter house, and storerooms with the dorter over). Only the Chapter House was built out from the cloister walk wall as the other buildings were further east and separated from the cloister by two open courtyard areas.

The Chapter House

The Chapter House, 16m long and 5.5m wide, lay 7m south of and parallel to the choir, running eastward from the cloister walk. No walls remained but the north, east and south wall lines were indicated by the wall foundation trenches (0255, 0282, 0279, 0278, 0744, 1070, 5030). These indicated angle buttresses at the north-east and south-east corners. The east end of the south foundation trench had been destroyed by the insertion of a modern petrol storage tank (5075).

There was evidence for three phases of floor levels. No flooring survived of the first phase, as the floor had been lowered in the second phase.

The second phase floor (0651), had been cut to a level lower than the base of the walls and the outside ground surface. This required the underpinning of the inside edge of the east and south walls with septaria (0701, 1082). The tiled floor (0651) had been badly damaged by later pits and the concrete footing (5029). The largest area of undisturbed

flooring lay in the north-west corner of the building. Small tiles had been laid in blocks, alternately square or diagonal to the orientation of the building. Further remnants of the floor were found along the south and western ends of the building, but here the tiles had been removed, leaving only their impressions in the mortar bed.

In a third phase the floor was raised back up with soil (0600), which was covered with a thin layer of sand with tiles set into a mortar surface above. The tiled floor (0261) had been totally robbed from its mortar bed, although a few were found in a layer of clay (0688) sealing the mortar surface at the eastern end of the building. Despite this, the imprint of the tiles had survived in the mortar bedding and indicated a larger tile to that found on the lower floor surface. The only surviving remnants of this floor were edging bricks (0618) on the northern and eastern extremities of the floor. Prior to the laying of the tile floor, work was undertaken to solve a damp problem along the north wall, which had not been under-pinned. A plaster tanking was inserted against the foundation fill below the floor by the digging of a trench alongside the wall (0187, 0270). This third phase dates to the LMT period as 6 LMT sherds and a penny of Henry V (1440-50) were included in the fill (0600) used to raise the levels.

Four graves (0603, 0626, 1078, 1099) were located within the excavated area, all of which cut the lower floor surface (0651). Only the graves on the north side of the chapter house (0603, 0626) could definitely be related to the upper floor surface, as it had been substantially removed on the south side. In both cases the mortar below the tiles overlay the graves, although in neither case were any tile impressions recorded in the mortar. It is therefore assumed that these graves were capped with grave slabs and had been inserted through the floor, with mortar laid below the slabs. All four burials probably post-dated the final floor surface and grave 0603 had LMT pottery in the grave fill.

The Sacristy

The sacristy was added onto the south side of the choir wall. It was a rectangular chamber, 4.5m from north to south by 7.5m east to west. The bases of both the east (0235) and west (0175) walls survived above their respective footings (5077, 0299) along with a portion of a southern return, in the south-east corner, above footing 652. The walls were constructed of septaria and mortar and measured 90cm in thick. The west wall (0175) was butted against the south choir wall while the east wall had been butted onto a south angle buttress of the choir. There was a 1.5m wide gap between the south wall of the sacristy and north wall of the chapter house. No internal features of this phase survived the phase 2 rebuilding.

In phase 2, it appears that the sacristy was joined to the chapter house. The angle buttress on the north-east corner of the chapter house was already only c.40cm from the sacristy wall and a new footing trench (0623) allowed the west sacristy wall (0299) to be joined to the north wall of the chapter house. The south wall of the sacristy was demolished making a sacristy 7.5m square.

Once the buildings had been linked, an internal north-south wall (0293), 30cm wide, resting on bare earth, and therefore assumed to be non-structural, was constructed running parallel with the west wall and 90cm from it. This may have constituted a 1.2m wide dais along the west side of the building and most likely represents the base of a night stair leading from the dormer, on the first floor of the range straight through the south choir wall and implies that the first floor dormer had been extended over the sacristy and up to the choir in this phase.

Later disturbance, along the inside face of the east wall had removed everything except a brick and septaria lined pit (0670) in the north-east corner of the building. The pit was 70cm square and 1.15m deep, with walls standing above the sacristy floor (0172). From its location, it could have been a drain taking a downpipe from the phase 1 choir roof, which had been incorporated into the sacristy rather than relocated, or more likely, as the fill (0208) contained 212 LMT sherds, it was a toilet, close to the choir, for the convenience of the friars.

The floor surface (0172, 0173) was confined to the centre of the building, and was probably bounded by a dais to the south, west and east. The tiles were of a size similar to those found within the chapter house and were laid out in a similar fashion, with

blocks of tiles laid alternately square then diagonal to the orientation of the building. A number of larger tiles imply that this surface had been periodically patched, unlike in the chapter house and dorter, where the whole floor surface seems to have been replaced.

The East Range south of the Chapter House

The other building in the east range, south of the chapter house, was 13.4m long by 7.5m wide, running north-south and parallel to the east wall of the cloister. Robbing of the walls had been extensive but the foundation trenches survived. The east foundation trench (1114) displayed a clear buttress (1740), roughly at the mid-point and terminated at the south end in a wide foundation for angle buttresses, with the robbed imprint of the south one (1137). Unfortunately, the intersection of the west foundation trench (1063) with the chapter house, to the north, and the south range, had been destroyed, as had that of the east foundation trench with the chapter house.

The robber trench for south wall (1066) lay above the foundation trench (1109), with a tanking trench (1089) on its north side, and a large buttress foundation (1113) at the mid-point of the south side.

Traces of the septaria and mortar walls survived in the south-west corner: a 4.8m stretch of the west wall (1771), 70cm thick, and a stub of the west end of the south wall, 1m thick.

The first phase building had a colonnade down the centre. Two circular footings (1176, 1181) survived at the south end, the most southerly of which was surmounted by the base of a column (1092), 40cm square. To the north any further similar features would have been removed by the insertion of a petrol storage tank (5076) and by post-Dissolution pits (1177, 1195, 0793). These bases most likely held vertical timber posts, presumably supporting a central ceiling beam supporting the dorter floor above. No floor level survived of the phase 1 building as the floor had been lowered in phase 2. In the second phase the floor level was lowered and a new clay floor (1162) laid. As a result, the footing 1176, below column 1092, stood proud from the floor. As with the chapter house, this floor lowering also exposed the top of the footing trenches, and the inside face of the walls had to be underpinned with septaria. This was visible along the southern two thirds of the east wall.

In phase 3, the central colonnade was removed and the floor was re-instated at a higher level. A layer of loam, 25cm thick (1093), was topped with a 6cm clay floor (1088). The central colonnade was removed in this phase. Above column footing 1181 the column had been completely removed while above footing 1176, to the south, the column base (1092) had been reduced to the level of the new floor surface and tiled over. This implies that a new floor, capable of spanning the 7.5m, had been constructed for the dorter above.

Also in this phase a room, 3.9m north-south by 2.9m, was constructed in the south-west corner. A dwarf wall, 25cm thick (1090), ran north-south and another (1118) east-west. This had the impressions of large tiles in the mortar bedding on the floor, which appeared to be of similar dimensions to those revealed in the final phase of the chapter house.

There were the in situ remnants of moulded limestone door jambs marking the position of a doorway (0748), into this room. This doorway stepped up into a covered way abutting the north side of the south range and ultimately entered the south-east corner of the cloister. This room was presumably used separately from the rest of the ground floor room either as a room or a stairwell from the dorter above.

The later blocking of doorway 0748 may be associated with the post friary buttressing added to the north-east corner of the south range, when it was used as the Town Gaol after the Dissolution.

2.2n to the north of doorway 0748, was a second doorway (1147) through the west wall, marked by two in situ internal limestone splays and by a 1.35m long course of bricks in front of the external threshold. This doorway would have provided access from the south courtyard in to the rest of the ground floor.

It is possible that the range was extended further south in phase 3. A wall foundation trench (1139) ran south from the south-east corner buttress meeting an east-west

foundation trench (4676) on the line of the south wall of the west range. This east-west foundation trench (4676) ran for a further 3m east and another LMED foundation and a wall fragment (4577), above foundation trench 4578, to the south-east, imply a further building south of the excavated area. Another possible foundation trench (4958, 4981, 2701), also of LMT date, continued the line of 4676 a further 10m east, and the foundation may be that of the south precinct wall rather than a building.

The Reredorter Range

This building, 12.5m east-west by 9.7m north-south, ran east from the south end of the east range. In its final form it was certainly the reredorter serving the dorter on the first floor of the adjoining east range, with a ground level latrine pit, presumably below first floor latrines. It comprised a masonry east and south wall but was open on the north side. The east wall was represented by foundation trench 0935 and the south wall by foundation trench 1104/3353. Two remnants of the south wall, 90cm thick, survived (1103 at the west end and 2700 at the east end). The buttress (1740) along the east wall of the east range appears to form the west jamb of the large open north entrance and implies that this range was contemporary with the east range.

In the first phase the building was subdivided by two internal walls, forming a room in the south-west quadrant, marked by east-west foundation trench 1017 and a north-south wall which had been removed by pit 1001 and a deep robber trench (0747), probably at the Dissolution as the latter also cut phase 2 features. The east-west wall (1017) had a projection on its south side, similar to a buttress foundation.

The east half of the building had been entirely disturbed by two contemporary, shallow, square pits (0997 in the north-east quadrant, and 1300 in the south-east quadrant). They were c.50cm deep and filled with a multitude of layers of sand, loam, clay and mortar.

These are difficult to interpret but could be the result of the constant piling up of sewage and subsequent removal off-site

The function of the building in phase 1 must remain uncertain but was probably a service area for the reredorter, as in phase 2, but without a latrine pit.

Two shallow post holes (0951, 0960) along the open north side of the building, could represent door posts.

Running the full length of the outside face of the east wall footing was a gully (0935), which presumably acted as an external drainage ditch, carrying away surface water from the building. This would imply that the roof sloped eastward from the east range to the west.

In phase 2, a masonry-lined latrine pit (1057) was inserted into the room in the south-west quadrant of the building and a north-south partition wall built along its east wall, extending north to meet the east-west wall 1017. This created a second small chamber at the east end of the room in which a second small latrine chute was constructed linking into the latrine pit to the west. LMT pottery in the footing (1100) for the latrine pit implies that phase 2 dates to the late 15th-early 16th century.

Despite robbing of the walls above the pit lining, the inside face of the south wall of the pit aligned with the projected position of the inside face of the south wall, and almost certainly underpinned it.

The latrine pit was rectangular, 2.5m from north-south by 2m east-west. The walls were composed of flint and mortar and the occasional brick, tile and septaria block and were plastered throughout. The walls varied in thickness: 40cm on the north, 30cm on the south, 50cm on the west and 85cm on the east, where the walls formed the base of the internal north-south partition wall. The east wall had an arch leading from a separate chute at the north end. This chute dropped vertically from a square shaped privy above, entering the main garderobe pit through the arch down a sloping brick lined back wall. The arch and the southern jamb of the opening were similarly composed of brick.

The pit was not bottomed, being excavated to a depth of some 2.9m (2.48m O.D.) below the ground surface, with the water table being encountered at 20cm above this level.

The bottom 40cm of fill was composed of brown organic-rich clay. This clay spread up the sloping back of the entrance from the privy. Above this level, the whole structure

had been backfilled at the Dissolution with flint, septaria and mortar rubble, which presumably comprised the debris left from the robbing of the walls above ground level. Although access to the pit would have been accessible from ground level for clearing out, it is assumed that it serviced first floor communal lavatory facilities above leading off the reredorter.

The ground floor privy chamber created east of the latrine pit was 1.8m wide. The toilet comprised a square aperture on the east side of the partition wall with a chute that dropped vertically to a sloping back wall. This allowed access through an arched opening into the main latrine pit.

The only feature of this phase in the east half of the building was shallow pit (1304) in the central area, similar to the earlier pits (0997 and 1300), in that half of the building.

The South Range

Only the 5.5m of the far eastern end of the building was excavated. The part of the range underlying Market Lane was not accessible but the north wall footing of the range was traced further to the west in the eastern section of Cowells's basement, following removal of the cellar wall.

Fragments of the original septaria and mortar walls were best preserved along the south side of the building, where the wall (1107) survived to a height of some 60cm. The wall was some 80cm thick above ground level but stood on a bottom plinth course that extended the thickness of the wall by as much as 20cm on both sides.

Robbing of the walls along the east (0754) and north (0783) sides of the range had left only a residue of walling in the north-east corner surrounding doorway 0791. This entrance to the range was 1.15m wide and the threshold was floored with a paving slab that had been cut to fit the shape of the doorway, but was separated from the vertical stonework of the western jamb by two lines of horizontally laid bricks.

Those sections of the east (1771) and north (0792) walls that had not been fully robbed had been reduced to a height of not more than 50cm. The east wall was 90cm thick adjacent to doorway 0791 but reduced to 70cm to the south. The wall remained the same thickness as it continued northwards forming the west wall of the east range. The remnant of the north wall to the west of doorway 0791 was 90cm thick, consistent with the width of the robbing trench (0783) further to the west.

During the LMT period, a drain (1053,/1068) from the cloister was cut through the east end of the range, cutting the threshold of doorway 0791, in the north wall, and exiting the south wall in the south east corner of the building.

The West Range

The construction of the Cowells printing works had removed all but the most northerly four metres of the west range, and the insertion of a World War II air-raid shelter (1785) had cut away the south wall of the nave of the friary church, removing any direct relationship.

A stub of the west wall, 1.2m wide at plinth level, abutted the end of the south angle buttress (3547) at the south-west corner of the nave and a stub of the north wall of the cloister walkway north wall protruded from the buttress south-east corner.

4.2m of the east wall survived running south from the south nave wall. It was 70cm thick with a plaster face surviving on both sides. The base of the wall had a plinth below ground level on the west side, increasing the thickness of the wall by a further 10cm. At the far north end, the wall was cut by a 1.05m wide doorway that joined the range with the north-west corner of the cloister walk.

Remnants of a north-south wall footing (4875) of LMED date, lying some 1.5m east wall of the building, was either the remnant of an earlier layout or constituted some form of internal division. This may suggest the former existence of an internal corridor within the range, which would, in turn, suggest the possibility of the ground floor being divided into a number of separate cells. No remnant walling was however found in association with the footing, which was cut by the later insertion of a small cellar (3532).

The Great House

The only evidence of structures to the west of the west range was the remnant of a septaria wall (3548), 32cm wide, with no associated floor surfaces, located in the western section of Cowell's basement after demolition. This may relate to the Great House, which was probably the only building west of the church. Redstone states that the church faced the Great House, behind which the priory gardens stretched to the west gate of the priory in Queen Street (Redstone 1969, 78). This Great House was presumably the guest house which received Henry VI on his visit in 1452 and, being at the far western end of their site, could well have been their first construction on the site, providing accommodation prior to the building of the church and other friary buildings, to the east.

The Cloister

The cloister lay on the south side of the church bounded by the west, south and east ranges. It was c.25.8m east-west, by c.22.3m north-south, with covered walkways, c.2.55m wide, on all sides.

The south and west sides of the cloister walk and the majority of the garth had been completely destroyed by the cutting of the basement of the Cowells printing works, fronting Falcon Street. In addition, the east side was inaccessible being located below the demolition contractor's access road. However, one trench across the area was negotiated which located the east wall (5020) of the walkway, 70cm thick, and the footing trench (5021) for the associated inner wall plus the base of a wall and wall footing (5025) running from east to west, presumed to be the internal wall of the south cloister walk.

The south wall of the nave was buttressed and, to avoid them projecting into the north cloister walkway, a separate north wall (3537) for this walkway was constructed up against the outer face of the nave buttresses with buttresses of its own on the north side, overlapping with those of the nave, creating a cavity between the two walls. The wall (3537) was butted up against the west range wall (3533) confirming that the cloister was built after the surrounding ranges had been completed.

All the external walls of the cloister were plastered on their inside faces.

Only two thirds of the north walkway and the start of the west walkway were exposed by area excavation. Here, the inner wall (3538) was 30cm wide and plastered on its inside face. It was composed mainly of flint and mortar and survived to a height of c.10cm above its footings (4810). Near the west end of the north walkway, a brick surface (3540) crossed the line of the wall and into the garth, indicating a doorway.

Only one floor surface was recorded within the cloister walk and some tiles survived robbing at the intersection of the north and west walkways. There were small tiles close to the inner and outer walls, whereas towards the centre of the walks, where the wear on the floor was heaviest, these had been replaced with larger tiles..

Although no tiles survived, the trench across the east cloister walk revealed a continuation of this floor, as represented by a layer of clay (5022) overlain by a thin surface of orange sand (5023) with the mortar bedding for the tiles (5024) lying above. The main entrance from the cloister into the nave must have been in the unexcavated area at the north end of the east cloister walk.

In the extreme north-west corner of the walk, abutting the plaster face of the north and west walls, was a rectangular area of mortared rubble, 1.1m long by 32cm. An area of tiles (5108) respected the edge of this feature, which must either be a seat.

The cloister garth had been destroyed by the basement of Cowells's printing works but the removal of the cellar floor, prior to development, revealed the base of a circular septaria and mortar lined well below, roughly at the centre of the cloister garth, but no certain evidence of friary date was retrieved.

Four graves were located by the limited excavation within the north cloister walk, probably represent only a small proportion of those present, but time did not allow further investigation. Of these, two (4811, 4812) lay at the east end, partially underlying the contractor's road and were not excavated down to the level of the body. A third grave (4813) at the east end was cut by a large post-dissolution pit (4777) and no trace of a body survived. The fourth grave (5107) lay towards the west end and was the only one of the four from which a skeleton was recovered.

Although the majority of grave 4813 had been cut away by a later pit, the main disturbance was caused prior to this by the robbing of the grave. The base of the grave was lined with bricks, which had presumably formed a chamber, although these had been robbed to their bottom course. The brick lining of the floor had been covered with tiles which had been robbed leaving only impressions in the mortar bedding below. Robbing had considerably enlarged the grave, and the base was littered with mortar debris. The absence of a body is therefore not surprising and is consistent with those lined graves found within the church, none of which contained any traces of a burial. Whether the body was removed at the same time that the fabric was removed is uncertain but no human remains were found within the backfilling.

The Northern Courtyard

This courtyard, 8m east-west by 10m north-south, lay between the choir to the north, the cloister eastern walkway to the west, the chapter house to the south, and the sacristy to the east. It probably remained as an open garden area throughout most, if not all of, the LMED period.

Phase 1

In the late 13th/early 14th century,, a structure (1769) was built on the west side of the yard, along the east side of the eastern cloister walkway

Structure 1769 (Phase 1)

A north-south foundation trench (0264), 2m long by 80cm wide, formed the east wall, north of the chapter house, It cut pre-friary surface 0281 and was filled with compacted layers of mortar and topsoil. Along its west edge, there was a shallow, clay-filled slot (0256). It was sealed by a floor surface (0240), which related to a second phase of the structure. The north wall (0259) was an east-west clay-filled slot, similar to 0256. Within the angle formed by the east and north walls, was a floor with a tile and mortar layer (239) overlain by crushed chalk (0234). The only pottery associated with the phase 1 structure was 1 Ipswich and 4 Thetford ware sherds from 0264.

To the east of structure 1769, was a soak-away (0280), the base of which was lined with 40cm of loose flint and septaria rubble, associated with late 13th/early 14th century pottery. No below ground drains were found connecting with the soak-away but presumably it acted as a drain for a water holding container in the centre of the yard.

Phase 2

In a second phase, the ground surface of the courtyard was raised by 20cm with layers of greenish grey clay (0224, 0188), with a surface of sand and gravel (0148), covering all the phase 1 features. These layers contained 192 LMT sherds.

A replacement structure 1769 was then rebuilt with a new soak-away pit (0186) and drains to the east. These cut through the clay layers, partially removing the original soak-away pit (0280). Three brick drain runs ran into the central soak-away (0186). Two of these (0189, 0190) ran northwards from the north wall of the chapter house, while a longer drain (0212) ran southwards from the south wall of the church. A possible spur in this drain may have connected to the remnants of a drain (0219) leading from the west wall of the sacristy.

The drains were all floored with pin tile with sides of red brick, sealed with a roof of brick, level with the top of layer 0188.

Structure 1769 (Phase 2)

The phase 2 structure 1769 was 5.5m north-south by 3.3m wide. The east wall was a fairly shallow, irregularly shaped footing trench (0223). The north end was marked by a semi-circular chalk and mortar spread (0266). The eroded east side of the phase I building floor (0234), was levelled up using a mixture of tile, mortar and brick rubble (0240) and a new clay floor (0228), laid across the building. No evidence for the nature of the walls or entrances was recorded.

The Southern Courtyard

A lack of activity of LMED date implies that courtyard remained as an area of garden during this period but was encroached upon during the LMT period.

A linear feature (1050), 1.3m wide and 40cm deep, along the east side of the enclosure contained two LMT sherds. The flat bottomed, slightly curving trench, ran approximately parallel with the west wall of the eastern range. The fill within it was similar to that found in footing trenches. It was cut by the robber trench for the south wall of the chapter house (1070), to the north, and probably extended as far south as the north wall of the south range (0792). Some form of garden feature seems likely.

Also of LMT date, was a covered walkway, 3.3m wide, probably under a lean-to roof, along the south side of the courtyard, linking doorway 0748, in the east range, and doorway 0791 in the south range, with the east walk of the cloister. The south side was formed by the south range and the north side by a line of six post holes (1071, 1072, 1073, 1074, 1075, 1076). The space between the posts was filled with a 40cm wide flint and mortar wall, traces of which survived close to the west end. The walkway had been floored with tiles, as traces of the bedding layers survived as a layer of orange sand (0763) overlain by a mortar bedding layer.

Drain 1053

A drainage trench (1053) ran west-east from the south cloister walk, under the covered walkway in the southern courtyard and then south, through the south range, just inside its east wall. It contained interconnecting tubular unglazed fired clay pipes (1068). The trench ran from west to east and under the floor surface (0760) of the covered walkway and cut the stone slab threshold of the doorway (0791) in the north wall of the south range. It then ran southwards, cutting the sub-floor surface within the range, leaving the excavated area of the site via a tunnel below the south wall of the range. The drain ran southwards, following the general slope of the site, disappearing out of the southern limit of excavation. The drain dates to the later LMED or early LMT period.

THE PRECINCT WALLS

The East Precinct Wall

The east precinct wall was located along the west side of St Stephen's Lane. The wall itself survived only at the north-east corner of the excavated site (2197). Post medieval buildings had removed it to the south, where only foundation trenches were recorded. The wall (5027), constructed of septaria blocks, was, 60cm wide at the base, and set on a footing trench, 1.7m wide. The footing trench (2197) contained 45 LMT sherds, indicating that it was constructed late in the life of the friary.

The wall did not follow the west edge of St Stephen's Lane, being at least 3m west of it, confirming the documentary references to a strip of common soil between the two. At the south end of the site, a series of foundation trenches (1929, 2082, 2148, 2149, 5017), 4.5m by 4.5m, indicate the square east gate of the friary, opposite St Stephen's Church. The linear features 2149 and 5017 are described as a wall footing whereas the others are described as pits and could be robber trenches rather than foundation trenches. 1929, 2082, and 2149 were firmly dated to the LMT period on the basis of associated pottery.

South of the excavated site, the precinct wall footing (5073) was observed during site clearance by the contractors. The line was recorded but no further investigation could be undertaken.

The South Precinct Wall

The basement of 7 Falcon Street had been constructed behind the south precinct wall, which acted as the south wall of the cellar. The wall here was composed of flint and mortar, with the occasional septaria block. The cellar was deeper than the base of the wall and it had been underpinned with brick. The precinct wall had been demolished to 33cm below present day pavement surface and the wall of the later building (dated 1727) had been built on top.

Three east-west linear trenches (4676, 4679 and 4953/2701), running east of the south-end of the east range/east end of the south range, could also be foundation or robber trenches for the south precinct wall. If this is the case, the wall must either turn northwards at this point or they must represent an earlier line of the wall.

Contractors' ground reduction in the south-east corner of the development site, below buildings on the north side of the Old Cattle Market, failed to reveal any traces of the wall. At this point it probably lay further to the south, following the edge of the street as it existed prior to the creation of the Old Cattle Market.

The North Precinct Wall

On the north side of the church, a wall (3149) ran north from a buttress towards the west end. It was traced for 8.9m along the east side of Market Lane. The wall formed a boundary between the public access to the church along the lane, and the friar's cemetery to the east of the wall. No corresponding wall was located on the west side of the road.

A 1.28m wide doorway (3409/3410) cut the wall, 1.85m north of the nave wall. Its elaborately moulded jambs, dated to between 1280 and 1300 (Samuel 1992). Not all of the wall was original as the predominance of septaria in the south end of the wall gave way to brick to the north, indicating some rebuilding. 3.30m to the north of the doorway, a 12cm wide vertical niche, defined by courses of brick and 20cm deep, had been constructed in the outer western face of the wall.

Friary Gardens

The area, c.2000m² (half an acre) in extent, east of the friary buildings, and up to the east precinct wall and east gate, had no structural features and was presumably gardens.

A rectangular, brick-lined soak-away (2629), 2.7m long by 1.4m wide, set into an oval pit (4256), and lying in the north-east corner of this area, was most likely of friary date. There were arched recesses in the brickwork of the east and west walls for the drainage of liquid waste into the surrounding sub-soil. The backfill contained 47 LMT sherds. Although the dating could also support a post Dissolution date, the sophistication of the structure and lack of any associated post friary buildings, suggests that it was a privy for workers in the friary garden.

Only six pits (1194, 1235, 1948, 2137, 4260, 4587) in this area appear to be certainly contemporary with the friary, on the basis of the associated pottery including Ipswich Glazed Ware (c.1270-1325).

THE FRIARY DEVELOPMENT SEQUENCE

Although the development sequence of the individual friary buildings can be established, their relationship to each other is more difficult as most of the key relationships had been destroyed by later pits and basements. The following model can be suggested on the basis of the available evidence.

Phase	Date	Friary feature	Stratigraphic evidence	Artefact evidence
1	1278-1300	Great House		Documentary
		Choir (1)	Earlier than nave	
2	1300-1325	Nave with aisles		
		East Range+Chapter House		
		Building 1769(1)		
		Soakaway 0280		Late 13 th /early 14 th c pot
3	1325-50	South Range		

		West Range	Butts on to nave buttress	
		Cloister walkways	Lean to ranges	Small floor tiles
		Sacristy (1)	Butts on to choir	
		East range floor lowered		
		Reredorter (1)	Butts on to east range	LMED pot in foundations
4	1450-1477	Transepts added and floor raised in nave	Cuts earlier nave walls and floor	LMT pot in foundation
		Choir extended	Cuts Choir (1)	LMT pot in foundation
		East range floor raised inc Chapter house		Larger tiles
		East range extended south		LMT pot in foundation
		Sacristy (2)	Cuts sacristy (1)	Larger floor tile repairs
		Reredorter (2)	Cuts reredorter (1)	LMT pot in foundation
		Building 1769 (2)	Cuts 1769 (1)	LMT pot in foundation
		Drain 1053	Cuts south range	LMT pot in trench

The only associated artefacts which can illuminate the absolute dating, other than pottery, are the moulded stone fragments (Samuel 1992) and stained glass recovered.

Architectural Fragments

The majority of the stone was either recovered from demolition layers or had been built into walls of post-dissolution date. In the latter category, stone came from the south wall (3578) of a cellar (3532) and wall 3424, running east from the north-east corner of the chancel. In both instances, the majority of stone was of pre-friary date (c.1180 - c.1275) and must have been imported from a building being demolished elsewhere. The jambs (3409, 3410) from the doorway in the wall running north from the church, alongside Market Lane, and butted onto a nave buttress, dated c.1280 - 1300.

The majority of the moulded stone from the area of the chancel, nave, sacristy and chapter house was dated between 1275 and 1325, with the occasional fragment as late as 1350, which implies that all the major buildings were in place within 40-50 years of the arrival of the Carmelites in 1288. Of this stone group, only the plinth 3489, associated with the first phase choir wall (3478) was in situ with the rest from demolition layers.

A single arcade shaft from a clustered pier (3407), lying detached in the nave, and dated to between 1350 and 1400, testifies to later modifications within the church or that the nave had not been completed until that time.

A block of tracery found within the post-medieval demolition rubble (1024) at the east end of the south range was dated c.1390-1450.

Stained Glass

A large quantity of stained glass was recovered which has not been studied. A rapid assessment of the assemblage, undertaken by David King in February 1992, confirmed its importance of the material (IAS3104-windowglass-King-C219).

There was a small amount of 13th century glass and a large amount dating c.1285-1350, including pieces displaying heads of monks, a possible virgin and child, a Crucifixion or Trinity, a mitre of a sainted bishop or abbot, a donor inscription in Lombardic text, a

coat of arms (probably Robert Ufford, 1337-81, or John de Ufford, Archbishop of Canterbury, 1348-9). There was also a large amount of 15th century glass of the same quality.

Late Medieval Transitional, Phase 2 (c.1538-1600)

Dissolution

The Friary was suppressed in 1538 and demolished soon after apart from the south and west ranges which were retained and put to alternate uses (see Post Medieval). The friary buildings were almost totally removed with only a few wall bases and areas of floor remaining in situ. Extensive areas of mortar, tile and rubble covered the demolished buildings. Rubble layer 0757 contained a penny of Edward VI (1550-61). The area of the buildings was covered with small pits associated with LMT pottery. Pit 0204, cutting the demolished chapter house, had a coin of Elizabeth I (c.1578-80).

A clearly defined area, immediately east of the friary buildings, 12m east-west by 22m north-south, appears to have been used for gravel extraction contemporary with the friary demolition. A series of large overlapping pits (0011, 0033, 0413, 0435, 0463, 0464, 0468, 0494, 1229) filled the area. None of these pits was extensively excavated, but they had clearly been back-filled with demolition rubble from the Friary buildings. Pit 0468, which cut pit 0435, had a coin of Henry VIII (1526-44). Pit 0464, cutting pit 0073 but sealed below pit 0468, was a shallow depression filled with medieval stained glass and roof tiles.

To the east of this area there was a scatter of smaller and larger pits. As the pottery doesn't allow a close dating, many of these were probably later 16th century i.e. post Dissolution. Closely dateable coins were found in two of these pits: a penny of Philip and Mary (1554-61), from pit 0829, and a farthing of Henry VIII (1523-6), from pit 4194.

Post Medieval, c.1600-1900 (PMED)

17th-18th Century

The earliest map of Ipswich, by John Speede (1610), shows the frontages along the west side of St Stephen's Lane, the north side of Falcon Street and east side of Queens Street, had been developed with housing, and that a roadway (later known as Market Lane), had been cut diagonally across the site, from north to south.. A representation of the remaining friary ranges, wrongly identified as *Black friers*, is also shown to the west of that street.

John Ogilby's map (1674), the first accurate map to scale, shows the same layout, but the open areas within the friary precinct had been turned over to garden, the largest of which is shown as Mr Danes Orchard. It also shows the surviving south and west ranges of the friary which he labels as The Sessions House.

As much of these two ranges had been destroyed by Cowells's printing works, little evidence survived dating to this period.

The South Range

A number of modifications to the south range related to this period.

The robbing trench of the east wall retained remnants of a brickwork lining along the inside face of the wall, probably carried out to consolidate the wall.

Ogilby's map (1674) shows a pair of angle buttresses on the north-east corner of the range. Whereas the northern buttress was certainly fashioned from a remnant stub of wall of the west wall of the east range, the southern (1033) was post medieval, resting on a rectangular pit filled with consolidated septaria blocks.

The medieval doorway (0791), in the north-east corner, was also blocked during this period, using mainly septaria in a hard lime mortar, with some red brick and at least one piece of moulded limestone.

A hearth (1131) had been built into the base of the south wall (1107). Burning of the septaria fabric of the wall directly above the hearth indicated that it might represent a small fireplace.

An oven (0761) had been built into the south side of the eastern angle buttress in the south-east corner of the range. It consisted of an entrance from the south through a

40cm wide neck, rebated on its outer surface to accommodate a door. The neck expanded into a chamber, sub-circular in plan, and measuring some 80cm in diameter. The base of the structure was covered with flat slabs of sarcen stone and the walls were built of septaria, lined with iron rich clay.

To the west, there were traces of a further sub-circular structure which had been removed by the robbing of the east wall by robbing trench 0754.

The Ogilby map clearly shows a building had been added to the south east corner of the range during this period, all traces of which would have been outside of the excavation area. The oven (0761) would have been accessed from this building.

A stub of wall (1770) abutting the north wall, just west of doorway 0791, was the only surviving remnant of another extension of this period, as shown on the Ogilby map. An area of collapsed brickwork (1058), lying directly to the east of this wall, appears to constitute a fragment of blocking, probably of a window, abandoned at the time of the final demolition of the south range.

The only recorded floor surface within the building (1041) probably relates to this period and comprised a layer of compacted loam under a brick floor (1063), which only survived as a small area of burnt bricks abutting the north wall (0783). Associated burning on the ground surface around the bricks occurred in all directions; as compacted red fired chalky clay to the west and grey ash and charcoal to the east. The surface of the surviving section of the north wall (0792) was reddened as far as the western jamb of doorway 0791. Overlying this surface was a layer of charcoal and mortar rubble (1037) sealed below layers of soot and light grey ash. It is therefore possible that this intense amount of burning may represent a major fire at this end of the range.

The West Range

At the north-east corner of the west range, a cellar (3532), 4.85m east-west and c.2.3m north-south, had been inserted through the medieval floor level. An air-raid shelter (1785) had removed its north end, but it most likely coincided with the north wall of the west range, as Ogilby's map implies that there was no post-dissolution extension to the range.

The east wall utilized the medieval wall (3533) of the range, and a blocking (3534) of the doorway in this wall probably dates to this time. The cellar had been cut deeper than the base of the wall but not underpinned and left as bare earth. On the west side the wall was of one brick's width, and sloped inwards from top to bottom. The south wall (3578) was 35cm thick and built of septaria, brick and re-used moulded limestone fragments, which were predominantly pre-friary in date (Samuel 1992). The wall had been plastered and provided with three brick alcoves, 20cm deep. These may have originally been arched, although their tops had been removed by the later demolition of the range, and indicate that the roof of the cellar was well above the height of the medieval floor surface of the west range. The cellar was certainly contemporary with the post-friary usage of the range, as the pottery in its backfill was all LMT (215 sherds). There were also traces of a contemporary floor surface. A brick surface was mortared into the inside edge of the west wall at its far north end and a mortar surface (3536) survived around the edge of the cellar.

Late 18th/19th century

The Town Gaol/Sessions house had probably fallen out of use before 1700 as a new shire hall for the county sessions and assizes was built in 1698 on the old Blackfriars site, and the sessions had not met in Ipswich for some years before. In 1727, William Churchill, the then owner of the gaol site, applied for permission to move the southern end of Market Lane westward, diverting its course to a line which cut across the site of the old friary buildings (Clegg, 1984), establishing Market Lane along the line that survived until its final closure in 1988. The large quantity of post-medieval artefacts within the south range confirmed an eighteenth century demolition date.

New property boundaries were clearly established across the site during this period. A septaria wall running eastward from the north-east corner of the friary church marks a boundary shown on the Ogilby map. The wall incorporated a number of moulded

limestone fragments (3424), many of which appear to predate the construction of the friary.

By Joseph Pennington's map (1778), the Town Gaol/Sessions House (south and west friary ranges) had been demolished and the south end of Market Lane (known as Old Gaol Lane at that time) had been moved westwards.

The kink to the south at the east end of Falcon Street was straightened out c.1810, after the demolition of property in the way, creating an open area (now called the Old Cattle Market) which accommodated the move of the cattle market from the Corn Hill. By 1851, the site was too small and the cattle market moved to Portman Road.

By 1883, the First Edition Ordnance Survey map shows the old garden areas, on the friary site, completely redeveloped including a Provision Market.

The gardens plots of the 17th and 18th centuries and 19th century Provision Market left no traces in the excavated area.

Modern, c.1900 onwards (MOD)

The Provision Market made way for the Palace Electric Theatre in 1912 but this was demolished to make way for the Post Office sorting office in 1920. The deep concrete strip foundations (5029) and the associated petrol storage tanks of the vehicle garage, behind the sorting office, were a major intrusion on the excavated site.

Standing Buildings

Buildings within the development area were recorded prior to demolition. A photographic record was made of the facades of St Lawrence Hall and the Diocesan Hall, along St Stephen's Lane, the Methodist Chapel in Market Lane and 40-47 Old Cattle Market.

Measured ground plans, sections and a photographic record were made of the Falcon Brewery (3-5 Falcon Street), prior to its partial demolition and extensive refurbishment. A full survey comprising ground plans, sections and elevations, and, where appropriate, recording of the timber framing was conducted on 2, 10-12 and 16 St Stephen's Lane, 7-9 Falcon Street and 40 Buttermarket.

In addition, measured drawings and a photographic record were made of the timber frame of the former Beehive public house, which came to light during the demolition of the Cowells complex, fronting the Buttermarket,

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