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Excavations at City General Hospital, Stoke-on-Trent, Staffordshire. 2001. Post-Excavation Assessment and Publication Plan.

by
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1 Summary

An archaeological evaluation, subsequent excavation and watching brief was carried out between June 2001 and the December 2001 at Stoke-on-Trent City General Hospital between the London Road (A34) and the Maternity Hospital (NGR SJ 857 459). This work was commissioned by North Staffordshire Hospital NHS Trust under the guidance of Wardell Armstrong (engineering consultants) and carried out by Birmingham University Field Archaeology Unit. All archaeological work was monitored by Stoke-on-Trent City Council. The excavation of this site revealed the remains of the stone foundations for a structure and a series of 22 human burials. Three linear ditches surrounded the site. Although little dating evidence was retrieved, it is believed that these archaeological deposits date to the 13th and 14th centuries AD. It is assumed that the remains excavated on this site are a part of a medieval hospital, which has been documented as being located in this area.

2 Introduction

This report details the results of an archaeological evaluation, subsequent excavation and watching brief. This archaeological work was undertaken in advance of the development of an undergraduate medical school for North Staffordshire Hospital NHS Trust (NGR SJ 857 459). This included the construction of deep pilings and the removal of a significant depth of the overburden in order to create level foundations. The archaeological work was commissioned by North Staffordshire Hospital NHS Trust under the guidance of Wardell Armstrong (engineering consultants) and carried out by Birmingham University Field Archaeology Unit. All archaeological work carried out on this site was monitored by the Stoke-on-Trent City Archaeologist.

The proposed development was situated in the suspected location of a medieval hospital complex and associated burial ground, with a high potential for the recovery of buried archaeological deposits. In line with guidance given in Planning Policy Guidance Note 16, a planning condition was placed on the development proposals. The planning condition required that an archaeological evaluation and excavation should be undertaken prior to any groundwork on the site. A watching brief was required for all subsequent intrusive groundworks carried out on the site.

Preservation *in situ* was not considered possible due to the nature of the works proposed. An evaluation was considered appropriate in order to locate and determine the nature and extent of any archaeological deposits present on the site. Consequently, all deposits encountered were fully excavated and preserved by record. The evaluation was carried out to the specifications prepared by Wardell Armstrong (Hodgkinson 2001). All the evaluation, excavation and watching brief work was conducted in accordance with the Institute of Field Archaeologists' *'Standard and guidance for archaeological field evaluation'*, '*Standard and guidance for archaeological excavation'* and '*Standard and guidance for archaeological watching brief'* (September 1999).

Overburden clearance was carried out in June 2001. The evaluation took place at the same time and the excavation of the site was carried out between July 2001 and August 2001. A watching brief was carried out in December 2001 and involved the archaeological supervision of the safe removal of any remaining overburden.

This report outlines the results of the evaluation, excavation and watching brief. An assessment of the finds, human bone and environmental material recovered is included. A discussion of the results of the archaeological work is included. A publication plan and post-excavation programme is also included to enable the dissemination of the results of this archaeological work.

3 Site Location and Geology (Fig. 1; Plate 1)

The site proposed for development covers an area measuring *c.*34m by 32m centred on NGR SJ 857 459. It is bordered to the northeast and the southeast by the buildings, roads and car parks of the City General Hospital. It is limited along the southwest edge by the A34, the London Road. The site is also situated on an area of ground made-up and landscaped in the 1980's during the development of the hospital. It is also situated near the bottom of the northeastern side of the Lyme Valley. Although within the parish and district of Stoke-on-Trent, it is closer to the centre of Newcastle-under-Lyme.

The solid geology of this area is the Newcastle formation, over which glacial drift geology either till, consisting of coals, mudstone and sandstone or glacial outflow deposits of clay, sand or gravel, lies (Marsden and Courtney 1998).

4 Archaeological Background

There is no known evidence of prehistoric, Roman or Saxon activity on the site. The earliest recorded activity dates to the medieval period, where there is a record of a hospital located on or near the site.

The historical records are not clear and refer to either several hospitals within the area of Newcastle-under Lyme during this period, or the same hospital with a series of different dedications. It would seem that around the middle of the 13th century there was a hospital dedicated to St. John the Baptist. By the early 15th century, a Hospital of St. John is identified near Newcastle-under-Lyme (VCH 1970). This is probably the same hospital.

The hospital of St. John seems to have provided some sort of charitable function, but the precise nature of this is unclear. During the 15th century there are variations in the evidence for the name of the hospital. These include St. John, St. Louis, St. John the Baptist and St. Eloy. By the late-15th century and into the 16th century, the hospital is referred to as the hospital of St. Loye or the hospital of St. Leo (VCH 1970). It seems that by the end of the 16th century the hospital was derelict (Marsden and Courtney 1998).

In 1985, during the expansion to the Stoke City General Hospital, remains of a sandstone structure and two related graves were recorded in a salvage rescue excavation (*ibid*.). This site was dated to the medieval period by surface finds. These remains were generally thought to be part of the Hospital of St. Loye as suggested by the documentary evidence. The site was left preserved *in situ* and covered by a bank of landscaping material (Hodgkinson 2001). The precise location of this structure is not known, although it is thought to be somewhere in the immediate vicinity of the proposed development.

In 1998, as part of the development of an Acute Psychiatric Unit for the North Staffordshire Hospital, immediately to the southeast of this present development, an archaeological watching brief revealed very little of archaeological note (*ibid*.).

Although there is no other specific evidence for archaeological activity in this immediate area, there is the possibility for evidence of deposits from the prehistoric through to the post-medieval periods (Marsden and Courtney 1998).

5 Evaluation

5.1 Aims

The general aim of the evaluation was to identify whether any archaeological deposits were present on the site of this development and record the nature and extent of any archaeological deposits encountered.

A specific aim was to attempt to identify the location of the foundations of a medieval structure and associated burials, which were recorded somewhere in or near the area of this site in the 1985 salvage excavation.

5.2 Method

Six trenches, each measuring 10m long and 1.8m wide were excavated, using a JCB fitted with a toothless ditching bucket, down to a natural or archaeological horizon. This was carried out under archaeological supervision. Any significant archaeological deposits were excavated by hand and recorded on *pro-forma* record cards supplemented by scale plans, section drawings and photographs, where appropriate. Where no archaeological deposits were identified, the stratigraphy was recorded and photographed. These records comprise the site archive, which, at the time of writing, is stored at Birmingham University Field Archaeology Unit.

5.3 Trench Descriptions (Fig. 2)

5.3.1 Trench 1

Trench 1 was aligned northwest-southeast, parallel to the London Road. It reached a maximum depth of 1.9m below the machine-cleared surface. A 3m by 3m step was dug at the southeast end of this trench; this was dug to a depth of 0.9m. The stratigraphy was excavated onto a natural horizon of clean yellow sand. This was sealed by a deposit of brown sand, gravel and clay, which had a maximum depth of

0.7m. Above this was a layer, 0.7m deep, of dark grey to black humic silt and clay. This in turn was sealed by a layer of landscaping material, which had a maximum depth of 0.7m. This consisted of mixed sand and clay with a profusion of building rubble. It was present over the extent of the trench. No archaeological deposits were encountered during the excavation of this trench.

5.3.2 Trench 2

Trench 2 was excavated to a maximum depth of 1.3m, with a southwest-northeast orientation. The natural subsoil deposit was pink sand and gravel. Above this was a layer of pink sand-silt, which extended 7.5m over the southwest end of the trench and was excavated to a maximum depth of 0.4m. A hand-dug sondage, measuring 2m by 4m, was excavated through this layer, which appeared to be naturally deposited. This was below a layer of brown sandy silt, which was present over the whole area of the trench and reached a maximum depth of 0.6m. The extent of this trench was sealed by a layer of dark grey-brown humic sandy silt. This had a maximum depth of 0.6m. All the layers present in this trench were deposited on a slope, down-slope being to the southwest. All the deposits were deeper down-slope and became less substantial up-slope. No archaeological deposits were encountered during the excavation of this trench.

5.3.3 Trench 3

Trench 3 was excavated to a maximum depth of 1.5m. This trench was orientated southwest to northeast. It was excavated onto a horizon of natural brown silty sand. Above this was a layer of brown sandy silt, with clay lenses, which extended 3.4m over the southwest end of the trench and had a maximum depth of 0.35m. A posthole cut this layer in the southwest facing section of the trench. It had of depth of 0.6m and a diameter of 0.1m. Sealing this posthole and the layer it was cutting, was a layer of dark brown humic silt, which extended 6.6m over the southwest end of the trench; this had a maximum depth of 0.5m. This layer contained rubble and plastic. A layer of mixed clay and rubble overlay the extent of this trench and had a maximum depth of 0.7m. All deposits were on a slope. As in Trench 2, down slope was to the southwest and all deposits became shallower towards the northeast.

5.3.4 Trench 4

Trench 4 was orientated northwest to southeast. It was excavated to a maximum depth of 0.4m, onto a natural horizon of sand and clay. Above this, at the southeast end of the trench, was a deposit of sandstone blocks, of which a 2m length was exposed with a maximum width of 1m and on an east-west alignment. This was not excavated and recorded in plan only. It appeared to be the remains of a possible wall. Sealing this was a layer of dark brown humic sandy silt, which was present over the area of the trench. This had a maximum depth of 0.2m. A layer of mixed sand, silt and clay sealed the trench and had a maximum depth of 0.2m.

5.3.5 Trench 5

Trench 5 was excavated to a depth of 0.3m. This trench was aligned northwest to southeast. It was excavated onto a horizon of natural sand and clay. Above this

horizon was a deposit of sandstone blocks, of which an area measuring 0.8m by 0.6m was exposed at the northwest end of the trench. This was not excavated and recorded in plan only. This was also possibly the remains of a wall associated with that discovered in Trench 4. The area of this trench was sealed by a layer of mixed clays and sands, with rubble and masonry inclusions. This was excavated to a maximum depth of 0.3m.

5.3.6 Trench 6

Trench 6 was excavated to a maximum depth of 1.2m. This trench was aligned northeast-southwest and intersected Trench 1 at its southeast end. All of the stratigraphy was on a slope, down-slope being to the southwest. This trench was excavated onto a natural horizon of brown sand and gravel. Sealing this was a deposit of black humic sandy silt that had a maximum depth of 0.2m and extended over the whole area of the trench. Above this, a layer of pink clays and sandy silt mixed with building rubble covered the area of the trench and reached a maximum depth of 1m. No archaeological deposits were encountered during the excavation of this trench.

5.4 Discussion

The evidence from the stratigraphy exposed in these six trial trenches may be discussed together. The upper most layers present in all of the trial trenches, which were pink clays and sandy silts mixed with modern building rubble, are the lower remains of a layer of landscaping material, which was deposited in the 1980's. The majority of this layer was removed from over the whole area of the site prior to the evaluation. The layers of dark humic silty material present in Trenches 1, 2, 3, 4 and 6, below this landscaping layer, appear to be the same deposit. This is most probably the remains of an original topsoil deposit. This dark deposit becomes substantially deeper in the southwestern end of the site. This probably indicates some sort of terracing of this part of the site. Whether this is due to natural or human intervention is difficult to determine. The differing layers of sand and gravel excavated in Trenches 1 and 2 appear to be changes in the natural, indicating differing deposition events probably because of colluvial activity due to the slope.

The archaeological deposits in this evaluation are present above these colluvial layers. This archaeology consists of deposits of sandstone blocks in Trenches 4 and 5. These sandstone deposits were thought to represent part of the medieval hospital foundations or a related structure, first uncovered in the 1985 rescue excavation.

6 Area Excavation

6.1 Introduction (Plate 1)

Following the results of the evaluation the potential for *in situ* archaeological deposits was considered great enough to warrant an archaeological excavation of the area.

The modern landscaping deposits were removed by machine under archaeological supervision. It was apparent that the archaeological horizon was on a slope falling downwards to the southwest. The natural horizon into which these deposits were cut

consisted of very mixed sands gravels and clays. These did have the appearance of made-up ground. Although several hand-dug sondages illustrated that these layers were due to natural processes, probably colluvial deposits created by weathering down-slope.

6.2 Aims

The general aim of the excavation was to excavate and preserve by record any archaeological remains likely to be disturbed within the area of the proposed development. This would contribute to an understanding of the nature, extent and significance of archaeological remains both within the context of the immediate site and within a wider context of local and national history and archaeology.

This excavation was specifically aimed to preserve by record a structure of possible medieval date, which had been identified during the evaluation exercise.

6.3 Method

The method used for the main area excavation was to remove by machine, under archaeological supervision, the modern deposits sealing the archaeology on the site. The archaeology revealed within the area of the site of development was then excavated by hand and recorded on *pro-forma* record cards with scale plans, section drawings and photographs, where appropriate. This archive is currently stored at Birmingham University Field Archaeology Unit.

6.4 Phasing

The results of the excavation can be separated into three phases based upon the principles of archaeological stratigraphy and the datable artefacts recovered. These phases are:

Phase 1	Pre-dating the medieval period
Phase 2	Medieval period
Phase 3	Post-medieval.

Provisional stratigraphic information suggests that Phase 2 can be divided into two sub-phases:

Phase 2a	Burials
Phase 2b	Structure 1

6.5 Phase 1

There were no archaeological features that were datable before the medieval period (Phase 2). However, a single sherd of Roman pottery was recovered from F709 (Context 7014), part of the construction for Structure 1. This deposit also contained medieval pottery and this sherd is likely to be residual (see Ratkai, below). Although it may relate to Roman activity in the area of the site.

6.6 Phase 2

The majority of the archaeology revealed on this site appears to belong to the medieval period. Although many of the excavated features are not directly datable, the spatial relationships of these deposits suggests that they were from a contemporary period of activity on this site, and in this report will be considered as such. The medieval phases of activity were represented by a series of graves probably representing 22 individuals, three ditches and a single structure (Structure 1).

One of the burials, F735, is cut by Structure 1 and it is proposed that the majority of the burials pre-date this structure in an earlier phase of activity (Phase 2a). There are no stratigraphic relationships with which to associate the ditches and no true alignments associated with either Structure 1 or the burials. Therefore the ditches could belong to either Phase 2a or 2b.

6.6.1 Phase 2a (Fig. 3)

The bodies of twenty two individuals were represented within the area of this site. All of the remains were in a poor state of preservation. This was probably due to the conditions of the soil, although the relative shallowness of the grave cuts, probably due to erosion, had also presumably contributed to this level of preservation. Generally the remains were in a better state of preservation in the southwest of the site, down-slope. Unfortunately the majority of the burials were in the area towards the top of the slope. The fills of all the graves consisted of a mid-brown sandy silt and there was no evidence of any sort of grave goods or coffin furnishings recovered from any of the grave fills.

The grave cuts themselves were generally arranged in quite a uniform manner. They were all aligned east-west, although there was some slight variation in this orientation visible. The majority of burials present were lined in rows from north to south, although there were a few graves that deviated from this pattern.

There were two grave cuts F716 and F717 (Plate 2) situated 2.4m to the west of Structure 1. These were heavily truncated. The eastern end of both of these cuts having been completely lost. The western ends of the graves were in an almost perfect alignment along a north-south direction. Although the preservation of the bodies was poor, it could be deduced that the bodies were of adult individuals. They were both supine with the heads to the west. The individual to the north (HB 09) had its head facing to the north, whereas the head of the individual to the south (HB 10) was facing the south, effectively facing away from each other.

The highest concentration of aligned graves was immediately to the east of Structure 1. Unfortunately, the preservation of the remains was poor, and it was evident that several of the grave cuts had been disturbed by later grave cuts. The tight grouping of several burials at the eastern end of the structure consisted of eight grave cuts (from north to south F723, F722, F721, F720, F724, F707, F719 and F703). It is assumed from the size of the grave cuts that these individuals were most probably all adult.

The northern most burial in this alignment (F727) was positioned to the northeast of the structure. The cut was 1.7m long, 0.5m wide and 0.1m deep. It was irregular,

although approximately rectangular. The skeleton itself was in a very poor state of preservation and only flecks of bone survived in the ground. This burial was 2.7m to the north of the next burial in the row, a considerable distance compared to the tight grouping of the remainder of this alignment of burials

Grave cut (F723) was a shallow U-shaped scoop approximately rectangular in plan, although not well defined in places due to heavy truncation. It measured 1.56m in length, 0.45m in width and 0.02m in depth. The human remains (HB 17) consisted of fragments of cranium at the west end of the cut and two fragments of long bones, presumed to be part of the shafts of the femurs. These bone fragments were in a very poor state of preservation.

Approximately 1.4m to the south of F723 on this alignment were two inter-cutting graves (F721 and F722). The earlier of the cuts (F721) was sub-rectangular in shape and slightly mis-aligned from the east-west. It measured 1.45m long and 0.45m wide with a depth of 0.1m. The human remains (HB 19) consisted of a small piece of the cranium at the western end of the cut. Fragmentary flakes of bone were present in the remainder of the undisturbed fill, but these were unidentifiable.

The later grave cut (F722) was an irregular rectangular shape. The cut measured 1.5m in length, 0.45m in width and 0.15m in depth. The orientation of this grave was out of an east-west alignment and nearer to a northeast-southwest alignment. It was also dug slightly further to the east than the other burials in this row. The human remains (HB 14, HB 15 and HB 16) within this cut consisted of three probable skulls grouped together at the western end of the cut (Plate 3)and three fragmentary pieces of femurs towards the eastern end.

The next grave cut (F720) was well defined and ovoid in shape. It was 1.7m long, 0.5m wide and 0.07m deep. The human remains (HB 13) consisted of a small piece of the rear of the cranium at the western end of the cut. This seems to have been supported or resting on a large stone to the northern side of the cranium remains.

Grave cut F724 was sub-rectangular and measured 1.9m long, 0.5m wide and 0.1m deep, although the cut deepened towards the east. The human remains (HB 18) only survived on the northern edge of the cut, but were too degraded to identify in the ground. Although they probably represented the left arm and leg of the individual.

Immediately south of this burial was F707: this had an irregular rectangular cut, 1.3m long, 0.3m wide and 0.04m deep. It appeared that the irregularity of this cut was probably due to truncation. The human remains (HB 04), consisted of a pair of femurs, both of which were very degraded, especially at the distal ends.

The southern most cuts in this row were two graves, which were in the same position, F703 was directly above F719. The earlier cut, F719, was 2m long, 0.5m wide and 0.15m deep. The human remains (HB 12) were present only in the eastern half of the grave and consisted of a partial fragment of the left side of the pelvis, both femurs and both tibias. All of these remains were in a poor state of preservation. The later of these graves, F703, was 1.7m long, 0.5m wide and 0.1m deep, becoming deeper towards the west. The human remains (HB 06) were in a poor state of preservation and

represented a fraction of the back of the cranium, part of the shaft of the right humerus, both femora and the right tibia.

There were two inter-cutting burials near the northeastern extent of the site (F730 and F737). These seem to be associated with the grouping of burials to the east of the structure, although not in the row immediately to the east. The earlier of these two burials, F737, was heavily truncated and only the western end survived. This cut measured 1.24m long, 0.45m wide and a depth of 0.06m survived below the later grave. The human remains (HB 22) consisted of a fragment of the back of the cranium, and a fragment of the right humerus.

The later grave cut, F730 measured 1.9m long, 0.46m wide and was 0.2m deep. Only fragmentary pieces of the skeleton (HB 20) remained. These consisted of parts of the cranium and mandible at the western end of the grave. A mass of very degraded bone was present mainly on the southern side of the grave, but it was impossible to identify which bones of the skeleton these represented.

Two burials (F735 and F708) were directly in the projected line of the eastern wall of Structure 1. F735 (Plate 4) was actually cut by F713, the eastern wall of Structure 1. Only the western end of the grave cut remained, measuring 0.6m long, 0.6m wide and 0.15m deep. The human remains (HB 21) consisted of the upper body, without the skull, both humeri, both clavicles, the right scapula and several ribs from the upper body. The bone preservation was surprisingly good considering the poor preservation elsewhere on the site.

F708 was to the south of F735 and south of the end of the remaining eastern wall of Structure 1 (F713). The cut for this grave was ill defined due to severe truncation and so had an irregular rectangular appearance in plan. It was 2m long, 0.8m wide and 0.1m deep. The majority of the skeleton survived and was visible within this cut, but only in a shadow form. The body was lain supine with the arms crossed over the chest. The individual was possibly an adult. The fill of this cut was the only grave to produce any dating evidence. This was in the form of a single sherd of pottery dating from the 13th to the 14th century.

The next possible row of burials was in a loose alignment. These were, from north to south, F701, F700, F706, F705, F712 and F718.

The most northerly of this row, F701 was possibly a grave cut although there was no evidence of bone within the fill. It was a sub-rectangular cut, aligned east-west, 2m long, 0.4m wide and 0.1m deep.

Grave cut F700 was a rectangular cut, 1.8m long, 0.45m wide and 0.05m deep. All the edges of this cut were well defined and regular. The human remains (HB 01) consisted of partial remains of the back of the cranium, fragments of the shafts of the humeri, femora and tibiae and a single rib fragment.

Approximately 0.3m to the south were two inter-cutting burials, F705 and F706. These were on the same alignment and directly placed above each other. The later grave cut, F706 was 1.6m long, 0.4m wide and 0.25m deep. This was a regular cut feature with precise edges. The human remains (HB 02) contained within the cut were

poorly preserved. Most of the elements of a skeleton were represented, although hands and feet bones were missing. The body was probably that of a sub-adult, buried in a supine position, with the arms crossed across the chest. The earlier grave cut (F705) (Plate 5) was 1.8m long, 0.5m wide and 0.3m deep. This grave cut was also well defined. The human remains (HB 03) present consisted of the skull, at the west end of the cut. This end of the grave had not been cut by the later feature (F706) and so survived this later intrusion. The legs were also present, represented by fragments of the femoras and the tibiae, which survived *in situ*.

The next grave in this row, F712 was a well cut rectangular feature measuring 1.68m long, 0.48m wide and 0.18m deep. The body (HB 07) was poorly preserved. The skull was present, at the western end of the cut, along with a fragment of the shaft of the right humerus, the shafts of the left humerus, ulna and radius and shafts of both the femoras and tibiae. This individual was lain supine and it seemed that the arms were crossed at the waist.

A further 2.4m further south along this row of burials was a very badly preserved burial, F718. The dimensions of the cut were so eroded as to be unclear, but they were approximately 1.45m long, 0.5m wide and 0.02m deep. The body (HB 11) consisted of fragments of the femoras and tibiae.

There was a solitary burial (F715) (Plate 6) at the southwest corner of Structure 1. This cut was aligned northwest-southeast rather than east-west, *c*. 0.5 m to the south of F709. This grave cut was 1.76m long and 0.5m wide and had a depth of 0.12m. The human remains (HB 08) were poorly preserved. Most elements of the skeleton were represented in the grave although the smaller bones, especially at the extremities, had completely degraded. This individual was a large adult. They had been lain supine with the arms crossed at about waist level, with the left forearm overlying the right.

All of human remains recovered from this site were in a poor state of preservation. Very little, if any, information may be gleaned from these remains, other than a record of their presence and physical relationship to the associated deposits (see Brickley below).

6.6.2 Phase 2b (Fig. 3)

Structure 1 consisted of a rectilinear stone-filled, negative feature. This was aligned north-south along the short axis and east-west along the long axis. Each side of the structure was numbered separately for clarity of recording. The western wall was F710, the northern wall was F714 and the eastern wall was F713. This appeared to be a single, continuous foundation wall. Generally, this shallow cut for the wall was filled with a primary fill of cobbled stones. This was overlain by a narrow layer of compact silty sand, which was in turn overlain by sandstone blocks. This build was not homogeneous to the whole of the structure and the cobbles were more generally concentrated in the northern and western sides.

The western wall (F710) was approximately 1m wide, 6.5m long and 0.4m deep, although this varied according to the varying states of preservation. The northern end of this feature was preserved at 113.33m A.O.D. and the southern end was preserved at 112.76m A.O.D. This section of Structure 1 was well defined at the southern end,

but had been heavily truncated at the northern end, with only a few sandstone blocks surviving. This was presumably the corner with the northern wall, although little remained of this feature to demonstrate a relationship. It is assumed that this was a continuation of the same feature.

The northern wall of the structure (F714) was generally 1m wide, 11m long and 0.4m deep, although this again varied depending on the state of preservation. This section of the structure seems to have been truncated at the eastern end, at the corner with the eastern wall. This obscured the relationship with the eastern side (F710). On excavation (Plates 7 & 8), it appeared that these were the same feature. This side of the feature best demonstrates the two layers of sandstone and cobble build. This demonstrates two distinct construction episodes within the same cut.

The eastern wall (F713) was 1.5m long, 1m wide and 0.3m deep. This extended only a short distance to the south, although it did not appear to be truncated. This wall also cut a burial (F735).

There was no obvious evidence of a southern side to the structure, although several pieces of stone were present along the theoretical alignment. There was a very eroded sandstone filled feature (F711) located approximately along this line. This was very irregular and sub-circular in plan, 1.2m in diameter and 0.3m deep. This may have been a posthole, rather than the remains of a linear feature. This was difficult to determine due to preservation conditions. The southwest corner of this structure (F710) was well preserved to a depth of 0.4m and there was no evidence of an associated cut to the east.

There was a large square negative feature (F709) at the southwest corner of Structure 1. It measured 1.6m by 1.6m and 0.8m deep. This was abutted to the corner of the rectilinear structure. Although aligned southeast-northwest, out of alignment with the main body of the structure. This was filled with 16 large rectangular sandstone blocks, which had no evidence of having been cut to shape. These were secured *in situ* with stone, silt-sand and mortar.

A square feature of similar size was at the southeast corner of the structure, F704, measuring 1.5m by 1.5m and 0.4m deep. This was shallower and less well-built than F709. It was a negative feature packed with large blocks of sandstone. These did not appear to have been cut to shape, but were lain flat within the bottom of the cut. There was no evidence of mortar within the build of this feature.

Within this structure, towards the northeast corner was a circular, stone filled, negative feature (F702). This was 0.7m in diameter and 0.2m deep. This feature was probably a pit or a post hole. The feature was not datable, although it may have been related to the structure.

6.6.3 Phase 2a/2b (Figs. 3 & 4)

Several ditches were present on the site. A gully was revealed in the north corner of the site. This feature, F736, was 0.5m wide and 0.1m deep and a length of 3.2m was exposed within the area of the site. The gully ran on an east-west alignment approximately 10m to the north of Structure 1. The western end of this gully was

completely truncated, which was probably due to this part of the gully being further down-slope. The pottery recovered from this feature was dated to the 14th century.

Two linear features (F738 and F739) were present along the southeastern edge of the site. F738 cut F739. The earlier of the ditches (F739) was 0.8m wide, 0.6m deep and U-shaped in profile. A length of 12m was revealed within the area of the site. The fill of the ditch consisted of a clean, friable, brown, sand and silt. This ditch became substantially shallower towards the southwest and was completely truncated at this end. No dating evidence was recovered from this feature.

The later ditch (F738) was 1.9m wide, 0.7m deep and U-shaped in profile, in its full extent. The fill of this ditch was also a friable brown silt and sand, which was in general very clean. Although in the section at the northeast extent of the ditch was rich in charcoal. This ditch was also shallower towards the southwest end, although it was only completely truncated by the modern disturbance at the southwest end of the site. The ditch contained significant amounts of pottery, compared with the assemblage from the rest of the site. This was dated to between the 13th and 14th centuries. Although the uppermost fill of the section, at the northeastern extent of the ditch, contained pottery dated to the 17th century. This may indicate a possible later re-cut of the ditch in this area, although it was not clear in section.

6.7 Phase 3

The site was covered with a layer of landscaping material. This consisted of the spoil generated from the construction of the existing Stoke-on-Trent City General Hospital. Although a variety of artefacts from the 18th and 19th centuries were retrieved from this context, it was also mixed with modern items, such as plastic bags and modern building rubble.

The southwest end of the site had been steeply terraced. The resulting depression was full of black organic silts containing most noticeably plastic bags. This disturbance was sampled by the Trial Trenches 1, 2, 3 and 6. On the excavation of this layer, it became clear that this deposit was on an east-west alignment and had completely cut the archaeological deposits at the southwestern end of the site (see Fig. 3).

7 Watching Brief

Following the full area excavation, an archaeological watching brief was designed to monitor any further groundworks to identify the continuation of any archaeological deposits, which had been excavated and recorded during the main excavation. This was particularly pertinent in areas were it had been unsafe and impractical to carry out archaeological work, due to the depth of encroaching overburden.

7.1 Method

All intrusive groundworks taking place within the area of the development were monitored by a suitably qualified archaeologist. This included the deep battering around the edge of the area excavation, ground works along the London Road and construction to the north of the site around the existing buildings of the City General

Hospital. Any significant archaeological deposits were excavated by hand and recorded on *pro-forma* record cards with scale plans, section drawings and photographs, where appropriate, prior to development of the area.

7.2 Results

No archaeological deposits were encountered during the extent of the watching brief. Some dis-articulated bone was recovered during the removal of the of the modern overburden.

7.3 Discussion

The watching brief took place as a precaution, in case *in situ* archaeological deposits were disturbed during the groundworks. Only a small area of the construction disturbed the archaeological horizon outside of the area already excavated. Most of the groundworks were within the modern landscaping material. The presence of dis-articulated human remains within this material would suggest that the graveyard excavated had previously been disturbed.

8 Assessment: Quantification of Records and Finds

8.1 Site Records

Record Type		Evaluation	Excavation
Feature records		1	41
Context records		20	81
Burial records			22
Drawings			
	A1		5
	A2		
	A3	4	12
	A4	5	37
Photographs			
	Black and white	31	250
	Colour slides	31	212
	Colour print	-	231
Survey sheets		1	11
Index sheets		6	32

Table 1. Quantification of site records.

8.2 Finds

Context	Building Material		Pottery			Other
	Stone	Mortar	Roman	Medieval	Post Medieval	
2000					1	
3001						Clay pipe
3002					1	Tile
7000				1		
7001				2	4	Clay pipe
7007						Flint
7014		12	1	2		
7016				1		
7032						Iron SF 6
7044	2					
7052	1					
7058				13		
7064				1		
7065				1		
7066				4		
7069				2		
7078				4		
U/S				6		

Table 2. Quantification of the finds

9 Assessment: Specialist Reports

9.1 Human Bone by Megan Brickley

It is presumed that the human burials recovered from the excavation are medieval in date and may have been associated with the chapel of a medieval hospital thought to have been on this site.

9.1.1 Quantity

Twenty-two human burial numbers were assigned during the excavation. However, the human bone was very poorly preserved and only twenty one individuals and a small quantity of disarticulated bone was recovered from site and available for study.

9.1.2 Preservation

There are two aspects of preservation that should be considered in an assessment of the potential of human skeletal material for further analysis. The first is completeness (how much of the skeleton is present) and the second is surface preservation (how well preserved are the bone surfaces).

Examination of the human bone demonstrated that over 95% of the individuals recovered from the site had less than 25% of the skeleton present. In particular areas required for an assessment of age and sex, such as the skull, pelvis and ends of long-bones, were extremely fragmentary or often missing completely. In the majority of cases it would not be possible even to determine if an individual was adolescent or adult from visual examination of the skeletal material. In no instance would it be possible to determine the sex of any of the individuals with any certainty from visual examination.

An assessment of the quality of the bone surface for each individual demonstrated that this aspect of preservation was very poor. All bone examined was scored as Stage 4 or 5 (Behrensmayer 1978). In effect none of the original bone surface remained and this means that it would not be possible to record the vast majority of pathological changes that can affect the skeleton.

Teeth are the most highly mineralised tissue in the body and normally survive well even in adverse conditions. However, assessment of the skeletal material demonstrated that very few teeth were present and those examined were very poorly preserved.

9.1.3 Recommendations

In the light of the information produced from assessment of the human bone it is clear that it would not be possible to obtain any of the information that would contribute to our understanding of the medieval hospital or individuals who died there from further visual analysis of the human remains. I would therefore recommend that no further examination is made of the human bone.

The human bone has been processed, cleaned and packed to the highest possible standards by the Birmingham University Field Archaeology Unit. It will not deteriorate further if housed in dry conditions and I would therefore recommend that the human bone should form part of the site archive.

Archaeological science is advancing rapidly and it is possible that in the very near future forms of biochemical analyses will be available that could be fruitfully applied to the human bone from this site.

9.2 Pottery by S. Ratkai

All the pottery was examined macroscopically and the pottery divided into broad ware groups following Ford (1995) with the addition of a second iron-poor category (ip). Post-medieval pottery was ascribed to ware group where possible. The pottery was quantified by sherd and rim count. A total of 33 sherds were recovered (see Table 3, below)

The earliest pottery from the site consisted of a jar rim sherd, tempered with Malvernian rock. The form and fabric are Roman although the fabric is a continuation of a Late Iron Age tradition. It is not possible to date the Stoke sherd more closely than Roman, although recent work on pottery from The Magistrates Court, Worcester (Evans and Ratkai forthcoming) suggests that this fabric may become more common (in Worcester at least) in the later Roman period. The presence of Malvernian ware in Stoke is very striking, as it is well outside its normal distribution area.

The medieval pottery dates from the 13th and 14th centuries and there were no late medieval or early post-medieval transitional wares. Many of the sherds were very small and often abraded, making form identification impossible. The iron-rich sandy cooking pots were not confined to a single fabric and some of the sherds contained rounded mudstone fragments. The whitewares were wheel-thrown but very poorly finished with pale orange surfaces. Two bottles were present in (7078) and (7069) of roughly cylindrical type (cf MPRG 1998, form 3.2, type d). In addition an unusual, small diameter (c7.5cm) pedestal base was found in (7078), possibly from a small baluster jug or another bottle.

The post-medieval pottery was generally in poor condition and badly abraded. A possible stoneware waster came from the surface of fill (7058). It was a rim-neck sherd, similar in form to 17th century Bartmann type jugs. The body was buff and the glaze was off-white with some brown flecking. thick and pitted.

It is recommended that no further work is undertaken on this pottery assemblage.

Context	Other	Roman	irswu	irswt	ww	ip	pm	mod	Total
2000	Trench 2		1						1
3002	Trench 3						1		1
7000	Machine Layer						1		1
7001	Cleaning Layer							2	2
7014	F709	1	1	1					3
7016	F708		1						1
7058	F738		4	2	5		2		13
7064	F735				1				1
7066	F729		2			2			4
7069	F738				2				2
7078	F738		2		2				4
Total		1	11	3	10	2	4		33

Fabric Codes irsw-u: iron-rich sandy utilitarian ware irsw-t: iron-rich sandy table ware
ww: Midlands whiteware ip: iron-poor sandy wares
pm: post-medieval coarseware. mod: modern

Table 3. Quantification of the pottery

9.3 The Stone

A representative sample of the stone used to construct the foundations was taken from Structure 1 in order to identify the presence of any worked surfaces and to identify the possible origin of the stone.

There was no evidence of working on any of the stones collected and all breaks, if present were along natural bedding lines. The stone was a course pink sandstone, from a local source. A sample of the cobbles was taken from this site. The parent rock from which these cobbles derive have various origins to the North of England and were probably retrieved from the local glacial drift deposits (R. Ixer and L. Bevan pers. comm.).

9.4 Environmental Evidence by Marina Ciaraldi

Twenty-three soil samples of a standard size of 20 litres were collected at the excavator's discretion during the excavation at City Hospital, Stoke-on-Trent. Six of these samples were assessed in order to establish:

- The preservation of organic remains
- The potential of the plant assemblage in understanding the activities undertaken on site
- The potential for reconstructing the palaeoenvironment of the site

The samples examined were taken from various features, including grave fills, ditch fill and a wall fill. The samples are dated to the medieval period. The samples were processed using manual flotation. The flots were recovered on a 0.5 mesh, while the residue was recovered on a 1mm mesh and sorted by eye.

None of the samples contained organic remains apart from large quantity of coal, probably naturally present in the sediment of the area. Sample F706/7010 contained some small fragments of bones, possibly deriving from the skeleton present in the grave.

No further analysis is suggests for the samples here assessed, neither for the remaining unprocessed samples.

Sample N.	Feature	Context	Type of context	Vol. processed (lt.)	Flot. vol. (ml.)	Description
1	F 709	7014	wall fill	20	1	-
5	F 706	7010	grave fill	20	20	Coal and tiny fragments of bone
9	F 710	7041	wall fill	20	10	Coal and small amounts of slag
10	F 704	7053	wall fill	20	10	Small fragments of coal
15	F 725	7058	ditch	20	500	Coal
23	F 738	7078	ditch	20	50	Coal and a amount of small slag

Table 4. List of samples assessed for plant macroremains

10 Discussion

10.1 Phasing

It is obvious from the few relationships demonstrated on this site that several phases of activity are represented. The pottery assemblage from this site indicates medieval activity from the 13th to the 14th century, although very little of this dating evidence comes directly from individual features and so timescale and order are difficult to establish. Tentative explanations may be put forward at this stage.

The groupings of certain of the graves into rows would indicate burial in a similar phase, but this cannot be certain. It is clear that some time must have past between the interments directly cutting another, but they are so well placed together as to indicate a formal arrangement. Significantly, F715 was out of the east-west alignment and this seems to be because it was aligned with the padstone structure, F709. This suggests that this grave was later than the structure. This also indicates the possibility that building construction and burial were ongoing simultaneously on this site.

Structure 1 seems to have had two stages of development, the rectangular stone filled foundation trench (F710) is earlier than the square deep stone filled, well-constructed pier like structure (F709), situated at the south west corner of the structure. This feature is similar in plan to that of F704, although not at the same angle. It is logical to suggest that these two stone structures are related to a single, later, construction episode.

The three ditches (F736, F738 & F739) have been associated with either the burials or Structure 1 or both. Alternatively, they may have been a separate phase of activity on the site. The evidence from the excavation remains inconclusive.

10.2 Burials

The burial tradition in the medieval and early post-medieval periods was interment in relatively shallow and irregularly placed cuts, usually without permanent markers (Parker Pearson 1999). Orientation and alignment, although theoretically on the lines of the compass, can be effected by previously existing structures, boundaries, paths or the natural geology (Daniell 1997). If there are no such restrictions, the placing of the graves is most logically in rows, with the most important of graves within a church building (*ibid*.).

Graveyards in the medieval period were prone to periodic disruption due to rebuilding and extension projects either overlying or cutting graves, with subsequent burials disturbing those of an earlier date. The disturbed bones may just be discarded, although there is evidence from several cemeteries for the reburial of these disturbed bones in charnel pits (Hadley 2001).

An unknown number of burials could have been lost due to subsequent truncation. From the pattern visible it seems that preservation of the grave cuts could be quite random, and probably dependent on the original burial depth and the surrounding geology, rather than the level of preserved archaeology.

The burials appear to be aligned in north to south rows, but it is unclear what their relationship was with Structure 1, if any. Grave cut F735 was cut by the wall of this building. If all the burials were from a similar period this would suggest that they all pre-date the structure, as has been suggested in this report. However, without the corroborating evidence, it remains plausible that Structure 1 and some of the burials were contemporary. This would possibly suggest that the building was some type of chapel, containing inhumations , F700, F705, F706 and F712, within its walls. It also remains plausible that there were earlier burials, pre-dating Structure 1, followed by the construction of the building, with contemporary burials. There is no conclusive evidence, as only one stratigraphic relationship survived.

Although the exact relationship of the burials with Structure 1 cannot be clarified, there were a number of burials of note. It could be argued that the two burials in the west of the site, F716 and F717, were related to each other in both time of death and possibly in personal relationship. The close proximity, alignment and the positioning of the heads facing away from each other, would suggest this. These two individuals seem to be distinctly separate from the rest of the burials. This may be due to the relationships between the individuals and the community in which they lived, or it may simply be due to the truncation of other burials in this vicinity.

There was one grave cut that seemed to have three burials within it (F722). This is unusual on this site as all other inhumations were single burials. The remains were so fragmentary as to obscure the relationship between the bodies, but there were fragments from three distinct skulls, at the western end of the grave cut, and some unidentifiable long bones near the eastern end of the cut. Although these elements of the body were in approximately the correct position to have been *in situ,* it is also possible that this was a discrete charnel pit. These have been identified at a number of sites, where bones that have been disturbed by later activity on the site, have been reburied (*ibid*.).

A single burial (F720) had evidence that stones were used to place the body. There is evidence of the Christian tradition of pillow graves, which involved the placing of the head onto a stone platform. Whether this was done as an act of penance or prestige is unclear (Daniell 1997). This practice seems to have been used from the cusp of the 10th and 11th centuries until the 12th century. Although there is a 14th century example, which seemed to have a stone pillow for a practical reason (the body had been decapitated) rather than ritual reasons (Daniell 1997; Hadley 2001). Due to the degradation of the skeleton, it is unfortunately impossible to tell what was the reason behind the use of this burial custom. Although the general dating of this site is later than the period of use of pillow stones, it could be possible that this is an example of a pillow grave or the propping of the head for practical reasons.

Where preservation conditions were sufficient to show the position of the arms they were all crossed over either the stomach area or the chest. This is probably a practical consequence of shroud burials. As there has been no evidence of coffin material from any of the grave cuts, it seems probably that all interments in this graveyard were buried in shrouds. It appears that this site had a uniform tradition of burial which was continuous throughout the lifetime of the graveyard. The burials recovered seem, in general, to respect the landscape. They do however cut each other, but these cuts in

general are above each other. This seems to indicate a uniformity to the burial process on this site. There is a general impression of solid organisation to the graveyard here.

10.3 Structure 1

Medieval building practices are fairly well understood in relation to the buildings in this country. This is mainly due to the many examples of structures of this age still standing and the evidence collected from archaeological excavations (Harris 1979). The interpretation of this structure can be based on a sound understanding of building techniques employed at the time of its construction.

Although the construction of the building is difficult to determine from the remains in the ground, it is possible to make tentative suggestions about the structure. It seems to have at least two construction phases. The first is the rectangular stone filled negative feature, (F710, F713 and F726). This was rectangular, measuring 11m along the east-west axis and 6.5m along the north-south axis and 1m wide. The evidence from other medieval constructions of this period would suggest that this was a sill wall, which would have supported a single bayed timber framed building (*ibid*.). It would have been quite substantial for this period. There is no evidence of similar stone work where a southern wall would have been or where the east wall should have been.

The absence of stone footings on the majority of the eastern side of the structure could have a variety of explanations. There may have been no need for the eastern side of the building to require substantial stone foundations, or the evidence for them has been lost. The cut for the southern end of the eastern wall would suggest that it had not been truncated, but rather that construction had purposely ceased here. This leads us to question whether there was a specific purpose for this. It may be that there was a large entrance or window at the east end of the building.

The lack of a southern sill wall is difficult to understand. The cut of the south end of the western sill wall was well defined and there was no obvious evidence for the cut continuing around the corner. This would suggest that a southern sill wall had not been used in this structure, or if it had, it was at a higher level than the surviving structure. A wall, or at least some sort of support, would have had to be present along this edge, because construction technology available at the time meant that the roof could not have spanned a distance much larger than the width of Structure 1 (*ibid*.). It will be difficult to decipher the type of construction on this side of the building, as the evidence has not survived.

The northern and western sill walls seem to have had two courses of construction material. This could represent a re-build of the sill wall in these areas or could merely be a different technique employed for these particular walls.

The two large stone constructs, F709 and F704, represent the second phase of building work. This was most probably later than the construction of the sill wall. The distinctive construction and opposing positions at the southeast and southwest corners of the structure probably indicates that they were contemporary. The most likely function of these features seems to have been as padstones, supporting wooden posts. The evidence suggests that the layout of the south side of the building had been changed at some point after the original construction. The size of the padstone would

suggest they supported rather large posts, but there was no conclusive evidence to support this theory.

It is possible that the padstone at the southwest of the structure (F709) was visible above ground. This is suggested because the grave cut F715 appeared to respect this feature, rather than along a west-east alignment. It remains possible, however, that the padstone respected the grave. The evidence was inconclusive. It could therefore be possible that the opposite padstone was also visible above ground. These additions to the structure may have been made either as an extension exercise, or to support the southern wall. Unfortunately, subsequent truncation, has made this impossible to determine. Why one of these padstones (F709) was out of alignment of the rest of the building is also difficult to explain. Although it was aligned with the break in the slope. It is also aligned with the direction of the road, which would probably have been present at the time of construction. The other postpad of the pair (F704) was also slightly out of alignment in relationship to the remainder of the structure. The postpad at the southeastern corner was approximately 1m to the south of where the projected corner of Structure 1 should have been, presuming the building was reasonably geometrical. This again is a bit of an enigma. Structurally, there is something unusual about the southern side of the structure. What this could indicate is unclear at this stage.

Overall, Structure 1 was probably a rectangular timber framed building, constructed on a stone foundation. The southwestern side may have been open or the structural evidence lost. The building appeared to need later structural support in the form of buttresses. The function of Structure 1 is unclear, but it remains likely that it was a chapel of some description.

10.4 Ditches

The linear ditches present on this site are at the edges of this site, which probably indicated that the site for the proposed development could coincidentally be directly above the boundaries of the archaeological site. The majority of the pottery from this site was recovered from the ditch fill. This indicated that while the majority of this ditch can be dated to the 13th and 14th centuries, later 17th century activity is evident at the north-east extent of the ditch.

10.5 Historical Evidence

The historical evidence for the area in which this site is located may be taken in to account in association with the archaeological evidence. The history of Newcastle-under-Lyme during the period that this hospital was in use could suggest something about this possible hospital. The town is not mentioned in the Domsday Book (Pape 1928). Although it is possible that a rudimentary settlement was established here at this time (Studd 1991). In the middle of the 12th century a new castle was established at this strategically important intersection on the London to Carlisle road, which was approximately along the line of the present A34 (Briggs 1973). The town of Newcastle-under-Lyme developed rapidly in the 12th and 13th centuries, becoming a borough and subsequently a strong trading economy boomed (Pape 1928). The erection of the guildhall and the church tower in the late 13th century seems to be an act of civil pride (Studd 1991). This would suggest that not only the economic

situation of the town was right to support a hospital but also the social situation would most probably have called for one. Although this does not shed any additional light on to the function of the hospital.

The site consisted of burials and a structure dating to the medieval period, as described above. During the medieval period burial was usually carried out within church grounds (Hadley 2001). Christian burials are generally aligned west-east, with the head to the west (Parker Pearson 1999). This indicates that the burials may have been part of a graveyard associated with a Christian ecclesiastical building of which Structure 1 may have been a later addition.

From the scant historical descriptions this site has been identified as a hospital, founded outside the boundaries of Newcastle-under-Lyme and within the old parish of Stoke-on-Trent (VCH 1970). This conclusion has been reached due to the location of this site, which is just outside the boundaries of Newcastle-under-Lyme, but well within walking distance, along a main route, into the town. This is a typical location for a medieval hospital (Price and Ponsford 1998).

In relationship to the dating evidence from this site, it seems that Structure 1 was most probably in use during the 13th and 14th centuries. As there is no dating evidence recovered from this site for a continuation of occupation after this, or a transitional period through to the post-medieval period, it is suggested that the activity was restricted to this period. Although it is possible that the evidence for a continuation of occupation on this site may have been lost or not apparent in the area investigated. This would indicate that the structure and burials could most probably be associated with the hospital of St. John or St. John the Baptist, rather than with the later St. Loye, as has been previously suggested.

The history of medieval hospitals is not well understood, mainly due to the dearth of evidence. From the evidence available, it can be said that, although medieval hospitals were very differing in form and function, some general trends were apparent (Price and Ponsford 1998). There is very little evidence for the establishment of hospitals prior to the 11th century, after which point there was a rapid increase in the their establishment. This was due in part to the increasing cases of leprosy and also because of the development of viable economic and social conditions during the 12th and 13th centuries (*ibid*.). With the shifting of populations towards the towns in the 13th century, a means of accommodating the poor and the transient was another reason prompting the establishment of hospitals (*ibid*.).

With reference to the date of this site, this demonstrates that this hospital complex at Stoke-on-Trent was most probably established towards the middle of this period. The little information from the historical records for the hospital or hospitals at or near Newcastle-under-Lyme indicate that the hospital dedicated to St. John the Baptist was already established in 1266 (VCH 1970). Little more is known about this hospital, but this date does correspond well with the dating of this site. The hospital of St. John the Baptist is identified with another or other hospitals recorded in the area, from the 15th through to the 16th century, under various dedications. The last known record for the hospital was from when it was suppressed at the end of the sixteenth century (*ibid.*). There is a concentration of fields in the area of the site with ‘spittles’ within the name, which would indicate that there was a hospital in the vicinity of the present site

(*ibid*.). This could suggest that the hospitals of various dedications associated with Newcastle-under-Lyme are generally the same establishment. The possible chapel discovered in the course of these excavations may relate to an early phase of hospital, which was abandoned for a nearby location.

The care afforded by hospitals during this period was more spiritual than medical. If any medical care seems to have taken place in hospitals at this time, it would have been very rudimentary (Price and Ponsford 1998). Their main functions usually fell in to four categories: housing the poor, caring for the sick, secluding lepers and providing travellers accommodation (*ibid.*). Unfortunately, with the evidence collected from this site to date, very little light can be shed on the function of this particular hospital.

The documentary history for this site sheds little light on the specifics of form or function of the hospital. The lack of evidence on this site for any sort of medical care neither proves nor disproves that this was the site of a chapel of a hospital. Due to the state of degradation of the archaeology, especially with reference to the bodies of the individuals buried here, it is impossible to identify specific hospital or religious functions.

10.6 Conclusion

From the archive of the site uncovered in this approximate location in 1985, which was preserved *in situ*, it can be established that the current excavation revealed the same structure and associated burials. Although there are some inconsistencies between the records from the rescue excavation and those from this excavation, they are similar enough to make this assumption.

It is concluded that this is the site of a medieval hospital documented close to Newcastle-under-Lyme. Although medieval hospitals are not well understood it is known that they were basically ecclesiastical institutions, which would indicate that this is probably the site of a chapel within the hospital complex. The evidence from other such establishments suggests that the layout of hospitals although varied, were usually buildings arranged around a courtyard and entranced by a gateway. The function, wealth and date of the hospital seem to be the overriding governing factors in determining the hospital layout, but it does seem that not all had associated chapels.

Generally the evidence from this site would suggest that the burials, building and surrounding ditches relate to a period of medieval activity. It is not unreasonable to relate this activity to the medieval hospital documented in this area.

11 Publication Plan

11.1 Background

As a consequence of the expansion to the North Staffordshire Hospital, an archaeological evaluation, excavation and watching brief was carried out in the summer of 2001.

These archaeological works resulted in the discovery of the remains of stone foundations of a building, a series of linear negative features and human burials associated either with this building or with an earlier graveyard. These features and building appear to date from the 13th to the 14th century. These are thought to be the remains of the medieval hospital of St. John, known from the historical records to be located in this area of Newcastle-under-Lyme.

11.2 Summary of Statement of Potential

The information obtained from the excavation of this site could be considered limited on its own. No additional work on any of the finds or samples collected from this site has been recommended. As no further information can be gathered from the study of these various artefacts, it seems that little more work can be done on the archaeological assemblage from this site. All the useful information that maybe gathered from the artefactual assemblage has been done so in the course of this post-excavation assessment. The human remains from this site may be reburied at an appropriate location and the other finds deposited at a museum such as the Potteries Museum and Art Gallery, Stoke-on-Trent. However, little is known about medieval hospitals and further work on the structure and burials excavated here will not only enhance the local archaeological knowledge, but also contribute to our understanding of medieval hospitals in general.

11.3 Aims

It is possible to restate, enhance and re-focus the research aims as being to:

- Complete the characterisation of the site dating and function for the medieval period represented on this site.
- Compile a greater understanding of the known archaeology and history of the region at this period in order to place this site in its context.
- Study the archaeology and history of similar sites in order to understand this site in its context.
- Contribute to the understanding of the medieval settlement in the region in terms of settlement, society, economy and religion.
- Contribute to the understanding of the medieval hospital, both regionally and nationally.

11.4 Publication Synopsis

It is proposed that the results of this archaeological work be published as an article in the journal 'Medieval Archaeology'

Title
'The Excavation of a Medieval Hospital on the site of the Undergraduate Medical School, Stoke-on-Trent, Staffordshire 2001'
by Mary Duncan

with contributions by Megan Brickley, Marina Ciaraldi and Stephanie Ratkai.

Summary
250 words

Introduction
500 words *1 Figure*

Aims and Methods
750 words

The Site and its Context
1500 words *1 Figure*

Description of Results
5000 words *5 Figures, 3 tables,5 Plates*

Medieval Pottery by Stephanie Ratkai
1000 words *2 tables*

Human Burials *by Megan Brickley*
1000 words *1 table,3 Plates*

Environmental Evidence *by Marina Ciaraldi*
500 words *1 table*

Discussion and Conclusions
2000 words *3 Figures*

Bibliography

Acknowledgements

12500 words, 10 figures, 7 tables, 8 plates

11.5 Post Excavation Task List

	Person	Days
Preliminary Analysis		
1) Overall project management	G.C	3
2) Finalise phasing	M.D.	1
3) Figure roughs for the site narrative	M.D.	1
4) Draught illustrations	N.D.	5
5) Prepare plates	E.N.	2
6) Integrate Specialist Reports	G.C.	1
7) Library Research	M.D.	5
8) Preparation of fist draft of introduction and results	M.D.	5
9)Preparation of first draft of discussion	M.D.	10
10) Compilation of First Draft	G.C.	2
11) Editing of fist draft (BUFAU)	G.C.	3
12) Corrections to first draft	M.D.	2
13) Corrections to illustrations	N.D.	1
14) Final proof reading	M.D./G.C.	2
15) Final corrections to text/illustrations	M.D. N.D.	2
16) Submission of Final Text		
17) Preparation of excavation and research archives	K.M	1
18) Deposition of archive	K.M.	1

Personnel

G.C. Gary Coates
E.N. Edward Newton
M.D. Mary Duncan
N.D. Nigel Dodds
K.M. Karen Muldoon

12 Acknowledgements

The fieldwork was supervised by Mary Duncan and carried out by Kate Bain, Sabina Belim, Melissa Conway, Cath Flitcroft, Sue Gailey, Lisette Piper and Gemma Wicks. Nigel Dodds and John Halstead prepared the illustrations and Ed Newton prepared the plates for the report. Maurice Hopper carried out the environmental sampling. The project was managed by Gary Coates, who also compiled and edited this report.

David Hodgkinson, Wardell Armstrong Engineering Consultants, monitored the project on behalf of North Staffordshire NHS Trust.

Bill Klemperer and Noel Bothroyd monitored the project on behalf of Stoke-on-Trent City Council.

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13 Bibliography

Behrensmayer, A.K. 1978 'Taphonomic and ecologic information from bone weathering.' in *Paleobiology*, 4, 150-162.

Briggs, J. *Newcastle under Lyme 1173-1973*. Newcastle-under-Lyme Borough Council.

Daniell, C. 1997 *Death and Burial in Medieval England.* Routledge.

Evans, J. and Ratkai, S. forthcoming *An Assessment of the Roman Pottery from Excavations on the Site of the Magistrates Court, Worcester* Archaeological Investigations Internal Report.

Ford, D.A. 1995 *Medieval Pottery in Staffordshire AD800-1600: A Review* Staffordshire Archaeological Studies No 7 1995.

Hadley, D.M. 2001 *Death in Medieval England.* Tempus Publishing Ltd.

Harris, R. 1979 *Discovering Timber-Framed Buildings*. Shire Publications Ltd.

Hodgkinson, D. 2001 *North Staffordshire Hospital NHS Trust City General Hospital Stoke-on-Trent Project specification for an Archaeological Evaluation by Trial Trenching* Wardell Armstrong.

Marsden, P. and Courtney, P. 1998 *An Archaeological Desk-based Assessment for North Staffordshire (SJ 448 860)* University of Leicester Archaeological Services Report Number 98/22.

MPRG 1998 *A Guide to the Classification of Medieval Ceramic Forms* Medieval Pottery Research Group Occasional Paper 1.

Pape, T. 1928 *Medieval Newcastle-under-Lyme* Manchester University Press.

Parker Pearson, M. 1999 *The Archaeology of Death and Burial* Sutton Publishing.

Price, R. and Ponsford, M. 1998 '*St Bartholomew's Hospital, Bristol. The excavation of a medieval hospital: 1976-8.*' CBA Research Report 110.

Studd, R. 1991 'Medieval Newcastle-under-Lyme: a hidden Domsday Borough?' *Staffordshire Studies III*.

VCH 1970 *The Victoria History of the Counties of England. A History of the County of Stafford Volume III*. Oxford University Press.

Appendix 1

Pottery Spot Dating and Catalogue by S. Ratkai

Tr2 2000 13th-14th c
irsw-u x 1 cpj sherd

Tr3 3002 later 17th-e18th c
cw x 1 very abraded internally, possibly part of a slipware dish.

7000 ?late 17th-18th c
cw x 1 base sherd internal toffee brown glaze

7001 19th c
blue transfer printed plate x 1rim
refined red earthenware, brown glaze x 1
1 x clay pipe stem

7001 sf9 c1250-1300
ip x 1 jug base/base-angle sherd, incised wavy line decoration, heavily abraded, similar to Ford 1995 Fig 15: 99.

7014 13th-14th c
irsw-t x 1 small chip, olive glaze
irsw-u x 1 cooking pot rim, similar to Ford 1995 Fig 9; 21
Roman Malvernian x 1 cooking pot rim

7016 13th-14th c
irsw-u x 1 cooking pot rim, similar to Ford 1995 Fig 9; 30.

7058 F725 ?late 17th c
ww x 2 jug sherds
ww x 2 cooking pot sherds
irsw-u x 3 sherds
irsw-t x 2 sherds
pm x1 pie crust rim sherd, v abraded, trace of glaze in pie-crust depressions

7058 surface ?late 17th c
ww x 1 jug handle
irsw-u x 1 cooking pot sherd, largely reduced and sooted
?stw x 1 rim sherd ?imitation gstw? with thick off-white heavily pitted, glazed sherd. ?waster

7064 F725 late 13th-14th c
ww x 1 wheel-thrown body sherd

7066 F729 ?14th c
ip x 1 cooking pot sherd
ip x 1 base sherd
irsw-u x 2 very small chips

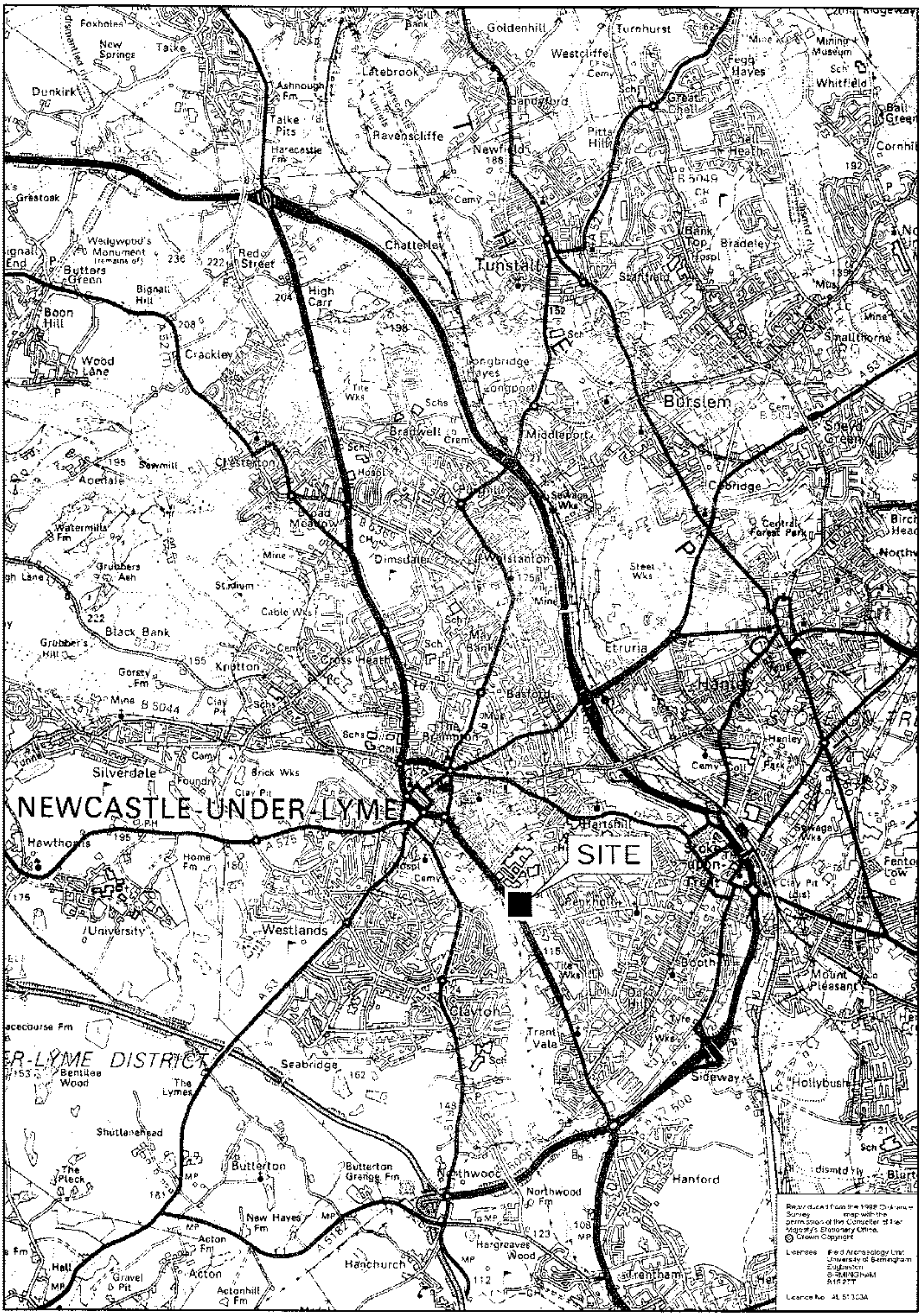
7069 F731 ?14th c
ww x 1 ba ?bottle, same form as 7078
ww x 1 body sherd probably part of same vessel

7078 F738 ?14th c
ww x1 pedestal base ?form
ww x 1 small dia base ?bottle?
irsw-u x 1 cooking pot/bowl rim, (mudstone inclusions) abraded. Simple everted rim.
irsw-u x 1 small cooking pot chip (mudstone inclusions)

F713 post-medieval-modern
1 x drainage pipe

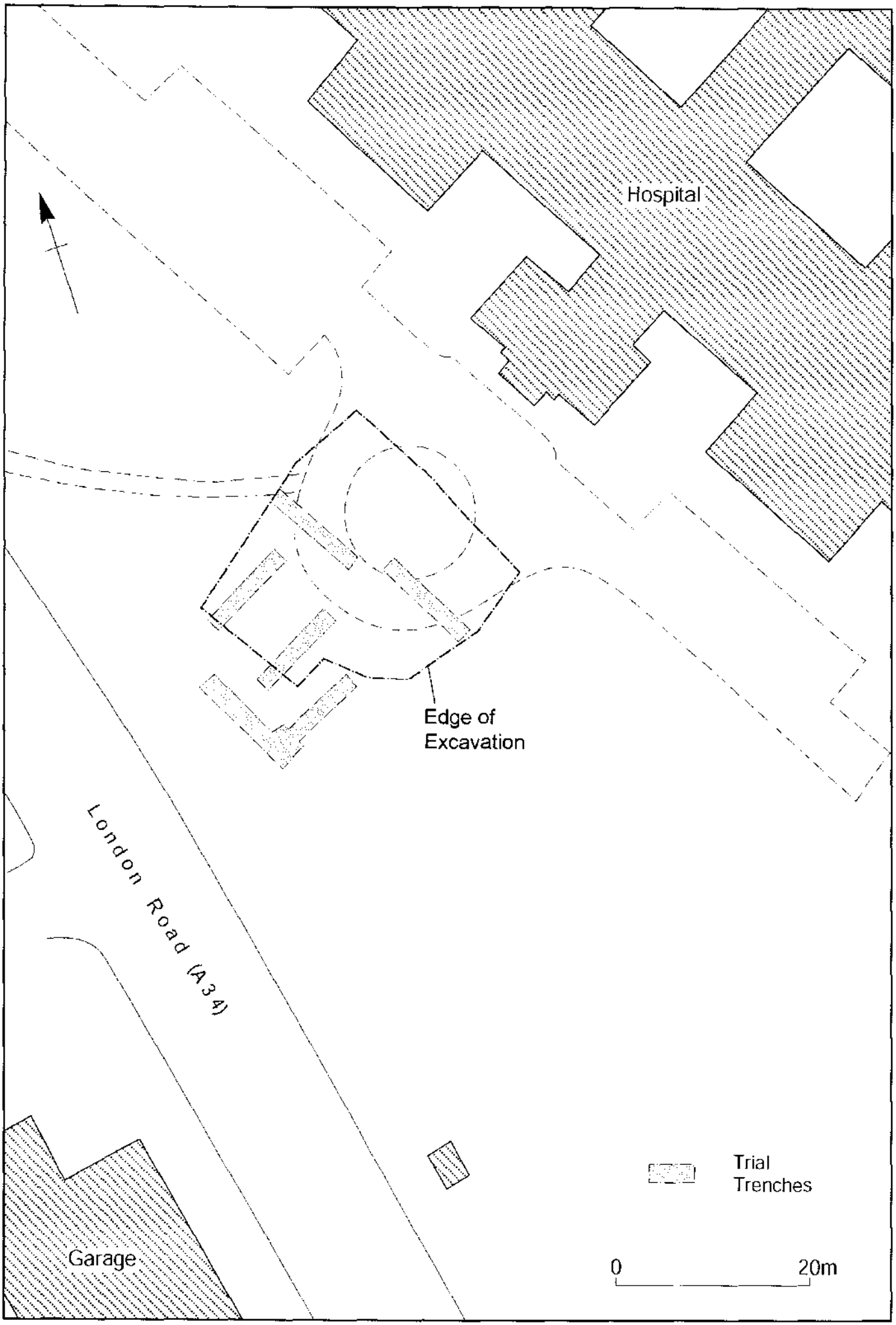
Fabric Codes	irsw-u: iron-rich sandy utilitarian ware	irsw-t: iron-rich sandy table ware
	ww: Midlands whiteware	ip: iron-poor sandy wares
	cw: post-medieval coarseware.	stw: stoneware

Figures



NEWCASTLE-UNDER-LYME
SITE
Tunstall
Burslem
Etruria
Hanley
Stoke-upon-Trent
Silverdale
Westlands
Clayton
Trent Vale
Sideway
Hanford
Northwood
Trentham
Chesterton
Wolstanton
Basford
May Bank
Cross Heath
Knutton
Bradwell
Porthill
Middleport
Longport
Chatterley
Crackley
Seabridge
Butterton
Hanchurch
Acton
Hawthorns
University
Penkhull
Boothen
Oak Hill
Hartshill
Mount Pleasant
Fenton Low
Hollybush
Smallthorne
Sneyd Green
Cobridge
Central Forest Park
Goldenhill
Turnhurst
Westcliffe
Sandyford
Newfield
Pitts Hill
Great Chell
Chell Heath
Bank Top
Bradeley
Fegg Hayes
Whitfield
Ravenscliffe
Latebrook
Talke
Talke Pits
Foxholes
New Springs
Dunkirk
Red Street
High Carr
Bignall Hill
Boon Hill
Wood Lane
Butters Green
Wedgwood's Monument
Apedale
Watermills Fm
Grubbers Ash
Black Bank
Gorsty Fm
Dimsdale
Broad Meadow
Shutlanehead
The Lymes
Bentilee Wood
Northwood Fm
Hargreaves Wood
Acton Hill Fm
New Hayes Fm
Butterton Grange Fm
Home Fm
Gravel Pit
A 525
A 53
A 34
A 500
A 5182
A 527
B 5044
B 5049
LYME DISTRICT

Fig.1


Hospital
Edge of
Excavation
London Road (A34)
Garage
Trial
Trenches
0
20m

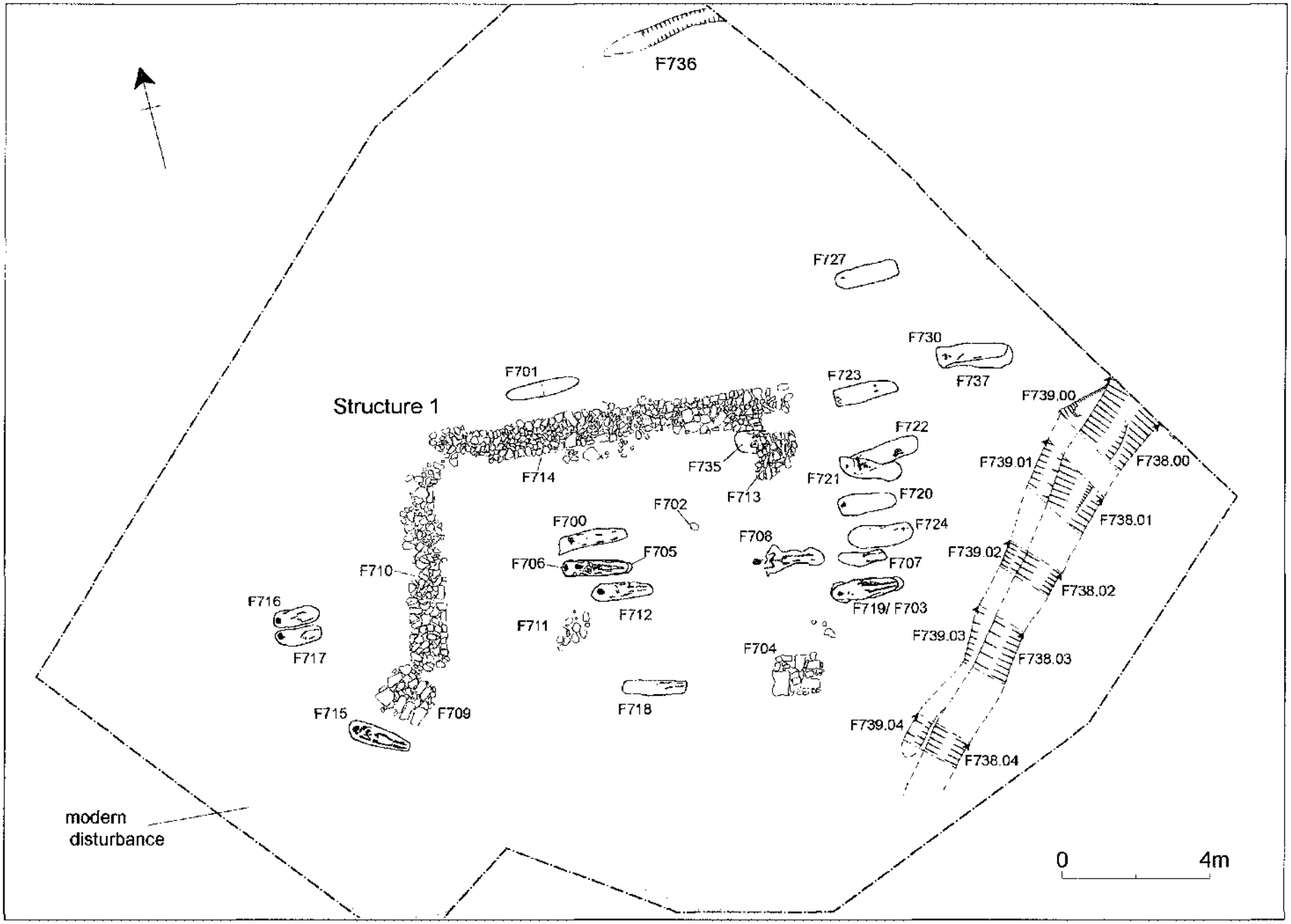

F736
F727
F730
F737
F701
F723
Structure 1
F739.00
F722
F739.01
F738.00
F714
F735
F721
F713
F720
F702
F738.01
F700
F724
F708
F739.02
F705
F706
F707
F710
F738.02
F719/ F703
F716
F712
F711
F739.03
F704
F738.03
F717
F718
F715
F709
F739.04
F738.04
modern
disturbance
0
4m

Fig. 3

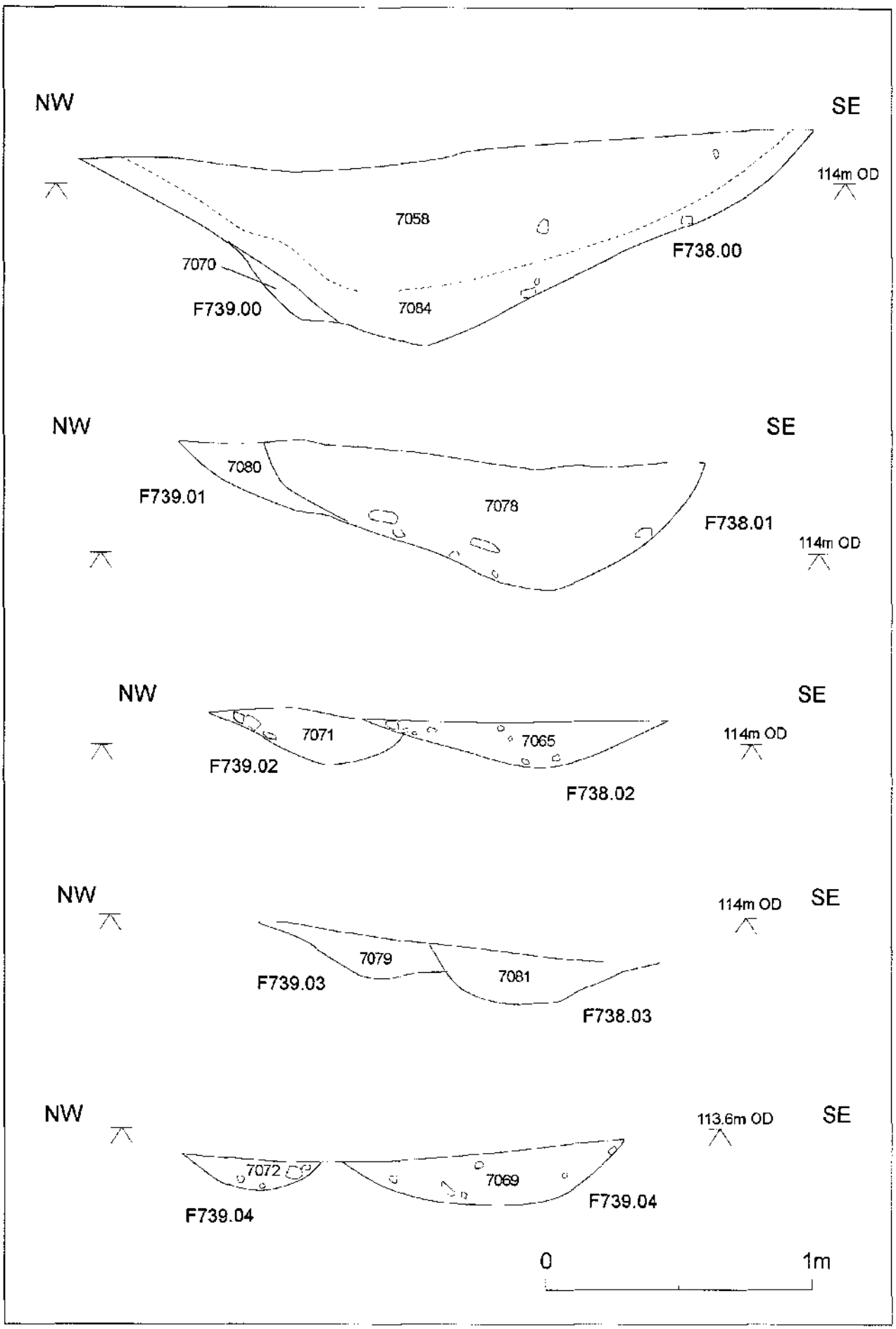
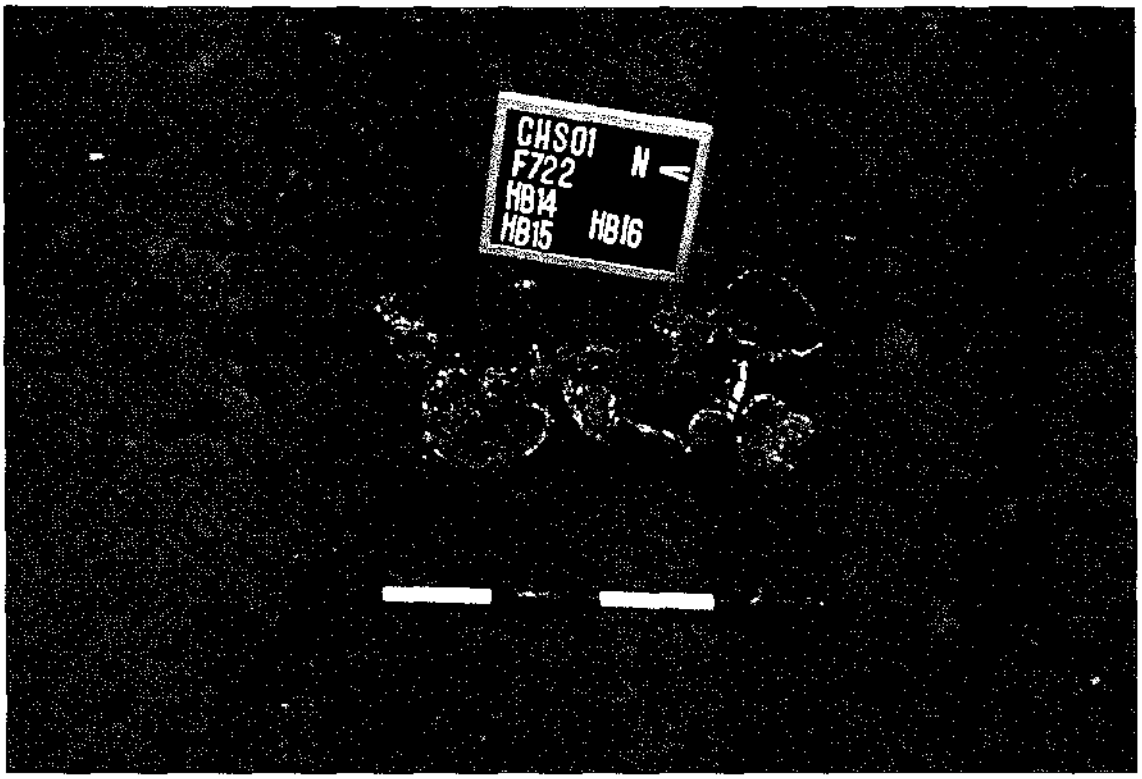

NW
SE
114m OD
7058
7070
F739.00
7084
F738.00
NW
SE
7080
F739.01
7078
F738.01
114m OD
NW
SE
7071
7065
F739.02
F738.02
114m OD
NW
114m OD
SE
7079
F739.03
7081
F738.03
NW
113.6m OD
SE
7072
7069
F739.04
F739.04
0
1m

Fig. 4

Plates

Plate 1

Plate 2



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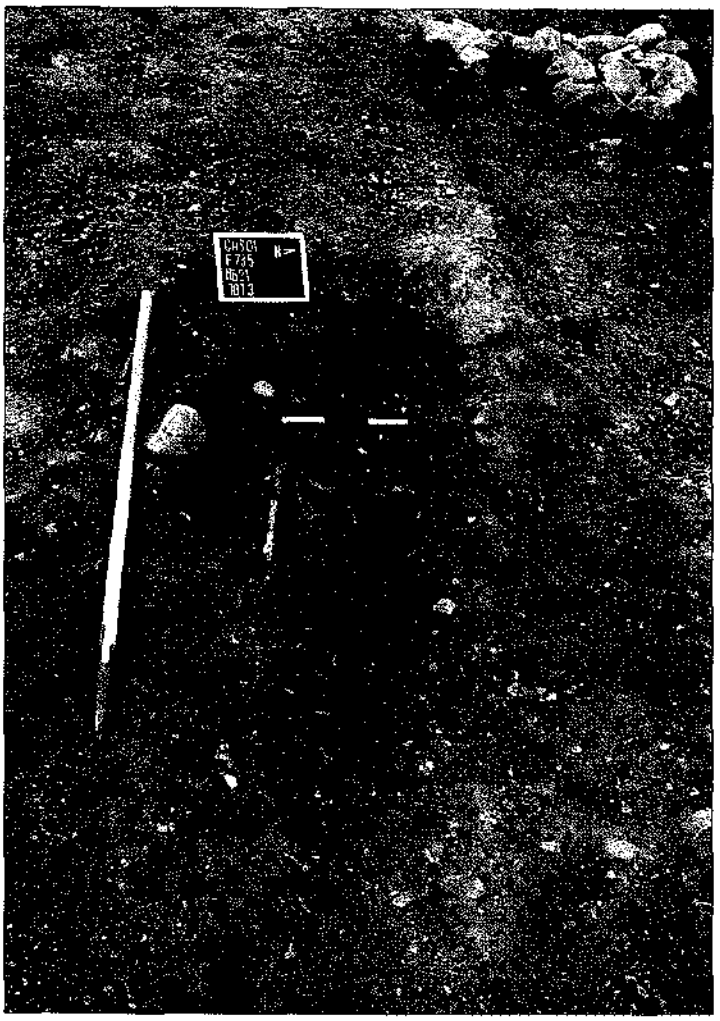

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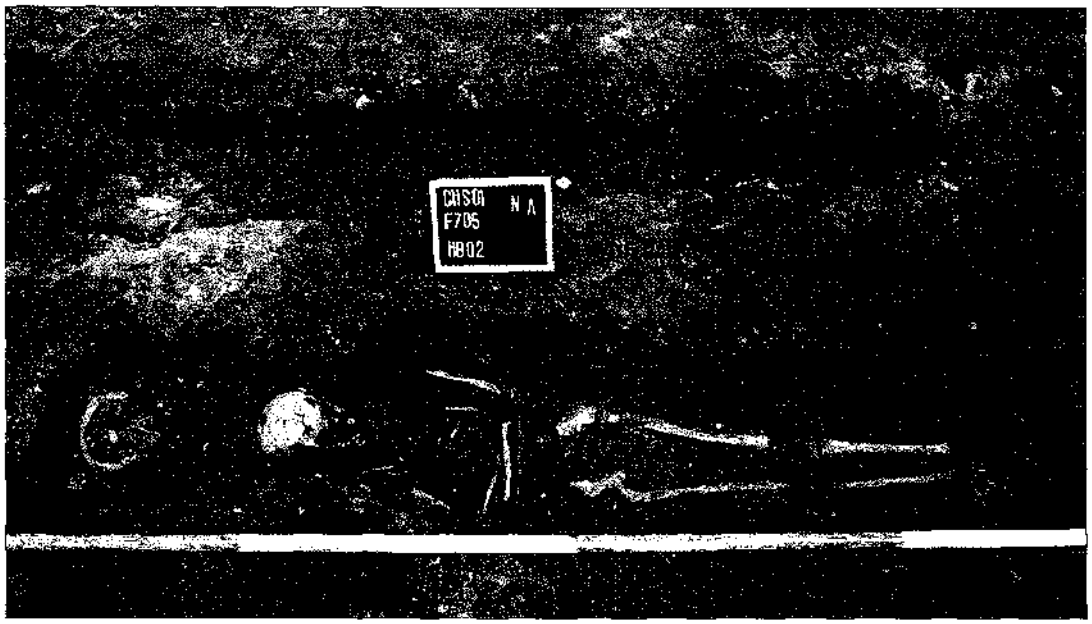

Plate 5

Plate 6

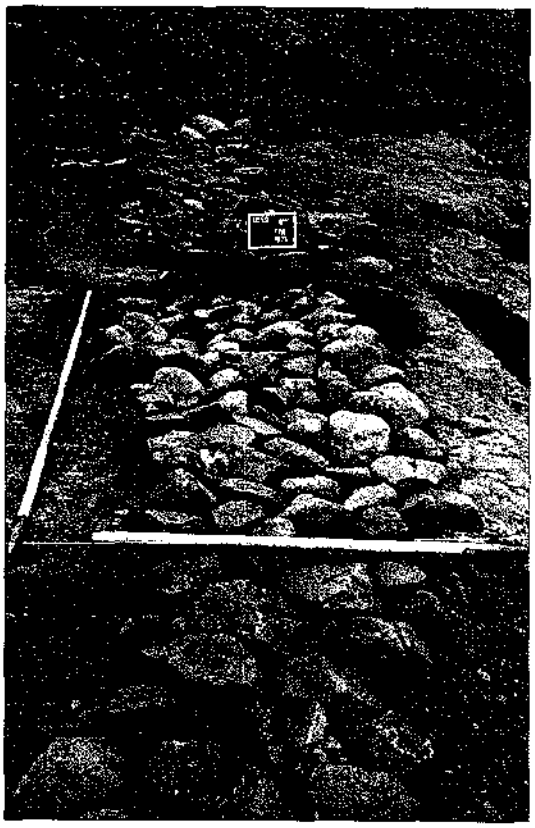

Plate 7

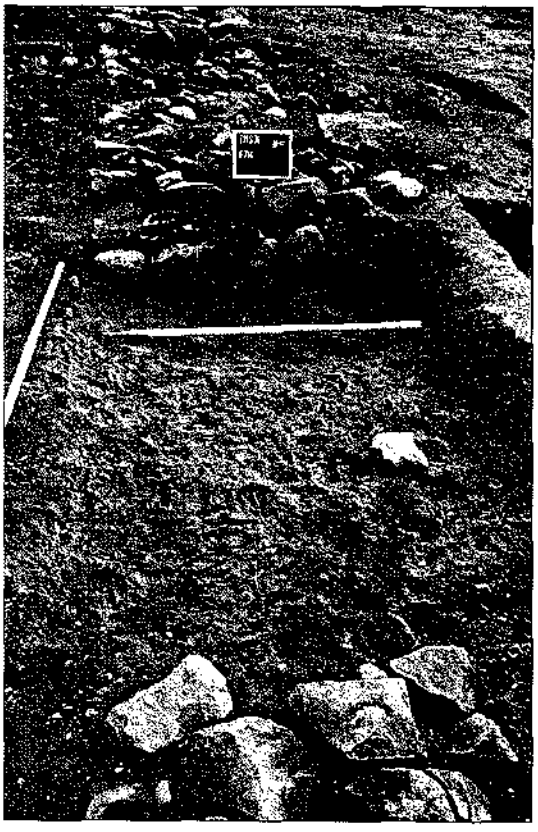

Plate 8