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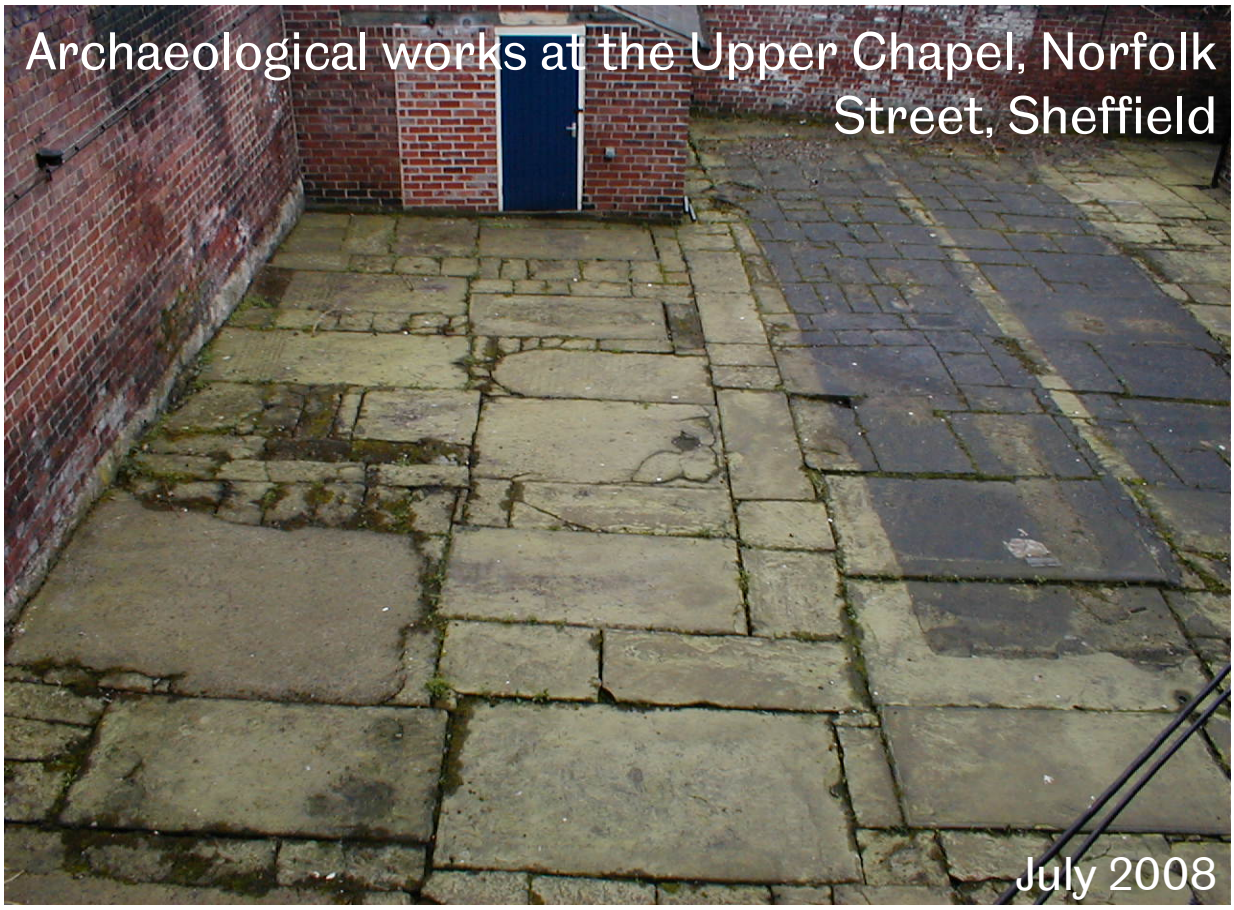
Final Report 732f.3(1)

Archaeological works at the Upper Chapel, Norfolk Street, Sheffield



July 2008

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Prepared for:
Hermes Property Unit Trust
Lloyds Chambers, 1 Portsoken Street, London E1 8HZ

Upper Chapel, Norfolk Street, Sheffield

National Grid Reference: SK 3541 8725 (centred)

Archaeological Works

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Fieldwork

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Archive

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Checked by:	Passed for submission to client:
Date:	Date:
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OASIS SUMMARY FORM

PROJECT DETAILS		
OASIS identifier	arcus2-46553	
Project title	Upper Chapel, Norfolk Street	
Short description of the project	ARCUS were commissioned by Pro-Active Project Management to carry out a programme of archaeological works at the Upper Chapel, Norfolk Street, Sheffield, on behalf of Hermes Property Unit Trust, as part of a larger project associated with the redevelopment of the Carmel House, Fargate site. An archaeological watching brief, evaluation, and recovery of human burials were carried out during the construction of an electricity substation and associated cable trenches in the former Unitarian burial ground to the rear of the Upper Chapel, active between about 1700 and 1855. A buried soil deposit was encountered, protected along the northern edge of the site by the footings of a wall along the line of Pepper Alley. This deposit contained a significant assemblage of medieval pottery dating between the 12th and 15th centuries, including waster sherds and fragments of kiln furniture suggesting that pottery production may have taken place on or near the site. The evidence suggests that this is one of the most important assemblages of medieval pottery to have been excavated in Sheffield in recent years in that it represents the first excavated evidence for medieval industry within the medieval core of the town. Four human burials from the 18th- to 19th-century burial ground were recovered during the archaeological investigations, in varying states of preservation. The Upper Chapel appears unique out of other recently excavated cemeteries in Sheffield as it can be confidently demonstrated to have the potential for all the graves to be present in an undisturbed state.	
Project dates	Start: 20-02-2006 End: 11-03-2008	
Previous/future work	Yes (desk-based assessment, building appraisal, building recording, evaluation, mitigation) / No	
Monument type and period	UNITARIAN BURIAL GROUND Post Medieval	
Significant finds (artefact type and period)	CERAMICS Medieval, CERAMICS Post Medieval, CLAY TOBACCO PIPE Post Medieval, HUMAN BONE Post Medieval, METAL Post Medieval, WOOD Post Medieval	
PROJECT LOCATION		
County/Parish	South Yorkshire/Sheffield	
Site address	Upper Chapel, Norfolk Street, Sheffield S1 2JD	
Site co-ordinates	SK 3541 8725	
Site area	481 square metres	
Height OD	Min: 78.20m Max: 78.47m	
PROJECT CREATORS		
Organisation	ARCUS	
Project brief originator	SYAS	
Project design originator	ARCUS	
Project supervisor	Steve Baker	
Project manager	James Symonds	
Sponsor or funding body	Hermes Property Unit Trust	
PROJECT ARCHIVES		
Archive Type	**Location/Accession no.**	**Content (e.g. pottery, metalwork, etc)**
Physical	Sheffield Museum/SHEFM:2005.8	Animal bones, Ceramics, Glass, Metal, Textile, Clay Tobacco Pipe
Paper	Sheffield Museum/SHEFM:2005.8	Context sheet, Correspondence, Photograph, Plan, Report, Section
Digital	Sheffield Museum/SHEFM:2005.8	Digital Photography
BIBLIOGRAPHY		
Title	Archaeological Works at the Upper Chapel, Norfolk Street, Sheffield	
Report no	ARCUS 732f.3(1)	
Author	Katherine Baker and Steve Baker	
Date	July 2008	

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NON-TECHNICAL SUMMARY

ARCUS were commissioned by Pro-Active Project Management to carry out a programme of archaeological works at the Upper Chapel, Norfolk Street, Sheffield, on behalf of Hermes Property Unit Trust, as part of a larger project associated with the redevelopment of the Carmel House, Fargate site. An archaeological watching brief, evaluation, and recovery of human burials were carried out during the construction of an electricity substation and associated cable trenches in the former Unitarian burial ground to the rear of the Upper Chapel, active between about 1700 and 1855.

A buried soil deposit was encountered, protected along the northern edge of the site by the footings of a wall along the line of Pepper Alley. This deposit contained a significant assemblage of medieval pottery dating between the 12th and 15th centuries, including waster sherds and fragments of kiln furniture suggesting that pottery production may have taken place on or near the site. The evidence suggests that this is one of the most important assemblages of medieval pottery to have been excavated in Sheffield in recent years in that it represents the first excavated evidence for medieval industry within the medieval core of the town. Four human burials from the 18th- to 19th-century burial ground were recovered during the archaeological investigations, in varying states of preservation. The Upper Chapel appears unique out of other recently excavated cemeteries in Sheffield as it can be confidently demonstrated to have the potential for all the graves to be present in an undisturbed state. Given the importance of the potential for the burial ground to exist in a hitherto undisturbed state of original preservation and the potential for at least a proportion of the skeletons and coffins to be exceptionally well preserved due to the waterlogged ground conditions, it is of paramount importance that any further disturbance to the graveyard in the future is carried out under appropriate archaeological supervision in accordance with archaeological conditions set out within the planning process.

1 INTRODUCTION

ARCUS were commissioned by Pro-Active Project Management to carry out a programme of archaeological works at the Upper Chapel, Norfolk Street, Sheffield (SK 3541 8725) (**Illustration 1**), on behalf of Hermes Property Unit Trust. The archaeological works were required by the South Yorkshire Archaeology Service (SYAS), in line with government policy outlined in PPG16 (Department of Environment 1990), as part of a planning condition on an application (03/01992/FUL) for the erection of a building at 2-6 and 8/8a Norfolk Row and to the rear of the retained frontage of Carmel House, Fargate, Sheffield. Within the yard to the rear of the Upper Chapel, the development included re-laying of grave slabs, demolition of an existing outbuilding, lowering of ground levels, and construction of an electricity substation and associated service trench. An outline Programme of Archaeological Works (ARCUS 2005) was agreed between ARCUS, the client, and the South Yorkshire Archaeology Service (SYAS). This document constitutes the final report on the archaeological works within the Upper Chapel yard, corresponding to elements 7, 8, 9 and 11 within the agreed Programme.

1.1 Site location and land use

The site (SK 3541 8725) was located in the yard to the north and west of the Upper Chapel, Norfolk Street, Sheffield, bounded by standing buildings to south, east and west, and by the course of a wall (demolished during development of the site) separating the yard from Pepper Alley to the north. Prior to development the yard was paved with gravestones and irregular sandstone slabs, partially overgrown with low vegetation; the proposed substation site was occupied by a brick lean-to outbuilding abutting the wall of the standing building to the west of the yard. The underlying geology comprised Silkstone Rock (sandstone) of the Upper Carboniferous Lower Coal Measures.

1.2 Archaeological and historical background

The proposal area on the site of Carmel House and to the rear of Norfolk Row has been subject to several phases of archaeological work undertaken by ARCUS. An archaeological desk-based assessment was submitted (May and Jessop 2003), followed by a building appraisal of Carmel House (Jessop and Roberts 2004) and subsequent building recording of Carmel House (Duckworth and Jessop 2006). Archaeological evaluation of the Pepper Alley part of the site was carried out before demolition (Bell 2005), with additional archaeological evaluation and mitigation carried out following demolition of Carmel House and buildings to the rear (Baker 2006). Burial plans and registers relating to the Upper Chapel were consulted in advance of works in the Upper Chapel yard (Stenton and Baker 2005).

The proposal area was part of the medieval town of Sheffield and therefore likely to have been developed from an early date. The earliest map of Sheffield, produced by Ralph Gosling in 1736, depicts the town prior to its late 18th-century expansion and shows the development area as mainly built up by this date (May and Jessop 2003). This map shows much of the medieval layout of the town preserved, with Prior Gate (later the High Street) linking the castle and market to the parish church (later the Cathedral). Fargate appears to have been part of the medieval town, an extension of Prior Gate, with tenements along the street frontage and gardens behind. The Upper Chapel is depicted and the area surrounding the church is probably the church yard.

This Unitarian chapel was constructed in 1700, and is believed to have been the earliest brick building in Sheffield, although most of the present building dates from enlargement in 1848. It was originally accessed via Pepper Alley, the original line of which is depicted as running from Fargate to Alsop Fields across the later site of Carmel House before its diversion between 2 and 4 Norfolk Row.

By 1771 Alsop Fields was being laid out for new streets and Norfolk Street had been constructed. Details of the buildings between Pepper Alley and the proposed Norfolk Row, which was constructed between 1780 and 1789, are shown on a Fairbank plan of 1780, depicting large buildings fronting onto Fargate, with a few smaller structures to the rear and facing Pepper Alley, but showing the area mostly occupied by yards and gardens. Fairbank plans of Pepper Alley show the southeast end of the street as 'Chapel Yard' or 'Chapel Walk' where it goes past the Upper Chapel and its graveyard. The name Pepper Alley probably comes from Dennis Pepper who apparently owned the land in 1767. Fargate was originally a narrower street and was enlarged between 1850 and 1890, cutting through an area of tenements between Fargate and Norfolk Street. The widening of Fargate removed a significant portion of the street frontage and there was a period of rebuilding between 1890 and 1905, with Carmel House having been constructed by 1903. The archaeological groundworks in Pepper Alley and on the site of Carmel House revealed the site to have been truncated, probably in the context of terracing during construction in the 18th and 19th centuries. A medieval well on the Carmel House site, in use between the 13th and 16th centuries (Baker 2006) was probably located to the rear of buildings along Fargate.

Burial records held by Sheffield Archives relating to the Upper Chapel comprise 19th-century burial registers and a copy of monumental inscriptions. The comprehensive burial register (UCR 1/3) covers the period 1837-1854 and shows the annual number of inhumations consistently diminishing, with 13 recorded in 1837, 6 in 1847 and 3 in 1854. This trend is perhaps due to an increasing lack of space within the chapel precincts and an accompanying increase in selection when determining allocation of burial plots. The lack of burials after this period is likely to be associated with the 1855 Burial Grounds Act, which prevented further interment within inner city cemeteries. The Upper Chapel's burial registers were also inspected, consisting of a series of notebooks containing simple numbered lists with names, dates, and the occasional highlighting of interrelations within family plots. These do not have accompanying plans recording the locations of the graves that they cover.

The Upper Chapel's burial records also include three plans, which although unrelated to the registers show the location of individual graves and all use the term 'burials' suggesting that they perhaps refer to actual inhumations rather than to simple memorial stones. The 1846 plan for the chapel authorities shows burials beneath the vestry, with nine marked graves representing all ages from infants and adolescents to the middle-aged and elderly. Inscriptions indicated that interment had occurred in this area from the first quarter of the 18th century, with the earliest recorded grave an infant burial of 1723. This is nearly two decades after the chapel's foundation; it is unclear where members of the congregation and their families had been interred during the intervening period, or what may have provided the impetus for burials to commence at this point. The vestry was built as part of the extension of the Upper Chapel in 1848 and so the burials beneath the vestry relate to the earliest phase of inhumations within the chapel grounds before the vestry was built. The 1900 plan for the chapel authorities shows the series of graves beneath the vestry already depicted in 1846, with an additional plot marked at the southeast. The additional plot contained a grave dating from 1747 and so may have been inadvertently missed at the time of the

1846 plan. The 1900 plan by Gibbs and Flockton, surveyors, marks the location of 163 separate, numbered, grave plots throughout the chapel grounds. It is unlikely that these numbers correspond with those in the burial registers, as the earliest graves were those beneath the vestry yet these were numbered 155-163 on the 1900 plan. Other areas shown to contain burials are the chapel grounds to the west of the vestry (Nos. 1-44), the passage between the chapel and the rear of properties on Norfolk Row (Nos. 45-49), and the chapel grounds along the Norfolk Street frontage.

Excavation of contemporary burial grounds elsewhere in Sheffield City Centre, such as that at Sheffield Cathedral (O'Neill, Baker and Swales, 2007) and the Methodist Chapel at Carver Street (McIntyre and Willmott 2003), has demonstrated that lack of space during this period regularly led to re-use of graves, with multiple 'stacked' burials within the same grave cut. Many of the graves located within the precincts of the Upper Chapel are likely to have been family plots and are likely to be the locations of actual inhumations rather than simply memorial stones. Although the gravestones at the Upper Chapel have been laid prone, there is no evidence to suggest that burials have been removed and re-interred at another location. It is considered likely, therefore, that most or all of the burials remain *in situ*. Indeed, the recorded locations of burials on the 1900 plan correspond almost exactly with the current positions of grave slabs. The recorded date span of burials is 1723 to 1854. Given that the earliest burial plan is dated 1846 it was considered possible that unrecorded 18th-century burials were present within the chapel yard. However, later burials are unlikely due to the provisions of the 1855 Burial Grounds Act, which prevented further interment within inner city cemeteries.

2 AIMS AND METHODOLOGY

2.1 Project rationale and research context

The archaeological programme was designed to mitigate the possible impact of the proposed groundworks within the yard of the Upper Chapel, upon human remains and burial-related archaeology, and upon any other archaeological structures and deposits.

The proposed groundworks comprised the following elements:

1 Construction of an electrical substation;

2 Excavation of a service trench to the substation;

3 Lowering of ground levels between the Upper Chapel and Pepper Alley;

4 Re-paving of the yard surface, with selected existing grave slabs retained after lifting

The level of archaeological intervention during different stages of the development was determined primarily by an assessment of the likelihood of groundworks encountering *in situ* human burials. In areas of low risk an archaeological watching brief was maintained on the groundworks. In areas of higher risk, archaeological excavation was required to evaluate the nature of the buried archaeology and to mitigate the impact of the proposed groundworks.

The proposed substation building was located in the chapel yard to the northwest of the vestry, in the vicinity of grave plots 1-44 on the 1900 plan. It appeared that the proposed works were unlikely to impact upon the majority of the marked burials,

although a single burial (number 17 on the 1900 plan/number 12 on the ARCUS survey) lay within the building footprint. It was also considered possible that unrecorded burials might be impacted by the proposed foundations.

The service trench to the substation was routed largely along the wall between Pepper Alley and the Upper Chapel yard, and was therefore considered unlikely to impact upon human remains as the wall marked the original boundary of the burial ground. However, the approach to the substation ran across the yard at a depth of 0.90m. Although no marked burials were present in this area it was considered possible that unrecorded burials might be disturbed.

It was also proposed to lower ground levels by up to 0.30m along the northern side of the chapel extending to the boundary with Pepper Alley. This area impacted upon the location of five recorded graves (numbers 45-49); although it was considered unlikely that the shallow groundworks would disturb burials. A number of grave cuts were identified during this stage of works, but no burials were present within 0.30m of the surface.

However, the eastern end of the service trench to the substation was re-routed away from the line of the wall to run across the north-east corner of this location, before turning to run through the chapel grounds towards Norfolk Row. This new route appeared likely to impact upon graves identified during the initial ground level reduction.

During the lifting and re-laying of grave slabs within the yard to the west of the chapel, it was considered possible that unrecorded graves might be encountered below the existing yard surface or burial vaults exposed below existing grave slabs. During the re-paving of the yard surface, it was proposed to lower ground levels by to 0.30m over the yard, but it was considered unlikely that the shallow groundworks would disturb burials. Excavation of a new drainage channel was also required in the southeast area of the yard, which extended 0.30m below the final ground level; however, this channel had been purposively positioned to run to the east of gravestones 28, 29, 30 and 31 and excavation was considered unlikely to disturb burials.

2.2 Methodology

Four stages of archaeological investigation were carried out:

1 **Gravestone survey:** A photographic record was made of the grave slabs within the surface of the chapel yard. Visible inscriptions were recorded and the positions of slabs noted prior to lifting.

2 **Archaeological evaluation:** The footprint of the proposed substation and the associated service trench was excavated to establish the presence or absence of human burials within the depth of the proposed foundations and underpinning works, and to assess the general character, preservation and potential of archaeological deposits.

3 **Archaeological mitigation:** Further work was carried out to record and remove human burials within the area impacted by the proposed foundations and underpinning works, and along the re-routed section of service trench.

4 **Archaeological watching brief:** An archaeological watching brief was maintained throughout works to excavate the service trench along the course of the wall foundations at the northern edge of the chapel yard, and to lower

ground levels between the chapel and Pepper Alley. A subsequent watching brief was maintained throughout works to lift the grave slabs in the yard to the west of the chapel, and to lower ground levels and excavate the new drainage channel.

Archaeological fieldwork and recording was carried out in accordance with the ARCUS project design and method statement (ARCUS 2006), with guidelines issued by the Institute of Field Archaeologists (IFA 1999) and with current industry best practice. Excavation of human remains was carried out under the provisions of the Burial Act 1857, and the Disused Burial Grounds Act (Amendment) 1981, and the requisite licences were obtained from the Department of Constitutional Affairs. The treatment of human remains was conducted in accordance with the recent guidance document issued by the Church of England and English Heritage (2005) and guidance for methodologies of assessment and reporting outlined by English Heritage (2004).

2.3 Project aims

The aims of the archaeological works were as follows:

- To produce a full record of the locations of grave slabs prior to, and after, relaying.
- To produce a photographic record of each slab *in situ* with a written record of any legible inscription.
- To ensure adequate recording should burial vaults have been exposed during the re-laying operation, and to ensure that no damage was caused to such structures.
- To determine whether graves were present wholly or partially within the footprint of the substation building, the associated service trench, and within the area of ground level reduction.
- If graves were present, to determine whether human burials were present within the proposed depth of groundworks.
- To determine the character, preservation and potential of any other archaeological structures or deposits within the footprint of the substation building and the associated service trench, and to place any such material within its local, regional and national context.
- To remove all burials impacted by the proposed substation development, service trench, or lowering of ground levels.
- To analyse the burials and associated coffin fittings with a view to determining the status of the people buried in the north-west corner of the graveyard.
- To add to the body of data already assembled from city centre burial grounds in Sheffield, in order to assess the impact of the industrialisation and expansion of the city on the health of its people as shown through their skeletal remains.

2.4 Fieldwork programme

The project was managed for ARCUS by James Symonds (Director) and Steve Baker (Project Archaeologist). Fieldwork was carried out by Duncan Alexander, Katherine Baker, Steve Baker, Alex Rose-Deacon, Tom Sparrow, Ashley Tuck and Michael Wallace during February, March and April 2006, with subsequent watching brief visits

made during June and September 2006. Watching brief visits were made by James Thomson and Mike Hartwell to monitor the re-laying of the grave slabs during February and March 2008.

3 RESULTS

3.1 Gravestone survey and watching brief

3.1.1 Gravestone survey

Gravestones to the rear (west) and northern side of the chapel were recorded. The landscaped area to the front of the chapel was not impacted by the proposed works and was therefore not included within the survey.

A survey of the existing grave slabs within the surface of the Upper Chapel yard had already been compiled by the project architects, and this was used as a base for a 1:200 plan of gravestone locations (**Illustration 2**). Two grave slabs were not marked on the existing survey, and two slabs marked on the survey proved not to be gravestones. These variations were recorded on the 1:200 plan, along with two gravestones propped vertically against the chapel wall.

Each gravestone was cleaned, and a digital photograph taken incorporating a photographic scale. 39 slabs were recorded in total; a single slab previously covered with a layer of concrete was exposed during the subsequent watching brief, and this is included as Gravestone 40. Within the rear yard to the west of the vestry 35 slabs had been laid flat within the yard surface, one slab was laid horizontally but slightly raised above the yard surface, and one slab was propped vertically against the wall of the chapel. Within the narrow passage to the north of the chapel, one slab was located within the yard surface, and a second slab was propped vertically against the wall of the chapel. The slab uncovered during the watching brief was also located within this narrow passage. All the flat stones were orientated east to west, with the top of the stone laid to the west.

Where inscriptions were visible and legible, these were recorded. Of the 40 grave slabs, 17 carried an inscription legible in whole or in part. 20 slabs bore traces of an inscription that was no longer legible due to wear on the upper surfaces of the slabs. Three slabs showed no trace of an inscription, although two of these had a decorative border. In general, inscriptions were located towards the tops of the grave slabs, with a blank section near the bottom. This suggests that most of the stones were originally set upright in the ground.

The 17 legible inscriptions listed 42 named burials. Given the evidence from other city centre burial grounds in Sheffield, it is almost certain that this reflects multiple occupancy of graves. Most gravestones listed 1-4 individuals, although as many as seven individuals were recorded on one slab (**Table 1**). Partially illegible inscriptions were noted on five slabs, suggesting that more individuals may have been listed in the illegible sections. Multiple occupancy in all cases was in the context of a family plot.

Number of individuals listed on stone	Number of fully legible inscriptions	Number of partially legible inscriptions
1	3	3
2	4	1
3	1	1
4	2	-
5	1	-
7	1	-

Table 1 – Numbers of individuals listed in legible inscriptions

34 dates of death were also recorded, ranging from 1717 to 1858, with at least one date in each decade. The majority (21 dates) fell in the range 1780-1840, but the highest number of deaths in any decade fell within the 1720s with six recorded deaths.

Full details of the stones and inscriptions are included as **Appendix 2**.

3.1.2 Watching brief during gravestone re-laying

A dilapidation survey of the existing grave slabs within the surface of the Upper Chapel yard compiled by the project architects suggested that many of the gravestones were too dilapidated to be re-laid in order to create a level yard surface. Consequently, after consultation between the client and the South Yorkshire Archaeology Service, a decision was made to only relay a selected number of the gravestones, whilst the rest of the yard was re-laid with new stone paving. Gravestone 5 was the only gravestone unaffected by the work as it was not lifted and remained in its original location. The gravestones (Gravestones 1, 2, 5, 10, 11, 12, 16, 17, 18, 24, 30, 31, 34, 35) were not re-laid in their original locations but repositioned at the western end of the yard (**Illustration 3**). A number of the remaining gravestones (Gravestones 8, 15, 20, 27, 28, 29, 36, as well as another slab not identified as a gravestone during the survey that was marked as number 6 on the 1900 plan) were stored by the chapel authorities, but the rest were destroyed.

During the lifting of the existing grave slabs, the gravestones were observed to sit on top of a layer of cinder material (coal, coke and slag fragments), which probably represented the latest 19th-century levelling of the yard surface. Gravestone 37 sat on top of a stone plinth, which raised it above the surface of the yard, and the removal of the gravestone revealed the presence of handmade bricks bonded with lime mortar within the boundary of the plinth. The removal of the bricks and the stone plinth revealed the existence of another stone slab, directly underneath the bricks, which was left in position. Ground levels across the yard were lowered by up to 0.30m, but no human remains were disturbed and no other graves were encountered in addition to those that had been marked by the gravestones above. A second stone slab was observed to lie underneath the cinder material within the area of Gravestone 13 and again this lower slab was left in position. A square manhole lined with handmade bricks bonded with dark grey ash mortar and filled by a drain was revealed in the area between gravestones 28 and 36. A new drainage channel was excavated to a depth of 0.30m below the final lowered ground level to the east of gravestones 28, 29, 30 and 31, but no graves or human remains were disturbed during excavation.

3.2 The chapel yard site: archaeological phasing

The evaluation trench was located over the footprint of the proposed substation building, and a three metre wide projection centred on the proposed route of the service trench across the chapel yard (**Illustration 4**). The trench measured approximately 6.50m north to south by 4.00m east to west. The service trench extension projected approximately 4.50m east from the northeast corner of the proposed substation.

The brick lean-to building on the substation site had been demolished and cleared prior to commencement of fieldwork. This building proved to have been built without foundations onto a sandstone slab surface which was contiguous with the main yard surface. In the vicinity of the proposed substation this surface was at approximately 78.90m AOD. The sandstone slabs were removed by hand. One grave slab was also removed, corresponding to number 17 on the 1900 burial plan and number 12 in the gravestone survey, and retained for later repositioning. A mechanical excavator was then used to remove the underlying material, until the surface of the natural clay was reached. Finds of 13th- to 19th-century pottery, mid-17th- to late 19th-century clay tobacco pipe, glass, animal bone, shell and crucible encountered during machining were collected as unstratified (U/S) and will have been derived from the made ground graveyard deposit (112) and the buried soil (100); the boundary between these deposits was indistinguishable during machining. Archaeological features were visible cut into the surface of the natural clay and these were hand-excavated (**Illustration 5**). A single grave cut [108] was identified and burials SK[1] and SK[2] were recovered.

Subsequent excavation of the service trench along the northern edge of the site was carried out under archaeological watching brief, as was the minor reduction in ground level along the northern side of the Upper Chapel. During lifting of the slabs along the northern side of the chapel, a single grave slab was exposed that had previously been obscured by a layer of concrete and was included within the gravestone survey as Gravestone 40. Two grave slabs were removed during the ground reduction, corresponding to numbers 39 and 40 in the gravestone survey, and retained for later repositioning. Three graves were identified during the ground level reduction, and were surveyed in by EDM (**Illustration 6**). The fills were hand excavated to the proposed reduction depth of 0.30m, but no burials were present within this depth. Re-routing of the service trench at the eastern end of the site appeared likely to impact upon one of the graves identified during ground level reduction, and this area was targeted for hand excavation and two burials were encountered within the impact depth of 0.90m.

A phased discussion of the archaeology of the chapel yard site follows, incorporating information from all stages of the archaeological works. During excavations numerical sequences of context numbers were assigned to grave cuts, grave fills, skeletons, coffins, and walls or other structures. An inventory of the contexts and skeletons is presented in **Appendix 1**. The dates assigned to pottery and clay pipe are derived from the relevant specialist reports in **Section 4** of this report. The significance of the contextual record recovered lies in its evidence of stratigraphy, grave location, method of burial, skeletal position, and the location of coffin furnishings and grave goods.

3.2.1 Natural sandstone clay

The surface of the natural sandstone clay (103) was encountered at approximately 78.40m AOD beneath the substation footprint, dipping to approximately 78.30m AOD at the eastern end of the service trench extension. This deposit consisted of clean brownish yellow clay, with concentrations of water-worn pebbles in places, and patches of greyish sandy material, and appeared to represent typical Coal Measures Sandstone geology. The rapid transition to this clean material suggested that truncation of the original sequence had taken place, perhaps during the laying out of the graveyard. In comparison, the natural sandstone surface on the adjacent Carmel House site had been encountered at 78.00m AOD, representing a slightly higher degree of truncation during the late 19th-construction of Carmel House (Baker 2006). A similar level of truncation at approximately 78.30m was discovered within Pepper Alley, which was thought to have occurred in conjunction with the mid 19th-century redevelopment of Norfolk Row (Bell 2005).

3.2.2 Medieval buried soil

Along the northern edge of the substation trench a fragment of buried soil (100) was preserved beneath later wall footings [102] associated with the boundary wall between the graveyard and the former course of Pepper Alley to the north (**Illustration 7**). This buried soil consisted of pale brown silt clay lying directly above natural (103) up to 0.30m thick at the northern edge of the trench, and thinning out to the south for 1.20m at which point it no longer survived. A significant quantity of medieval pottery was recovered from the buried soil, with no later finds. This suggests that (100) represents a pocket of medieval buried soil preserved beneath the later footings. (100) was observed to grade in colour downwards into the natural clay (103), suggesting that it formed the very bottom of a soil profile truncated when the graveyard was laid out.

The pottery from the buried soil dated between the late 12th or early 13th and 15th centuries, although some of the pottery could date from the mid-11th to mid-13th century, and included waster sherds and probable fragments of stone kiln material (see **Section 4.3** below). No *in situ* structural evidence of this period survived, and the buried soil (100) was only present where preserved beneath the later boundary wall. It seems likely however that pottery production was taking place in the immediate vicinity of the site during the medieval period.

The western end of the buried soil (100) contained frequent inclusions of sandstone rubble. However, the later wall footings [102] did not sit directly above the sandstone rubble, suggesting that this rubble was not part of the wall footings [102], but may have been the remnant of an earlier wall footing along the boundary. The presence of the wall footings [102] above the buried soil (100) clearly shows that the boundary wall they were part of was constructed after the 15th century. The lack of any pottery later than 15th-century date within the buried soil (100) suggests the wall footings [102] were probably constructed not long after this date. They were certainly present before the first use of the site as a graveyard during the 18th century because the wall footings [102] preserved the remnants of the buried soil (100) below during the levelling of the site during this time.

3.2.3 The Unitarian burial ground: eighteenth and nineteenth centuries

Levelling of the site appears to have taken place during laying-out of the chapel graveyard in about 1700. As noted above, the natural sandstone deposit appears to

have been truncated, and a made ground deposit (112)/(200) was introduced above, typically 0.60m deep and composed of a red-brown silt clay with abundant brick and stone fragments. This deposit formed the ground surface of the Unitarian chapel graveyard, and was observed to truncate the earlier remnant of buried soil (100) along the northern edge of the site. The made ground deposit (200) contained pottery of 18th- and 19th-century date, and mid-17th- to late 19th-century clay tobacco pipe.

Towards the southern end of the substation trench, a single grave cut [108], aligned east to west, was identified, cut into the natural sandstone clay (103). Further grave cuts [201], [203] and [213], all aligned east to west, were encountered during reduction of ground levels between the north edge of the chapel and the boundary wall with Pepper Alley, cut into the made ground deposit (200) and the natural sandstone clay below. Both [201] and [203] were hand excavated to a depth of 0.30m, which was the maximum depth of the proposed ground level reduction in this area. No burials were encountered above this level and no further excavation was considered necessary. It was considered likely that the re-routed service trench would impact on the northern part of grave [213], so this area was subsequently re-excavated by hand to a depth of 0.90m.

The uppermost surface of the yard was a layer (212) of cinder material (coal, coke and slag fragments) varying in thickness across the site from 0.10m to 0.30m thick. This material covered all of the grave cuts and fills discussed above and may therefore represent the latest 19th-century levelling of the yard surface upon which the gravestones were laid.

Grave [108]/(109) – SK[1] Coffin [111], SK[2] Coffin[114]

Grave cut [108] was roughly oval-shaped in plan, with tapered ends at the east and west so that the middle portion of the cut was the widest, roughly reflecting the shape of a coffin. Grave cut [108] narrowed with depth, being 1.40m long and 0.65m wide at the surface of the natural, with the sides gradually sloping inwards towards the base at 0.30m deep. The uppermost visible grave fill was (109), an orange-brown silty clay with frequent angular sandstone inclusions and evidence of significant waterlogging. The grave fill (109) contained 17th- to 19th-century pottery, glass, and a fragment of leather shoe.

The position of grave cut [108] was consistent with the position of the single grave slab removed on the southern edge of the substation footprint, although [108] was observed to be slightly further north than the position of the slab. This suggests that the slab above had been repositioned slightly to the south, perhaps as a consequence of construction of the lean-to building above. This grave slab was recorded as number 12 in the gravestone survey, but the inscription was illegible.

The length of grave cut [108] suggested that a child's burial was present. On initial cleaning a burial was encountered just below the level of machine excavation at the south-west corner of the grave cut. SK[1] was an infant buried within coffin [111] (**Plate 1**). The skeleton was 50-74% complete but the bone was in poor condition. The fragmentary remains of a wooden coffin base [111], 0.64m long by 0.19m wide, were discovered beneath SK[1]. Small iron coffin nails and iron upholstery studs associated with coffin [111] were uncovered within grave fill (109). SK[1] within coffin [111] was clearly the most recent insertion within grave [108], although no clear cut could be ascertained that was distinct within grave fill (109).

Grave cut [108] was clearly originally excavated for the burial of SK[2], which lay below

SK[1]. SK[2] was a young child buried within coffin [114] (**Plate 2**). The skeleton was 75-100% complete and the bone was in excellent condition, although it exhibited dark organic staining presumably as a result of the waterlogged ground conditions. SK[2] was buried within a waterlogged single break flat-lidded coffin [114] that measured up to 1.20m long, 0.34m wide and 0.24m deep. The sides and lid of coffin [114] were constructed from oak, which tree-ring analysis suggests were all derived from a single tree and were possibly imported, but the base was elm (see **Section 4.11** and **Section 4.1** below).

Coffin [114] was completely intact apart from a split in the lid that had resulted in the northern side of the coffin lid collapsing in slightly. The intact nature of the coffin meant that the skeleton was completely waterlogged and only a small amount of sediment was present at the bottom of the coffin. The presence of the water had resulted in considerable disturbance to the skeleton, the skull was at the western end of the coffin but all the other bones had been disordered from their original burial positions. However, the intact nature of the coffin did mean that the bone had been excellently preserved. The sediment in the bottom of the coffin was collected and later sieved, thus almost the entire skeleton was preserved and retrieved. The collection of the sediment in this manner also meant that there was excellent retrieval of grave goods associated with SK[2], which consisted of fragments of fabric possibly from a shroud, brass shroud pins and a tiny brass needle (see **Section 4.1** and **Section 4.2** below). Large numbers of human hairs and fibres, presumably derived from fabric belonging to clothing or a shroud, were also present within the sediment (see **Section 4.10** below). A single sherd of 18th-century pottery was also contained within the sediment.

At the very base of grave cut [108] was a deposit of wood chippings [115] directly below coffin [114]. The wood chippings [115] contained a single sherd of 18th- to 19th-century pottery. Environmental analysis of deposit [115] showed that the wood chips were the only waterlogged plant remains present within the deposit (see **Section 4.10** below). The cleanness of the deposit suggests that the wood chips were a manufactured deposit deliberately placed beneath the coffin during the burial rite (see **Section 4.1** below). The natural sandstone clay (103) forming the base of grave cut [108] had been stained a dark blue grey colour (**Plate 3**), presumably similar to the organic staining that had affected SK[2], probably as a result of the waterlogged ground conditions leaching organic matter from the wood and coffin above into the clay.

Grave [201]/(202)

Grave cut [201] was a single grave, oval in plan and measuring 1.00m long by 0.52m wide. The grave fill (202) consisted of redeposited natural yellow clay mixed with black cinder and brown clay, the latter was redeposited made ground. The grave fill (202) contained a single sherd of 18th- to 19th-century pottery, and a single stem of late 18th- to late 19th-century clay tobacco pipe. Grave cut [201] was hand excavated to the proposed formation depth of 0.30m, and no burials were encountered above this level. The size of [201] suggested a child's grave, and it may have represented the latest cut into a larger multi-occupancy grave. However, the location of grave cut [201] corresponded to gravestone 39 in the gravestone survey, which only appeared to bear one inscription recording the death of a single individual, although the inscription was only partially legible.

Grave [203]/(204)

Grave cut [203] was a double grave cut, roughly H-shaped in plan, with two parallel single oval graves linked at the centre (**Plate 4**). The grave was 2.10m long and 1.37m wide in total. The grave fill (204) consisted of redeposited natural yellow clay mixed with black cinder and brown clay, the latter was redeposited made ground. The grave fill (204) contained late 17th- to early 19th-century pottery along with earlier residual material, including a sherd of Coal Measures Purple ware (15th- to 16th-century) and a sherd of 13th- to 15th-century reduced sandy ware perhaps contemporary with the medieval material from (100), as well as mid-17th- to late 19th–century clay tobacco pipe and glass. Grave cut [203] was hand excavated to the proposed formation depth of 0.30m, and no burials were encountered above this level.

The location of [203] corresponded to gravestone 40 in the gravestone survey and a rectangular area of mortar [205], measuring 0.80m long, 0.60m wide and 0.03m thick, over the western end of the grave was the remnants of a foundation pad for this gravestone. The inscription on gravestone 40 recorded the death of five individuals. Four of these individuals were a husband, wife and two sons who all had the same surname. The other individual had a different surname and was just described as a widow, but presumably she belonged to another line of the same family. Presuming that gravestone 40 recorded the deaths of the individuals buried within grave cut [203], the multiple occupancy of a family grave would account for the double nature of grave cut [203].

Graves [213]/(211), [208]/(210), [207]/(209) – SK[3] Coffin [215], SK[4] Coffin [214]

At the eastern end of the site, a large grave cut [213] was encountered cut through the made ground deposit (200), representing a large multi-occupancy grave 2.10m long and 2.00m wide. Grave cut [213] was backfilled with redeposited natural material (211) consisting of yellow orange clay, which contained 18th- to early 19th-century pottery, as well as a single stem of mid-17th- to late 18th-century clay tobacco pipe. The surface of (211) had been cut by two further roughly oval grave cuts [207] and [208], presumably later burials excavated into the earlier backfill (211) and representing the latest burials within large grave cut [213] (**Plate 5**). Grave cuts [207] and [208] were initially hand excavated to the proposed formation depth of 0.30m, and no burials were encountered above this level. Grave cut [207] measured 1.50m long and 0.50m wide. The grave fill (209) consisted of dark grey sandy clay containing 17th- to 19th-century pottery, as well as two stems of 19th-century clay tobacco pipe and glass. Grave cut [208] measured 1.40m long and 0.90m wide. The grave fill (210) consisted of dark grey sandy clay containing 18th- to early 19th-century pottery, as well as a single stem of mid-17th- to late 18th-century clay tobacco pipe and glass.

A rough unmortared sandstone slab structure [206] was laid aligned north to south across the grave pair [207] and [208], measuring 1.40m long and 1.00m wide. The slab structure [206] consisted of two main slabs 0.15m thick, the largest measuring 0.70m by 0.60m, which had each been laid over one of the grave cuts [207] and [208]. These larger slabs were supported by other smaller slabs and fragments both around and below them. Slab structure [206] may have originally supported a grave slab spanning grave cuts [207] and [208]. It seems likely that one or both of the slabs mounted on the chapel wall nearby were originally laid in this location, the gravestone mounted at the base of the chapel wall was number 38 in the gravestone survey, but the gravestone situated higher up the chapel wall was not included in the gravestone survey as it would not have been impacted on by the slab relaying. These gravestones both recorded the deaths of individuals belonging to the same family, gravestone 39

belonged to the Sylvester family and the higher gravestone belonged to several members of the Wadsworth family who were related by marriage. Presuming that these slabs belonged to grave cut [113], the number of individuals recorded as having been buried from these two families would account for the unusually large size of this grave cut in the context of a family burial plot.

The 0.90m maximum depth of the re-routed service trench appeared certain to impact on skeletons contained within the northern grave cut [207] and could also possibly impact upon any skeletons contained within the northern part of grave cut [213], outside or below the limits of grave cut [207]. The entirety of grave cut [207] was excavated and the dimensions were discovered to be larger than originally thought, measuring 2.15m long, 0.60m wide and 0.60m deep. Grave cut [207] had clearly only been excavated for the burial of SK[3]. SK[3] was an adult of undeterminable age or sex buried within coffin [215] (**Plate 6**). The skeleton was only 0-24% complete and the bone was almost completely destroyed, only fragments of the long bones survived. The fragmentary remains of a wooden coffin base [215] were discovered beneath SK[3]. A fragment of iron band associated with coffin [215] was uncovered within grave fill (209). The outline of coffin [215] was visible as an organic stain measuring 1.92m long by 0.64m wide in the surface of grave fill (216) below (**Plate 7**). The right arm of SK[3] was only discovered during excavation of grave fill (216) and was found lying at a high level within coffin [214], which belonged to SK[4] and lay slightly to the north below coffin [215], presumably as a result of the degradation and collapse of the two coffins over time. The close relationship of coffin [215] and coffin [214] clearly demonstrated that respect had been shown to SK[4] within coffin [214] during the excavation of grave cut [207].

Grave fill (216) was clearly distinct from grave fill (209) above, consisting of yellow brown sandy clay containing 17th- to 19th-century pottery. However, the grave cut that had been excavated for SK[4] within coffin [214] was indistinct, presumably because the insertion of grave cut [207] above had removed any clear evidence, and only the difference in grave fills remained to distinguish the two separate graves. SK[4] was an adult of undeterminable age or sex buried within coffin [214] (**Plate 8)**. The skeleton was only 0-24% complete and the bone was in poor condition, only fragments of the long bones survived. Coffin [214] within which SK[4] had been buried was better preserved than coffin [215] above. The base and lower portion of the sides of coffin [214] were only fragmentary but the top of the sides were well preserved, clearly showing the outline of the coffin measuring 1.90m long, 0.60m wide and 0.25m deep, and the lid was partially preserved although it had collapsed inwards. However, the wood of coffin [214] fragmented upon lifting and was deemed unsuitable for any further analysis so no samples were retained. A double row of copper alloy upholstery studs were present around the entire outline of coffin [214], a sample of which were retained. The outer row of these upholstery studs were fixed onto the top of the sides of the coffin, the inner row was fixed around the edge of the upper surface of the lid. The sandy clay beneath coffin [214] had been stained a dark blue grey colour presumably as a result of the waterlogged ground conditions leaching organic matter from the coffin into the clay.

During excavation the eastern and western extents of grave cut [213] were clearly defined cut into the natural sandstone clay, however, neither the northern or southern extents nor the base were defined. Along the southern limit of the excavated area a clear grave cut, grave fill and partial outline of a preserved coffin could be seen within the section and at the base overlain by grave fill (211) (**Plate 9**). The close relationship between coffin [214] and the unexcavated coffin below again

demonstrated that respect had been shown to the lowest coffin during the excavation of the grave cut for SK[4] within coffin [214]. Along the northern limit of the excavated area a less clearly apparent grave cut and grave fill could be seen within the section and at the base again overlain by grave fill (211). Although the line of the service trench went through the northern portion of grave fill (211), observations during the watching brief on the excavation of the service trench confirmed that the depth of the service trench was not low enough to disturb any burials present within this part of grave cut [213].

Grave [301]/(302)

During the watching brief on the excavation of the 1.00m wide and 1.00m deep service trench, a single feature [301], possibly representing a grave cut, was identified within the natural sandstone clay (300) at the base of the service trench. This was a roughly oval-shaped cut aligned east to west, irregular at the east end and measuring 1.20m by 0.57m. The fill (302) consisted of grey brown silty clay containing a single sherd of 18th- to 19th-century pottery. As this feature was at the lowest limit of the service trench it was not considered necessary to carry out any additional excavation. This feature possibly represented a grave cut as it was on the correct east to west alignment. However, it is perhaps unlikely to be a grave as the service trench was outside the known limit of the burial ground as it ran along the northern boundary of the chapel yard and within Pepper Alley to the north. The evidence from the substation trench would indicate that the boundary wall of Pepper Alley existed before the graveyard was created.

3.2.4 19th-century drainage channel

A drainage channel [104], 0.50m wide, was cut into the surface of sandstone natural (103) on the substation site, and ran east to west across the evaluation trench. Within channel [104] was a drain structure [105], 0.45m wide, with brick sides two courses high and a sandstone slab cap (**Plate 10**). Infill layers of black silt (106) and red brown silty sand (107) below had accumulated within the drain and both these deposits contained 18th- to 19th-century pottery, as well as late 18th- to late 19th-century clay tobacco pipe and glass, (106) also contained a residual sherd of 17th-century pottery. The drainage channel [104] widened to 0.95m at the western end, with the drain structure also widening to 0.70m where the drain had been backfilled after it had gone out of use with a layer of black silt (110) containing frequent inclusions of brick fragments and a single stem of late 18th- to late 19th-century clay tobacco pipe. The construction cut [104] was backfilled with a packing of black clay (113) between the edge of the cut and the drain structure, measuring up to 0.05m wide at the western end, but only present as a thin layer further east.

4 ARTEFACTS

4.1 Analysis of the human bone

by Diana Swales

4.1.1 Introduction

During archaeological work undertaken within the yard to the rear of the Upper Chapel four east-west aligned graves were identified. The graves were excavated where they were at risk of being disturbed and four skeletons, numbered 1 to 4, were

recovered. Documentary resources and a gravestone survey undertaken by ARCUS provide a date of 1723-1854, making these burials contemporary with those recovered from the Methodist Chapel at Carver Street (McIntyre and Willmott 2003) and Sheffield Cathedral (O'Neill, Baker and Swales 2007).

4.1.2 Methodology

The skeletal remains of SK[1], SK[2], SK[3], and SK[4] were examined to determine preservation, completeness, age and sex. Visual recognition of pathologies as well as potential for further analysis were also assessed. In accordance with osteological standard practice, 'preservation' is taken to mean the condition of the bone i.e. how well it has survived the decaying process and external environmental factors, such as soil type and bioturbation. To quantify the condition of each skeleton, the Institute of Field Archaeologists criteria for recording cortical bone erosion and abrasion in *Guidelines to the Standards for Recording Human Remains: IFA Paper No. 7* (Brickley and McKinley 2004:17) was utilised.

The subadult skeletons were aged by dental development (Moorees *et al* 1963; Ubelaker 1989), epiphyseal fusion (Bass 1987; Schwarz 1995) and diaphyseal long bone length (Scheuer *et al* 1980; Hoppa 1992). No attempt was made to sex the subadults, in accordance with accepted osteological practice.

Unfortunately, the fragmentary nature and poor condition of the adult skeletal remains meant no sex or age diagnostic characteristics had survived, therefore, no further information, save for an educated estimation that they were adults, could be ascertained.

4.1.3 Condition of the bone and nature of the assemblage

Preservation

SK[1] was 50-74% complete and was composed of almost all cranial vault bones, right scapula, long bone shafts of upper and lower limbs, ribs and a few vertebral bodies and arches. The bone was in poor condition and exhibited Grade 4 cortical erosion.

SK[2] was 75-100% complete and in excellent condition. Almost all skeletal elements, including the hyoid bone, were recovered. No cortical erosion (Grade 0) was observed. The bone exhibited dark organic staining.

SK[3] was only 0-24% complete. All that survived was the shaft of the left humerus and very corroded fragments of humerus, femur and tibia. All the bone was destroyed, exhibiting Grade 5 cortical erosion.

SK[4] was also only 0-24% complete with only femoral and tibial shaft fragments surviving. This surviving bone was in poor condition and exhibited Grade 4 cortical erosion.

Age and sex

SK[1] was an infant, aged approximately 6 months with an age range of 6-9 months.

SK[2] was a young child aged 3-4 years. These ages were ascertained via epiphyseal union and fusion of primary ossification centres, long bone lengths and rates of dental eruption and development. Following standard osteological practice, no sex classification was assigned to these subadults.

The size of the long bone shafts recovered for SK[3] and SK[4] indicate that both individuals were adults, with SK[4] being the more gracile of the two. However, no

epiphyses are surviving to support this interpretation. No sex diagnostic characteristics have survived for these two skeletons.

Pathology

A preliminary assessment of the four skeletons failed to identify any palaeopathological lesions. The only observations made were heavy striations on the endocranial surface of the occipital of infant SK[1], and post-mortem pink staining on the interior surfaces of femur and tibia fragments of adult SK[3]. Staining on the cervical margins of the teeth of SK[2] suggested the presence of slight calculus, however, no mineralised plaque deposits survived to confirm this.

4.1.4 Associated finds

- SK[1] – Grave fill (109)/Coffin [111]. 4 small Fe coffin nails and 2 Fe upholstery studs.
- SK[2] – Grave fill (109)/Coffin [114]. Unidentifiable cloth fragments, possibly shroud. 1 shroud pin missing head. Tiny brass needle with ball head. Additional disarticulated 'wrapped' shroud-pin head. 7 wrapped-headed brass shroud pins.
- SK[3] – Grave fill (209)/Coffin [115]. Fragment of Fe band 35mm long by 1-2mm thick.
- SK[4] – Grave fill(216)/Coffin [214] 12 Cu alloy upholstery studs.

The presence of coffin nails, upholstery studs, shroud fragments, shroud pins, and coffin wood, corresponds with contemporary cemeteries in Sheffield such as the Methodist Chapel at Carver Street (McIntyre and Willmott 2003) and Sheffield Cathedral (O'Neill, Baker and Swales 2005), whereby individuals were interred in upholstered coffins, wrapped in shrouds or funerary dress fastened by wrapped-headed shroud pins.

X-ray fluorescence (XRF) analysis of the shroud pins recovered from the Upper Chapel demonstrates they are manufactured from brass, more specifically of the particular type deemed most suitable for the manufacture of thin wire and pins known colloquially as 'yellow brass' (see **Section 4.2** below). Within the common literature associated with Victorian burial (Cox 1998, Fritz 1995, Litten 1991, Richmond 1999) there is either no mention of the shroud pins or their material or they are described as brass (Reeve and Adams 1993) or copper alloy (Brickley and Buteaux 2006). However, the shroud pins recovered from the Quaker cemeteries at Kings Lynn (Mahoney 2005) and Kingston-upon-Thames, London (Bashford and Sibun 2007:120) are specifically described as 'copper'. The presence of 'brass' shroud pins appears to be restricted to higher status burial assemblages such as Christ Church, Spitalfields, but the dearth of detailed published information prevents definitive interpretation as to whether the use of such 'yellow brass' is an economic, temporal or stylistic decision. All the shroud pins recovered from contemporary intra-mural burial grounds in Sheffield were manufactured from copper alloy. Documentary research and the gravestone survey indicate that the Upper Chapel was active for a slightly longer period (1717-1858) than the other excavated burial grounds, therefore, it is possible that the general use of 'yellow brass' was more common in Sheffield in the early 18th century. Alternatively, there is the slight possibility that some of the copper alloy pins were originally 'yellow brass' but were too heavily eroded and oxidised to determine their original colour, and that the presence of 'yellow brass' pins at the Upper Chapel are a consequence of exceptional levels of preservation.

The exceptional preservation environment afforded by the waterlogged clay is also demonstrated by well-preserved coffins [114] and [214] also recovered during excavation. Coffin [114] contained a young child SK[2], and coffin [214] contained an unidentifiable adult SK[4]. Both were single break flat-lidded coffins, with [114] being in miniature. No nails were recovered from the fill surrounding these two coffins, or within the wood structure themselves, and there were no dovetailing or mortise and tenon joints indicating the use of a pitch or glue to adhere the sides, base and lids together. Both have a separated 'lip' of wood located upon the outer rim of the superior edge of the circumference of the coffin. The lid would sit comfortably within this lip, forming a seal. The excellent preservation of coffin [114] enabled the construction to be identified, and it confirmed that the sides were internally kerfed at the shoulders then bent into shape, as was typical for the standard single break flat-lidded coffin (Litten 1998:90). Wood indentification analysis identified that coffin [114] was constructed from oak sides and lid, which tree-ring analysis suggests were all derived from a single tree and were possibly imported, with an elm base (see **Section 4.11** below). The use of oak indicates wealth amongst the community interred within the yard of the Upper Chapel. Litten (1991:90) identified that elm was traditionally used for constructing coffins, whereas oak was only occasionally used 'for exceptionally important interments' in the 1700's. In many non-conformist burial grounds it has been identified that excessive displays of wealth were regarded as being in opposition to their beliefs and, as a consequence, the display of wealth was not through elaborate coffin furnishings and fittings but through the use of expensive materials in the construction of the basic coffin (Mahoney 2005:35).

During the period of use of the Upper Chapel as a burial ground, both Janaway (1998:23) and Litten (1991:92) document the use of sawdust and/or bran to absorb liquid and odour from the body's decomposition. Sawdust is also observed in coffins excavated at the Quaker burial ground in Bathford (Stock 1998:149), indicating its acceptance in non-conformist burial practices. The deposit of woodchips [115] below coffin [114] within cut [108] may have been employed in a similar fashion to absorb any odours or liquid matter that may exude from within the coffin into the surrounding grave fill. This would keep the interior of the coffin clear for purposes of display, if the coffin were to be left open prior to burial, as was commonly practiced (Houlbrook 1998, Jalland 1996).

4.1.5 Potential for further analysis

The exceptional condition of SK[2] implies that this site, of potentially over 160 burials, could be an extremely valuable primary resource to contribute to the study of the impact of the industrialisation and expansion of the city of Sheffield on the health of its inhabitants.

Analysis of the monuments, burial type, and associated coffin furnishings and fittings present within this graveyard could provide insight into the status of the people buried in the graveyard as a whole and intra-cemetery social and gender segregation. The presence of the 'brass' shroud pins and the use of oak in the construction of coffins suggest this graveyard served a middle-to-high status community. The presence of brick-lined shaft burials, family vaults, elaborate well-made coffins and coffin fittings and skeletal markers of health status and occupation could attest or disprove this.

Therefore, in the event of future development impacting on the site, it is paramount that provision is made for full analysis of excavated remains. There is a dearth of published data regarding post-medieval funerary practices and the life-histories of

people during this period of economic and industrial growth outside of London, with the exception of St,Martin's-in-the-Bull-Ring, Birmingham (Brickley and Buteux 2006).

The human bone assemblage from the Upper Chapel is of small size (4 skeletons, of which three are incomplete or poorly preserved), and does not therefore offer scope for further analysis. No further work is therefore recommended for this assemblage. Under the terms of the Burial Act 1857, the Disused Burial Grounds Act (Amendment) 1981, and the exhumation licences granted to ARCUS by the Department of Constitutional Affairs, the remains were re-interred in August 2007 at the City Road Cemetery, Sheffield.

4.2 Metallurgical analysis of the shroud pins

by Dr Roderick Mackenzie

4.2.1 Introduction

The aim of this analysis has been to identify the metal that the shroud pins associated with SK[2] were made from. The original assessment of the shroud pins (Baker and Baker 2007) suggested that the pins were possibly gold, or gold plated, and it was recommended that the pins were examined and, if required, analysed by an archaeometallurgist.

4.2.2 Methodological approach and analysis

To determine the type of metal that the pins were made from, it was felt that the least destructive method of analysis would be X-ray fluorescence (XRF). In XRF, a beam of X-rays is directed onto the surface of an object, which then emits an X-ray spectrum. The spectrum contains peaks for each element present and this information is used to calculate the relative amount of each element present. XRF is a commonly used method of chemical analysis in archaeology and it can be used as a non-destructive technique (English Heritage 2001).

The main limitation of XRF is that, used non-destructively, it can only analyse the surface layer of an object, which may not reflect its true overall composition. To overcome this limitation it is normal practice to analyse the surface and then remove a small amount of material from the object to allow analysis of the sub-surface.

Surface XRF analysis was performed on one of the pins. The surface of a section of the pin was then ground away to reveal clean sub-surface metal. The results of the XRF analysis are shown in **Table 2** below.

Sample	Element	Result (wt%)
Pin Surface		
	Cu	67%
	Zn	31%
	Pb	1.0%
Pin Sub-surface		
	Cu	65%
	Zn	34%
	Pb	1.3%

Table 2 – XRF chemical analysis of shroud pins recovered from the Upper Chapel

4.2.3 Discussion

The results show that the pin is made from brass and that it is not plated. The difference in composition between the surface and sub-surface is as expected from 'weathered' brass.

It may be worth noting that the particular ratio of elements present is typical of brass used for the manufacture of thin wire and pins. Coincidentally, this particular type of brass was/is colloquially described as 'yellow brass', because of its golden colour. (Overman 1852, 683).

4.2.4 Conclusion

The pin analysed is typical of those recovered and the results are very likely to be representative of all the pins. The fact that the type of brass used for the pins was known for its gold colour may just be a coincidence, rather than deliberate choice, as this particular alloy was the most suitable for drawing into fine wire.

4.3 Analysis of the Medieval and later pottery

by Dr C.G. Cumberpatch

4.3.1 Introduction

The pottery assemblage from the Upper Chapel was examined for analysis having previously been the subject of an assessment report (Baker and Baker 2007). The details of the assemblage are summarised in **Tables 12** to **14** with **Table 15** providing a key to the abbreviations used, all within **Appendix 3** below. The pottery assemblage consisted of 327 sherds of pottery weighing 5441 grams and represented a maximum of 305 vessels. The fragments of kiln structure are listed in **Table 13** and the fragments of ceramic building material in **Table 14**.

4.3.2 The Medieval pottery

The most striking feature of the assemblage was the group of medieval sherds and related objects from contexts (100), (204) and the unstratified contexts. With the exception of the assemblage from Sheffield Castle, this is amongst the largest assemblages of medieval pottery recovered from the centre of Sheffield to date. The importance of the assemblage is considerably enhanced by the fact that it appears that some or all of the sherds are related to pottery production, either on the site or in the immediate vicinity. The evidence for this can be summarised as follows:

- The homogeneity of the assemblage: the majority of sherds appear to be in the same or closely related fabrics, typically a coarse sandy or gritty ware containing abundant quartz and non-crystalline inclusions. The reduced fabrics appear to be overfired versions of the oxidised fabrics and the range of variability within the assemblage appears to be extremely low, in contrast to typical medieval assemblages in which a wide variety of local and regional material occurs within the same contexts and within the same site phases. The character of the pottery is discussed further below and in **Section 4.4** below.
- Overfired sherds: as noted above, the reduced fabrics appear to be overfired versions of the oxidised fabrics and some of them show signs of distortion typical of kiln wasters and misfired vessels. These sherds are noted in **Table 12**.

- Fragments of kiln fittings and furniture: the assemblage includes two fragments of burnt sandstone with a thick encrustation of glaze on the surface and edges (**Plate 11**) with a stacking scar from an inverted jug on one (**Plate 12**). This is consistent with what one would expect from a medieval stone-lined (or partially stone-lined) kiln structure. Other evidence includes a piece of flat fired clay slab with a stacking scar and glaze deposits (**Plate 13**) and a piece of fired clay which may have been part of the superstructure of a kiln (**Plate 14**).

Whether the site excavated was the actual site of a medieval pottery cannot be determined from the pottery assemblage alone (although it possesses many of the expected characteristics of such an assemblage from such a site) and given the nature of the site, it seems unlikely that any of the features recorded in the ground can be unequivocally linked with a pottery. Medieval kilns can be difficult to identify and other features associated with pottery manufacture are rarely distinctive. While the evidence from the Upper Chapel suggests that stone was employed in the construction of the kiln, it may have formed only a small part of the entire structure.

Examples of kilns dating to between the later 11th and later 13th centuries in Doncaster appear to have been largely devoid of significant stone structural elements although fragments of stone and reused pottery were used in the kiln structure and show patterns of glaze similar to those seen on the stone and fired clay fragments from the Upper Chapel site (see, for example Cumberpatch, Chadwick and Atkinson 1998-1999). Surviving traces of kiln structures are often limited to earth-cut features with traces of burning around the flues and fire chamber. Such structures are exceptionally susceptible to damage from later activity and this may account for the lack of evidence in the case of the Upper Chapel. It is also possible that the material recovered had been dumped some distance from the location of manufacture, in which case there would be no structural evidence on the site itself. Certainly the fact that the greater part of the material came from unstratified contexts suggests that the area had been subject to considerable disturbance in the early modern and recent periods. In spite of this the evidence suggests that this is one of the most important assemblages of medieval pottery to have been excavated in Sheffield in recent years in that it represents the first excavated evidence for medieval industry within the medieval core of the town.

Fabric

The fabrics represented fell into three distinct groups, distinguishable by eye and with a X10 hand lense. A series of samples (listed in **Table 16**) were taken from the assemblage and submitted for petrological and chemical analysis. The results are presented in **Section 4.4** below and the implications are discussed further below.

The finest fabric was also amongst the scarcest, being represented by only seven sherds, including sample 1 (V4878, context (100); see **Section 4.4** below). This *Oxidised Sandy ware* (described in **Section 4.4** below as *Glazed Red Earthenware*) contained moderate to abundant fine (up to 0.5 mm) rounded to sub-angular quartz and occasional round red non-crystalline inclusions. These varied in size with exceptional examples up to 2 mm in diameter. Smaller grains were commoner but were not abundant. The name Oxidised Sandy ware has been retained in preference to Glazed Red Earthenware as the latter name is also used to describe post-medieval utilitarian wares in Norfolk and it seems unhelpful to adopt a name already in use elsewhere to describe these sherds. For the sake of clarity the initials GRE have been included in the data tables after the type name (see also **Table 16**).

Much commoner than the Oxidised Sandy ware was the coarser *Oxidised (or Northern) Gritty ware* from which two samples (numbers 4 and 5, V4881 and V4882 respectively, both from an unstratified context) were selected for analysis. The results are presented in **Section 4.4** below. Visually the fabric is a buff coarse sandy or gritty ware, generally without a reduced core and only showing signs of reduction where the thin, friable green glaze has been removed by abrasion leaving irregular pale grey areas on the surfaces of the vessels. The fabric was heavily tempered with coarse sub-rounded to sub-angular quartz grit (up to 1.00 mm) and equally abundant rounded red iron-rich non-crystalline grains which varied considerably in size from less than 0.5 mm to over 2 mm, although the coarser examples were considerably rarer than the fine ones. These larger inclusions were, in some cases, broken and where this was the case they had a vesicular and slightly cindery appearance in cross-section. In contrast, a much smaller number of red inclusions were flat and platey in shape and presumably represented a different, but also iron-rich, material.

A substantial group of sherds have been described in the data table as *Reduced Gritty ware*. Generally speaking these sherds, (including Sample 2; V4879, context (100)) had a harder, denser fabric, generally reduced to a mid-grey colour throughout, although the degree of reduction varied between sherds. In spite of the difference in appearance, it seems likely that the reduced wares are in fact overfired versions of the Oxidised Gritty ware, a suggestion that is supported by the fact that the assemblage includes sherds that show evidence of the type of distortion associated with kiln wasters. This was most evident in the case of the decorated sherd (**Illustration 8**) but could also be seen on other body sherds. At X10 magnification the fabric has a dense appearance consistent with overfiring within which the abundant sub-angular to angular quartz (up to 1.00 mm) and black grit inclusions (up to 1.5 mm) stand out prominently. The black inclusions have a distinctive vesicular, cindery appearance similar to that seen in the local Coal Measures Purple wares and it seems likely that these are the overfired remnants of the red grit seen in the oxidised fabric described above. The similarity to the Coal Measures Purple ware is enhanced by the presence of small grey pimples on some of the sherds which seem to mark the position of the black inclusions close to the surface.

The final group, represented by only two sherds (including Sample 3; V4880) from context (100) had a yellowish buff fabric and contained a similar range of inclusions to those seen in the Oxidised Gritty ware although they are generally smaller and perhaps somewhat less abundant, giving the sherds a slightly finer appearance. This was identified by Dr A.G. Vince as *York Gritty ware* (see **section 4.4** below) and this name has been used in the data tables.

The rim and handle from a jug (context (100), **Illustration 9**) was identified as of *Brackenfield type ware*, specifically Fabric BRK001 (Cumberpatch 2004a). To date Brackenfield wares have not been identified outside north-east Derbyshire and the presence of a sherd in Sheffield indicates that, contrary to the (admittedly sparse) evidence from other sites in the city, the Don Valley was not the only source of medieval pottery drawn on by the inhabitants and there were also contacts to the south. This may have been connected with Chesterfield's position as a significant market town for the wider region although other mechanisms for the movement of pottery must also be considered (Moorhouse 1983a). Taken together with the York Gritty wares from the site, this means that the medieval pottery assemblage from Sheffield as a whole is beginning to resemble typical assemblages from medieval towns in the wider area which generally include a wide variety of regional wares as well as locally manufactured wares.

An additional medieval item, seemingly unrelated to the material described above, was the base of a small jar-like vessel from an unstratified context in a very hard, semi-vitrified fabric containing abundant quartz grit and distinguished in cross section by the regular pattern of elongated parallel voids. The function of this vessel is unknown. It had clearly been heated to a very high temperature, presumably during firing and the fabric is quite unlike the remainder of the medieval pottery assemblage from the site. The base contains a hard packed mass of greyish soil containing fragments of charcoal and coal.

Medieval pottery other than the wares which appeared to be associated with the kiln debris were limited to a single sherd of Coal Measures Purple ware from context (204) but there was no sign of other types which have been recovered in small quantities from other sites in the city centre.

Vessel types

Inevitably, given the small size of the assemblage, the number of identifiable vessel forms was rather low but it did include everted rim jars, jug handles and rims and a pipkin handle. Bases included both flat and baluster forms, presumably from jars/cooking pots and jugs respectively.

The jar rims have a very distinctive profile (**Illustrations 10-12**) parallels for which include Humberware from Holme-on-Spalding Moor (Mayes and Hayfield 1980: Fig 3; 1, 2, 3, 5 and 6), Brackenfield (Type 5 jar; Cumberpatch 2004a: Fig. 17) and Burley Hill (Jar type JR3A; Cumberpatch 2002-2003: Fig. 94; 18 – 20).

The jugs appeared to be somewhat less distinctive with rod handles predominating (**Illustrations 13-15**). These included one example with the handle springing from the rim rather than the neck (**Illustration 9**) alongside more conventional examples (e.g. **Illustration 13**) but this may be a Brackenfield product, as noted above. Although the assemblage did not include any complete vessel profiles, it is assumed that the bases (**Illustrations 16 and 17**) were from jugs and a jug rim is shown in **Illustration 18**. The only other vessel type positively identified was a pipkin, represented by a short handle (**Illustration 19**). An unidentified object is shown in **Illustration 20**. This was a thick (c.1.5 cm) flat disc with a raised edge and a number of deep stabbed holes which penetrated only one third to half the thickness of the disc.

Decoration was limited to a flattened rod handle with parallel grooves (**Illustration 15**) and a slightly distorted body sherd with an applied curvilinear motif and impressed radiating lines (**Illustration 8**). Glaze appeared to be restricted to jugs and was sparse and often flakey and friable, to judge by the numbers of sherds where abrasion had reduced it to little more than a trace. Where it did survive it was yellow-green to green in colour but darker green on the overfired, reduced sherds.

Chronology

Attributing a date to the medieval pottery is difficult in the absence of independent dating evidence or comparable material from contexts containing dated wares. There is little in the pottery itself to suggest a date range and in this respect the assemblage resembles those from Brackenfield and Burley Hill, both of which produced abundant and unequivocal evidence for pottery manufacture but little to indicate when the potteries were in operation.

The presence of two sherds of York Gritty ware dating to the period between the mid-11th century and the mid-13th century (Vince, pers comm.) is a possible indication of an earlier medieval date for the assemblage as a whole, but the disturbed nature of

the site means that such associations must be treated with a degree of caution.

The identification of the Oxidised and Reduced Gritty wares as Northern Gritty wares (see **Section 4.4** below) raises the issue of the relationship between this group and the material of the same name described and defined by Moorhouse (1983b), Moorhouse and Slowikowski (1987:62) and followed in broad terms by the author elsewhere (Cumberpatch 2002:178). The matter is compounded by the fact that the term refers to a broad class of pottery and also encompasses an oxidised variant, Orange Gritty ware, rather than describing a specific type which can be identified with a single place of origin. If the definition proposed by Moorhouse and Moorhouse and Slowikowski is considered broadly, then the Upper Chapel material could be said to be part of the group but this hardly assists in the closer definition of ware types in that it further extends an already broad descriptive category to cover a site some way south of what has hitherto been considered to be the core area of the ware class (West Yorkshire). The date range attributed to Northern Gritty ware from Kirkstall Abbey, Sandal Castle and Pontefract Castle is broad; at Sandal Castle a date range between the mid-13th and mid-14th centuries was suggested (Moorhouse 1983b:88) but when considering the oxidised variant at Kirkstall Abbey, Moorhouse and Slowikowski suggest a much broader date range between the later 12th and mid-15th centuries (1987:63). In view of this it would seem to be unwise to rely on specific *comparanda* to date the wares from the Upper Chapel and as an initial step, the characteristics of the pot sherds themselves must be considered.

The pottery from the Upper Chapel was wheel thrown which would seem to rule out an earlier medieval date (later 11th to early 12th century) contemporary with the Frenchgate and Hallgate 95 kilns in Doncaster, but it should be noted that not all pottery of this date was coil-built, as the evidence of the wheel-thrown utilitarian wares from West Yorkshire (Hillam type wares) indicates. The glaze was, in most cases, badly damaged either by overfiring in the case of the reduced wares or decayed and abraded in the case of the majority of the oxidised wares. It is possible that the decayed glaze, represented by small vitreous flakes and a thin whitish-green deposit where the glaze had been largely removed, is a counterpart of the friable brown glaze which occurs on sandy wares in the Durham area. The author has suggested elsewhere (Cumberpatch 2001) that this type of glaze may have been an early attempt to produce a suspension glaze towards the end of the period of popularity of splashed glaze (sometime in the early to mid-13th century), but this is no more than a suggestion and requires further investigation before it can be accepted. In some cases the surviving glaze appeared to be pitted in a manner that is similar to the case with splashed glaze, but such pitting does sometimes occur on suspension glazed vessels and it cannot be relied on as a method of dating either individual sherds or assemblages, particularly where the sherds have suffered the degree of surface damage evident in this case.

The character of the sherds; thick and rather poorly finished (quite unlike the finely made, thin walled Hillam and Thorner type wares or the broadly contemporary Hallgate C and B wares) does tend to suggest a later medieval date rather than an earlier one but variations between potteries at this time are to be expected and there is no reason to presume that all were capable of producing the high quality wares found in West Yorkshire.

The vessel forms are ones which find their best *comparanda* in later medieval assemblages (as described above) and the sharply everted jar rims do not resemble either the everted rectangular or diamond sectioned rims of the Hillam type wares or the heavy rounded rims of the Northern Gritty and Orange Gritty wares (Moorhouse

and Slowikowski 1987: Fig 51; 189-194). This may be the best evidence for a later medieval date available from the assemblage, but it does depend upon the evidence of Humberware as the primary indication of the date (Brackenfield and Burley Hill being effectively undated) and there is no *a priori* reason why this particular vessel form should have originated with the Humberware potters in the early 14th century rather than having been adopted by them from some other, earlier, source.

Medieval potteries tended to move out of towns and into the countryside during the 13th century, a result of either rising urban land prices and hence rents or of a growing disinclination for the inhabitants of towns to share space with an industrial process based upon the regular firing of kilns. Thus pottery manufacture in Doncaster seems to have moved from the market place area to Hallgate and thence to the Don Valley between the mid-11th and later 13th or early 14th century. Whether this can be taken as a model for medieval Sheffield is unclear, given our limited knowledge of the morphology of the medieval town. The centre of medieval occupation was probably located between the parish church (now the Cathedral) and the Castle, but how far it extended to the south is unclear. It cannot be assumed therefore that the pottery occupied either a central or liminal position in respect of the rest of the town and so this possible, if inherently somewhat unreliable, indicator of date is of limited value in indicating even a broad date range.

At present the conclusion must be that a definite date cannot yet be suggested for this pottery and it will require the excavation of a site consisting or, or incorporating, stratified and independently dated deposits before it will be possible to advance a date which is based upon more than conjecture. In the interim, the best that can be suggested is a date range within the period between the later 12th or early 13th and the earlier 15th century is the best that can be postulated.

4.3.3 Post-medieval, early modern and recent pottery

The later post-medieval, early modern and recent pottery from the site included a range of wares which are known from other sites within the city. The assemblage is of interest in its own right and as a small but significant contribution to the overall picture of changing patterns of pottery use in the city during its formative period and the period of its greatest growth and prosperity.

The utilitarian wares were represented, as normal in Sheffield by a combination of *Brown Glazed Coarseware* (BGCW) and *Brown Glazed Fineware* (BGFW). In the case of the Brown Glazed Finewares, a general 18th- to early 19th-century date can be ascribed with the Coarsewares spanning the 18th and 19th centuries. Jars and pancheons were the commonest identifiable vessel types with the former only present in the case of the Coarsewares. *Mottled Coarseware*, a variant of the Brown Glazed Coarsewares bearing manganese rich glaze giving a mottled finish similar to that seen on the Mottled wares (discussed below) and normally consisting of small pancheons or bowls and small hollow wares including jars (contexts (209), (211) and unstratified).

Post-medieval pottery (*c*.1530 – *c*.1720) was represented by *Blackware* (contexts (209), (216), unstratified and probably (106) and (109)), *Midlands Purple ware* (unstratified) and perhaps by the sherds of *Redware* (unstratified) and *Type 1 Slipware* (unstratified) although it is probable that production of these wares continued into the early part of the 18th century. The same may be true of the Tin Glazed Earthenware (contexts (109), (204) (**Plates 15 to 17**) and unstratified)

Early modern wares were commoner and included all three types of formal

tableware developed during the 18th century (*White Salt Glazed Stoneware*; *c*.1720 – *c*.1780, *Creamware*, *c*.1740 – *c*.1820, *Pearlware*; *c*.1780 – *c*.1840, *Edged ware* (*c*.1810 – *c*.1830) alongside a variety of the typical 18th century vernacular tablewares (*Slipware*, *Late Blackware*, *Mottled ware* and some of the *Brown Salt Glazed Stonewares* (as indicated in **Table 12**).

Recent wares consisted of table and kitchen wares in various refined earthenware fabrics, notably *Bone China*, *Whiteware*, *Cane Coloured ware* and its variants *(Slip Banded Cane Coloured ware, Mocha ware)*, *Blue Banded ware*, *Sponged ware* and *Fine Redware*. Some of the Brown Salt Glazed Stonewares may also be of 19th-century date (as noted in **Table 12**).

The range of transfer printed designs on both the Bone China and the Whitewares were unremarkable and included Willow and Wild Rose, both popular and widely manufactured designs. Other designs, which could not be identified to a specific pattern, included Chinese style landscapes, floral and geometric designs, as described in **Table 12**.

While the range of wares represented in this small assemblage was wide, there were few unexpected items and the assemblage may be compared with others from the centre of Sheffield, notably those from excavations around the Cathedral (Cumberpatch in prep. 1) in seeming to have a significant 18th-century component as well as a 19th-century component.

Pot discs

In spite of the small size of the assemblage it contained a relatively large number of pot discs and similar reworked sherds (contexts (109), (204) and unstratified). These include an unusually small example of a disc (**Plates 18 and 19**) in Brown Salt Glazed Stoneware and a more conventional example made from a sherd of Late Blackware (**Plates 20 and 21**). Unusually, an example was identified made from a sherd of Tin Glazed Earthenware (**Plates 15 and 16**). This would seem to suggest that whatever purpose the discs served, it was not necessary for them to be particularly robust. Other reworked sherds were sub-rectangular in form. The best example is that from an unstratified context (**Plates 22 and 23**), associated with the pot disc shown in **Plates 20 and 21**. The final example was broken along one edge and the actual size and shape are unclear (**Plates 24 and 25**). Pot discs are a common find on sites throughout Europe and have an extremely wide date range. Although a variety of suggestions have been made as to their possible function or functions, to date none of these are convincing and they remain enigmatic. A fuller treatment of this subject, drawing on examples from a wider variety of sites is planned for the future (Cumberpatch in prep. 2).

4.3.4 Discussion

Context (100)

Together with the unstratified contexts, context (100) produced the bulk of the medieval pottery from the site. Little can be added to the discussion presented above concerning this pottery, other than to note that even small and initially unprepossessing sites can produce pottery assemblages which are of considerably wider significance than might at first appear to be the case.

Contexts (106) and (107)

Contexts (106) and (107), the fills of drain [105], produced a small but diverse group of

pottery, the earliest of which was of 18th-century date (with one sherd of possible Blackware from context (106) which may be earlier) and the latest of mid- to later 19th-century date.

Context (109)

In contrast to contexts (106) and (107) the pottery from context (109), the fill of grave cur [108] was rather more homogenous in nature, being predominantly of 18th-century date with some possible later 17th-century wares. A wide range of 18th-century pottery was present including types representative of all the principal classes of early modern pottery.

Context (115)

The pottery from context (115), the wood chippings in the base of grave cut [105], was limited to a single sherd of Colour Glazed ware of later 18th- or 19th-century date and will be associated with the pottery from context (109) as it was from the same grave.

Context (200)

Context (200), the made ground levelling of the graveyard, produced a small group of mixed 18th-and 19th-century wares with the former predominating but the latter represented by three sherds. The pattern resembles that seen in contexts (106) and (107) but given the small quantities of pottery present in each case, the similarity should perhaps not be over-emphasised.

Context (202)

Context (202), the fill of grave cut [201], produced only a small fragment of unglazed red earthenware, probably from a flowerpot.

Context (204)

The pottery from context (204), the fill of grave cut [203], resembled that from context (109) in that it was principally of 18th-century date with some earlier elements. In the case of (204), these included a sherd of medieval pottery of unidentified type which was not part of the putative kiln group from contexts (100) and unstratified. The presence of two sherds of Tin Glazed Earthenware (**Plates 15 to 17**) which were, until they were excavated, in reasonably good condition, suggests that the group had not been subject to any significant reworking or movement after its deposition. The abraded condition of the medieval sherd contrasts with that of the less robust Tin Glazed Earthenware and tends to support this hypothesis.

Contexts (209), (210) and (211)

With the exception of a single fragment of a component with an internal screw thread, probably part of a light fitting or similar electrical device which appears to be of later 19th-century date (or later), the pottery group from context (209), the fill of grave cut [207] within multi-occupancy grave [213], was of 18th-century date and resembled, in general terms, that from context (204). Whether the fragment of the electrical component could be considered to be intrusive into an earlier context is unclear but its presence does pose a problem for the interpretation of the group.

Context (210), the fill of grave cut [208] within multi-occupancy grave [213], produced only five sherds of pottery and the group was dominated by utilitarian wares, specifically Brown Glazed Fineware. Sherds from contexts (209), (210) and (211) in this ware appeared (on the basis if the fabric and the pattern and character of the

glaze) to be part of the same vessel, although no cross-context joins could be established to demonstrate this beyond doubt.

Context (211), the fill of multi-occupancy grave cut [213] in addition to including a sherd of Brown Glazed Fineware, produced a sherd of Mottled Coarseware similar to those from context (209).

Context (216)

The small group of pottery from context (216), the fill of an indistinct grave cut within multi-occupancy grave [213], included sherds of 17th- and 18th-century date, but the size of the group (three sherds) precludes any real interpretation beyond noting that it resembled the groups from contexts (109) and (204).

Context SK2 and unstratified contexts

The unstratified contexts produced a large group of mixed wares which included a significant quantity of medieval pottery. The remainder of the pottery was of mixed character as outlined in **Table 12**. The various different wares have been discussed briefly above and none are in any way out of the ordinary for an assemblage from Sheffield city centre. Future work, beyond the scope of this report, will look at sites in the city on a synthetic and comparative basis and the position of the Upper Chapel assemblage will then perhaps be clearer.

4.3.5 Conclusion

The pottery assemblage from the Upper Chapel falls into two principal parts; the medieval pottery which appears to have been associated with the remains of a pottery kiln and the early modern and recent pottery which conforms more closely to what has come to be expected from sites in the centre of Sheffield. In terms of comparison with other sites, the later pottery assemblage from the Upper Chapel appears not to have been deliberately dumped as other assemblages were but to have accumulated in some other manner. In this it seems to have more similarities with the assemblages from excavations around the Cathedral than it does with sites in the river valleys and adjacent areas. Future work will draw parallels between different types of assemblage in an effort to understand the broader issues related to site formation processes which are critical to the understanding of sites in Sheffield and must precede any attempt to interpret the assemblages in social or economic terms.

The medieval pottery is of considerable regional significance although at present it is not possible to ascribe a date to its manufacture. The results of the petrological and chemical analysis appear to support the suggestion, based upon the presence of kiln wasters and glaze-covered stones, that a kiln existed either on the site or in the immediate vicinity. The pottery falls into the well-known local tradition of Gritty ware although, in spite of the fact that this tradition was a long-lived one, it remains in many aspects obscure (as exemplified by the problems over nomenclature outlined above). It is to be hoped that future work in the city, particularly on the site of the Castle, will reveal stratified medieval assemblages upon which a coherent and sustainable chronological framework can be based. This will allow a specific local ware type to be defined more precisely and examples of the sherds should be added to the regional type series (Cumberpatch 2004b). At present it is perhaps sufficient to note the existence of the local production of Gritty ware

The medieval pottery assemblage should be fully published in an appropriate local or regional journal and the archive deposited with the local museum. It is of particular

importance that the significance of the unstratified pottery be recognised in this case as it includes examples of wares manufactured on the site. Given the small size of the group and its potential local and regional importance, in this particular case the unstratified pottery should be retained for future study alongside the stratified pottery.

4.4 Characterisation studies of the Medieval pottery

by Alan Vince

4.4.1 Introduction

Excavations at the Upper Chapel, Sheffield, produced a collection of medieval pottery which included overfired or burnt sherds, suggesting that the collection included production waste. Accordingly, a sample of five sherds was submitted for thin section and chemical analysis, to establish the characteristics of the pottery and whether it can be distinguished from other similar vessels.

In the event, it appears that at least some of the samples are not of production waste but were produced elsewhere. However, three of the samples, of Northern Gritty ware, have a distinctive chemical composition which can be distinguished from samples from other medieval production sites (all located considerably to the north of Sheffield).

4.4.2 Methodology

Thin sections were produced by Steve Caldwell, University of Manchester, and a block was removed from each sample and the surfaces removed mechanically. This block was crushed to a fine powder and submitted to Dr J N Walsh, Royal Holloway College, London, for chemical analysis using Inductively-Coupled Plasma Spectroscopy.

A range of major elements was measured and the results expressed as percent oxides (**Table 17** within **Appendix 3** below). A range of minor and trace elements was measured and the results expressed as parts per million (**Table 18** within **Appendix 3** below).

The ICPS data were normalised to aluminium to take account of the dilution effect of added quartz sand temper and were analysed using Factor Analysis (using the Factor Analysis option in WinSTAT, an add-on for Microsoft Excel).

4.4.3 Northern Gritty ware (V4879), (V4881) and (V4882)

Northern Gritty ware is a generic name for medieval pottery fabrics in an off-white to light brown clay tempered with angular quartzose gravel, with grains over 1.0mm across. Pottery of this general type was produced at numerous sites and those at Baildon, Winksley and Grantley, all in West Yorkshire, have been sampled and can be compared with the Upper Chapel samples. In addition, a large number of samples of Northern Gritty ware from the occupation site of Ingmanthorpe Manor were also analysed and these too could be compared with the Sheffield samples.

The three samples all have similar characteristics in thin section. The following inclusion types were noted:

- Sandstone. Moderate fragments up to 0.5mm across composed of angular and subangular quartz grains up to 0.3mm across in brown cement.

- Quartz. Moderate subangular grains up to 0.5mm across.
- Opaques. Sparse rounded fragments up to 1.0mm across. Some are vitrified and include abundant vesicules.
- Mudstone. Sparse ovoid fragments with prominent bedding. Some have an opaque core and all are light coloured (light brown or cream in plane-polarized light).

The groundmass consists of light grey to light brown optically isotropic baked clay minerals and sparse ill-sorted angular quartz grains up to 0.1mm across.

The quartzose inclusions are probably derived from a detrital sand derived from the weathering of Carboniferous sandstones, of at least two different textures and lithologies: a coarse-grained rock from which the quartz grains were derived and a finer-grained, red sandstone. Such sandstones mostly occur in the Coal Measures, which is consistent with the location of the Upper Chapel. The mudstone, some of which is organic, might be present in the parent clay or may also be detrital. It is almost certainly a Coal Measures shale.

The ICPS data were compared with that from Baildon, Knaresborough, Grantley and Winksley. The Grantley and Winksley samples include several different fabrics, all probably produced of the respective industries, and the Knaresborough samples are from a consumer site in the town, which is, however, known to have had a pottery industry.

Factor analysis was used to analyse the data and five factors were found. A plot of F1 against F2 scores (**Figure 1**) indicates that two of the Sheffield samples are clearly distinguished from the comparanda, being closest in composition to the two Knaresborough samples, whilst the third sample is similar to the Winksley and Lumley samples (apart from Winksley Fabric 1, which is a distinctive white sandy fabric).

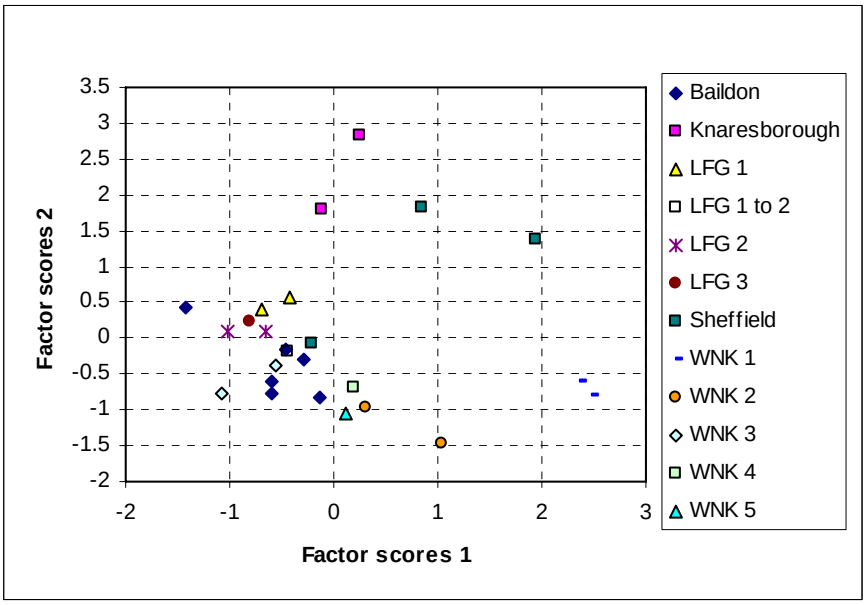

Figure 1 – Factor analysis for Northern Gritty ware: plot of F1 against F2 scores

A plot of F3 against F4 scores separates one of the Sheffield samples from the remainder (**Figure 2**) whilst a plot of F3 against F5 scores distinguishes the Sheffield samples from the others (**Figure 3**).

The comparative data all come from vessels made with Coal Measures clays and

tempered with sands derived from Coal Measures sandstones and therefore the similarity of the Sheffield samples might be expected.

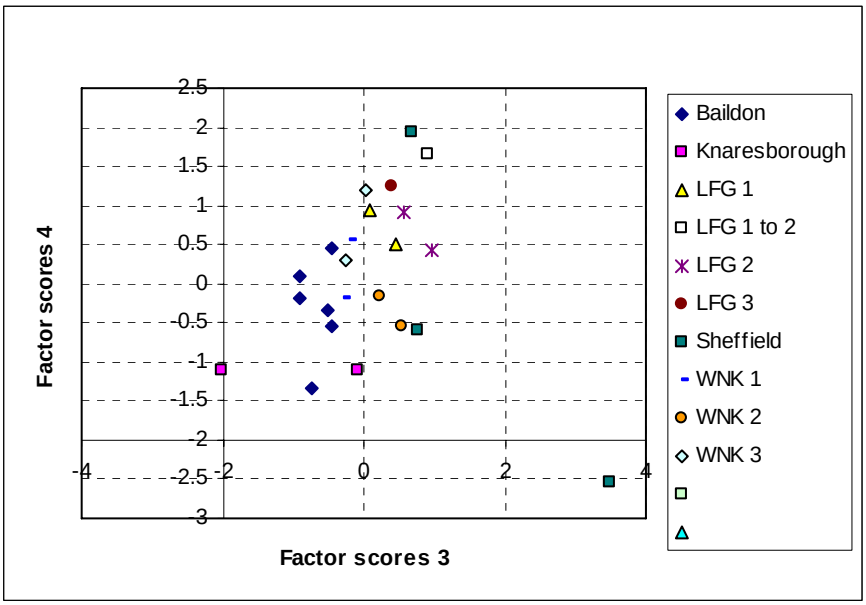

Figure 2 – Factor analysis for Northern Gritty ware: plot of F3 against F4 scores

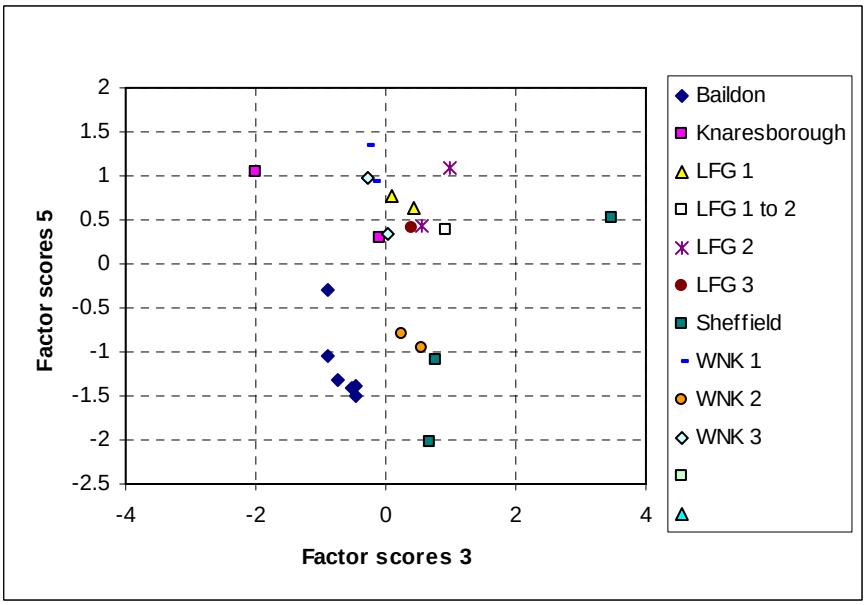

Figure 3 – Factor analysis for Northern Gritty ware: plot of F3 against F5 scores

Examination of the data, normalised to aluminium, indicates that the Sheffield samples have higher Potassium and Manganese values but that all other elements occur within the same range as the comparanda (**Figure 4**).

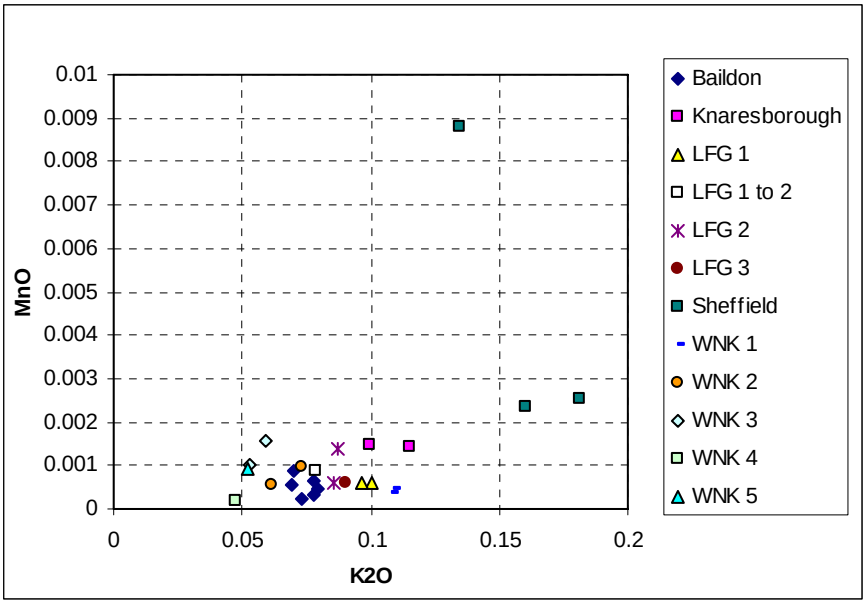

Figure 4 – Normalised data for Northern Gritty ware: plot of Potassium against Manganese values

4.4.4 York Gritty ware (V4880)

A single sample from the Upper Chapel has the same characteristics as York Gritty ware, which is widely distributed in the Vale of York and less common in surrounding areas (Holdsworth 1978, 1995; Mainman 1990). Thin section and chemical analysis has suggested a source for this ware at Potterton but it may well be that it is a generic fabric, produced at more than one centre but using similar raw materials and production methods (Vince and Young 2007; Vince 2004b). Pottery found at Thorner in levels post-dating a 9th- to 11th-century kiln and published as Hillam ware were sampled and shown to be of this fabric (Cumberpatch and Roberts 1998-1999; Vince 2004a).

The thin section has the following inclusion types:

- Quartz/sandstone. Moderate subangular fragments up to 2.0mm across. The quartz grains have one or more flat faces, indicating overgrowth, and in some cases have a dark brown to opaque coating. In some cases kaolinite, lighter in colour than the groundmass and coarser in texture, is seen to adhere to the quartz grains.
- Siltstone. Rare dark brown rounded tabular siltstone fragments up to 1.0mm long.
- Clay pellets. Moderate dark brown rounded clay pellets up to 0.5mm across.

The groundmass is optically anisotropic light brown baked clay minerals with no inclusions. Thin lenses of darker brown clay occur.

The ICPS data was compared with that from consumer sites at Doncaster, Knaresborough, Swillington, Thorner, Wetherby (Ingmanthorpe Manor) and York.

Factor analysis found three factors. A plot of F1 against F2 (**Figure 5**) found that the F1 score of the Sheffield sample was within the range of the comparanda (as were those of the Sheffield Northern Gritty ware sherds). However, the F2 scores of both the Sheffield group were higher than those of the majority of the comparanda, the

exception being one of the Doncaster samples.

A plot of the F2 against F3 scores (**Figure 6**) for this dataset shows that the Sheffield sample has a lower F3 score than any of the comparanda (also lower than the Sheffield Northern Gritty ware).

Examination of the normalised data indicates that the Sheffield YG sample has a lower Calcium value than any of the comparanda, followed by the Sheffield NGR samples. The Scandium value separates the two Sheffield groups, although both lie within the range found in the comparanda. The Vanadium value is higher than in the comparanda, followed closely by the Sheffield NGR samples (**Figure 7**). The ICPS data therefore suggest that the two Sheffield groups are more similar to each other than to other York Gritty ware samples, but that with the exceptions noted above, the range of values found is similar for both the Sheffield samples and the comparanda. The high Vanadium values are probably present in the dark brown to opaque coatings seen on the quartz grains, and in the siltstone.

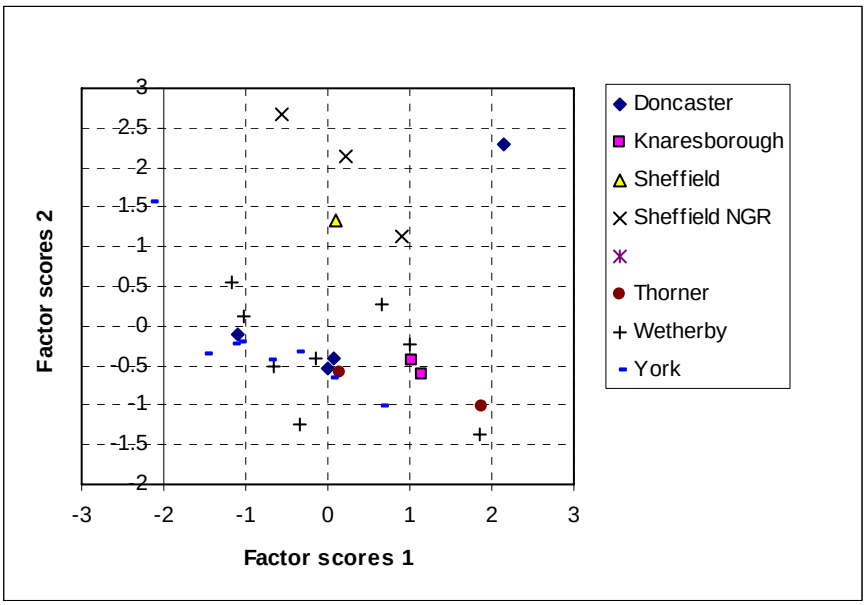

Figure 5 – Factor analysis for York Gritty ware: plot of F1 against F2 scores

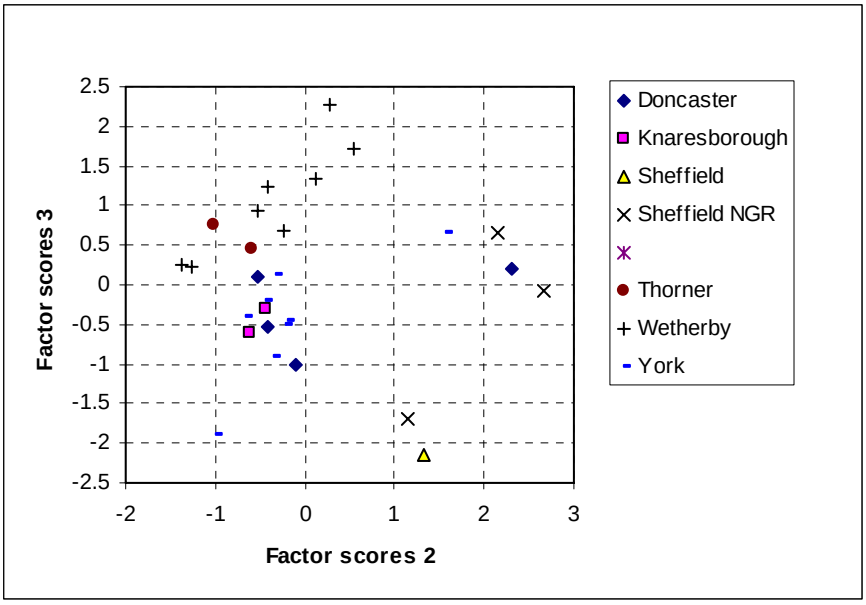

Figure 6 – Factor analysis for York Gritty ware: plot of F2 against F3 scores

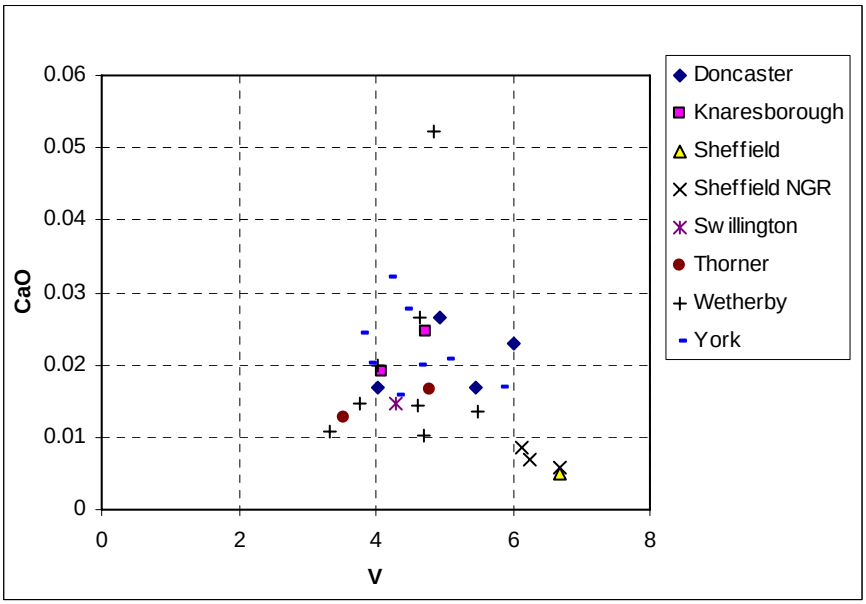

Figure 7 – Normalised data for York Gritty ware: plot of Vanadium against Calcium values

4.4.5 Miscellaneous Glazed Red Earthenware (V4878)

One sample could be distinguished by its higher iron content and the character of the sand inclusions. The following inclusions were noted in thin section:

- Quartz. Sparse subangular grains up to 0.5mm across and moderate rounded grains up to 0.3mm across.
- Chert. Sparse rounded grains up to 0.3mm across.
- Basic igneous rock. A single rounded fragment 0.5mm long containing plagioclase laths in a fine-grained groundmass.

- Siltstone. Sparse rounded fragments up to 0.3mm across.
- Sandstone. Sparse rounded fragments up to 0.3mm across, some with a dark brown cement and composed of subangular quartz grains up to 0.2mm across.
- Concretionary clay pellets. Sparse pellets up to 1.5mm across of similar colour and texture to the groundmass but with an oolitic dark brown staining.

The groundmass consists of optically anisotropic baked clay minerals, moderate muscovite laths up to 0.05mm across and moderate angular quartz grains up to 0.1mm across.

The sand inclusions in this sample are probably derived from a Permo-Triassic sand (the rounded quartz, chert, siltstone and fine sandstone), together with some Carboniferous sandstone. Such a sand deposit should not occur in the Sheffield area and the closest source would be to the east of Sheffield, such as the Don Valley, or to the south, in the Nottingham area.

The normalised ICPS data indicates a higher iron content for this sample as well as a higher Calcium, Titanium, Phosphorus, Chromium, Copper, Vanadium, Zirconium, Lanthanum, Cerium and Lead content and a lower Potassium, Manganese, Lithium, and Strontium content. Some of these elements are easily affected by burial conditions, but in this case these are likely to be comparable for all five samples. Furthermore, the copper and lead values might be enhanced through contamination by the glaze. Even excluding these elements there are sufficient differences between this sample and the others to suggest a different source.

The normalised ICPS data were then compared with those from a series of samples of Nottingham glazed wares (NOTG), a sherd of possible late Saxon Nottingham ware from a site in Doncaster (NOTTS) and Doncaster glazed red earthenware (Doncaster A ware). Factor analysis revealed five factors and a plot of F1 against F2 (**Figure 8**) indicates that the Sheffield sample is closest to the Nottingham glazed ware (and that the supposed Nottingham late Saxon sample is closer to the Doncaster glazed ware). However, examination of the normalised data indicates that the sample can be distinguished from the comparanda by higher Titanium and Chromium values (**Figure 9**) and lower Lithium and Strontium values (**Figure 10**).

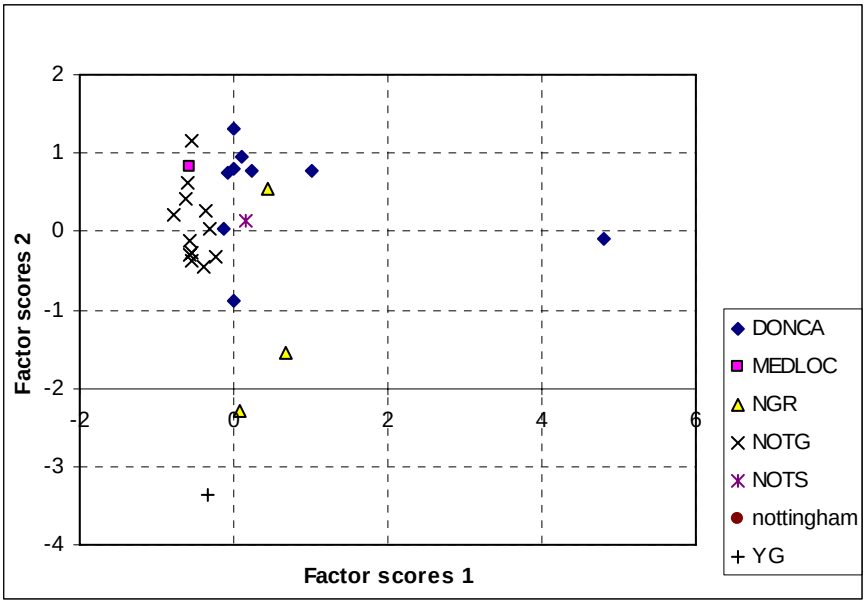

Figure 8: Factor analysis for glazed red earthenware: plot of Fl against F2 scores

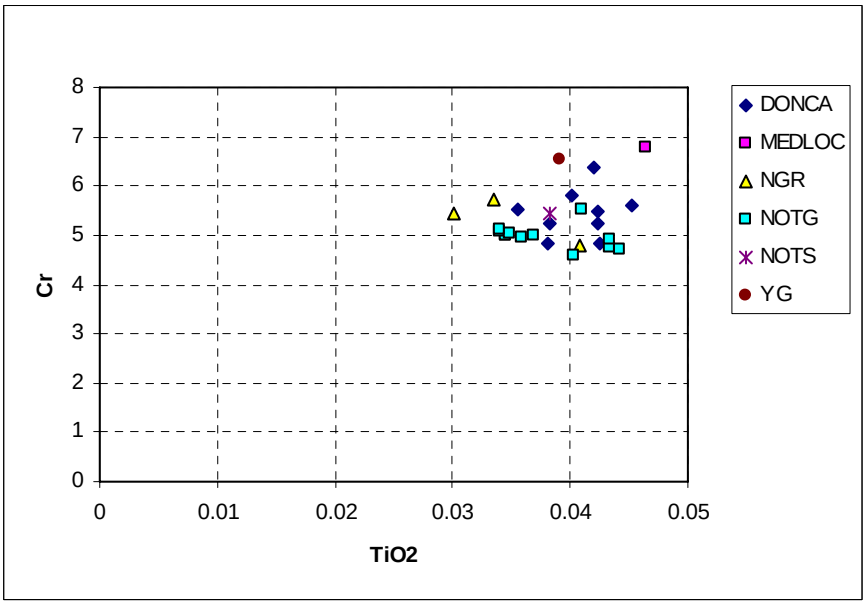

Figure 9 – Normalised data for glazed red earthenware: plot of Titanium against Chromium values

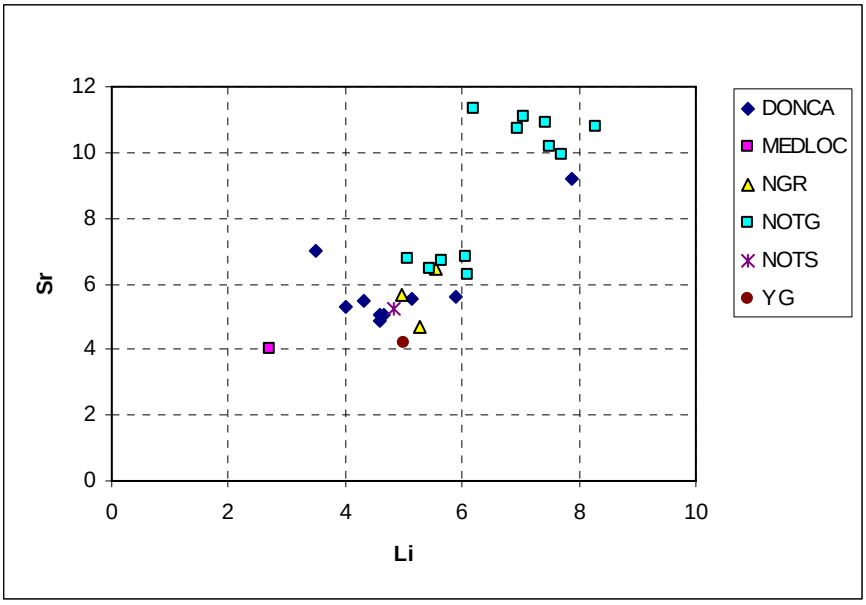

Figure 10 – Normalised data for glazed red earthenware: plot of Lithium against Strontium values

4.4.6 Conclusions

One of the five submitted samples is definitely not a local Sheffield product and can be distinguished both in thin section and by its chemical composition. The remainder include one sample which is distinct in thin section and, to a lesser extent, in its chemical composition. However, the raw materials to produce this fabric should be available in the Sheffield area and it is possible (though unlikely) that the "York Gritty" ware sample is a Sheffield product made using similar raw materials and preparation techniques to the York Gritty ware found in the Vale of York and more rarely neighbouring areas.

Three of the samples, however, were produced from similar raw materials and could well have been made in the Sheffield area. They are similar in thin section and chemical composition to Northern Gritty wares produced at sites in West Yorkshire, but since these exploited the same Coal Measures outcrops this is unsurprising.

4.5 Assessment of the pottery from the gravestone watching brief

By Dr C.G. Cumberpatch

4.5.1 Introduction

The pottery assemblage recovered during the watching brief on the relaying of the gravestones at the Upper Chapel consisted of four sherds of pottery weighing 59 grams and represented a maximum of four vessels. The details are summarised in **Table 19** in **Appendix 3** below.

4.5.2 Discussion

Beyond describing and dating the assemblage, there are few conclusions that can be drawn from it, and this small assemblage of pottery should be considered in conjunction with the larger assemblage discovered during the main excavations at the Upper Chapel (see **section 4.3** above). While the pot disc from grave 10 has suffered

from breakage and flaking and the sherd of Creamware from Grave 11 from spalling, the condition of the sherds was generally good, suggesting little movement since their deposition.

The date ranges attributed to the individual sherds are relatively reliable and indicate activity on the site in the 18th and early 19th centuries. The nature of this activity is not apparent from the pottery assemblage

None of the types of pottery present were in any way unusual for a site in South Yorkshire and can be paralleled in larger groups from elsewhere in the county.

4.6 Analysis of the clay tobacco pipe

by Dr S.D. White

4.6.1 Introduction

The excavations at the Upper Chapel produced a total of 87 clay tobacco pipe fragments, consisting of 9 bowls, 76 stems and 2 mouthpieces from a total of nine different pipe-bearing contexts and two unstratified deposits.

4.6.2 Methodology and treatment of the material

The pipe fragments from the Upper Chapel have been individually examined and details of each fragment logged on to an Excel spreadsheet. The layout of the spreadsheet has been based on the draft pipe recording system that has been developed at the University of Liverpool (Higgins and Davey, 1994). A copy of the spreadsheet appears as **Table 20** in **Appendix 3** below. Stem bores have been measured to the nearest 64th of an inch using a ruler.

An assessment of the likely date of the plain stem fragments has been given in broad date ranges. Stem dates should be used with caution since they are much more general and less reliable than the dates that can be determined from bowl fragments or stems marked by known makers.

Where more than one bowl fragment occurs in the same context group they have been allocated a simple reference number in the form of a letter (for example, A, B, C, etc), which as been pencilled on to the inside of the bowl. This is to enable individual bowl fragments to be linked back to the Excel Catalogue.

4.6.3 The context groups

The pipes from this site are first considered in their context groups, before a more general discussion of the pipe evidence from the site as a whole. Details of the pipes from each context are provided as a context summary in **Table 3** below. The context summary gives the total numbers of bowl (B), stem (S) and mouthpiece (M) fragments from each context together with the number of marked or decorated (Dec) fragments. The overall date range for the pipes from the context is then given followed by the most likely date of deposition, based on just the pipe evidence. Finally, any general comments about each context are given.

Tr	Ctxt	B	S	M	Tot	Date Range	Dep	Mkd	Dec	Comments
1	106		12	1	**13**	1790-1900	1800-1880			Plain C19th stems all heavily iron stained. Single mouthpiece from a long-stemmed pipe.
1	107	1	16		**17**	1800-1900	1800-1880			Plain C19th stems all iron stained; two have traces of green glaze. The bowl fragment is a C19th rim with a faint mould line around the rim suggesting that the mould has been altered or repaired during its lifetime.
1	110		1		**1**	1790-1880	1790-1880			Single plain stem of late C18th or C19th type.
1	U/S	3	26	1	**30**	1640-1900	1800-1900	WL heel x1; milled heel x1		This is a mixed unstratified group representing all periods of pipe production and use.
2	200	1	2		**3**	1640-1900	1800-1900	Cut heel x1		Small but mixed group. The bowl form and one of the stems are clearly late C17th to early C18th, but there is also a later stem of C19th type.
2	202		1		**1**	1790-1880	1790-1880			
2	204	2	6		**8**	1640-1900	1800-1900			Small group that includes some C17th fragments, but these are quite small and abraded. Group is mostly likely to have been deposited in the later C18th or C19th with some earlier residual material (latest pieces are some plain stems of late C18th or C19th type).
2	209		2		**2**	1800-1900	1800-1900			Two plain stems of C19th type.
2	210		1		**1**	1650-1700	1650-1700			
2	211		1		**1**	1650-1700	1650-1700			
2	u/s	2	8		**10**	1640-1880	1750-1850			This is a mixed unstratified group representing all periods of pipe production and use, although the majority of the fragments are C17th or early C18th types.
	Total	**9**	**76**	**2**	**87**					

Table 3 – Context summary of clay tobacco pipe from excavations at the Upper Chapel.

Only four of the 11 groups of pipes contained ten or more pipe fragments. In the following description of these four contexts, the total number of pipe fragments recovered is given, where the first three figures represent the numbers of bowl, stem and mouthpiece fragments respectively, followed by the total number of fragments recovered as a whole. For example, (1/2/3 = 6) would represent 1 bowl, 2 stems, 3 mouthpieces giving a total of 6 fragments.

- **Context 106** *(0/12/1=13)*. This context is the upper fill of drain [105] and produced a total of 13 clay tobacco pipe fragments comprising 12 plain stems and a single mouthpiece. All of the fragments are heavily iron-stained that would be consistent with being deposited in a drain fill. All would appear to be early to mid-19th century types from long-stemmed pipes.

- **Context 107** *(1/16/0=17)*. This context is also part of the fill of drain [105], and is stratigraphically below context (106) (described above). The group consists of single rim fragment from a 19th-century bowl and 16 plain stems. As with the material from context (106), these pipe fragments are also heavily iron-stained. Both groups are very similar in nature and make up and there is very little, typologically, to distinguish between the two groups.
- **Trench 1, U/S** *(3/26/1=30)*. This is a unstratified group from Trench 1 and as such very little can be said about it from a contextual point of view. It is however one of the more interesting groups of pipes from the site, in that it contains earlier material, something that is normally lacking in pipe assemblages from Sheffield. The stems are all plain and of a mixed date although they are dominated by late 17th- or early 18th-century types. There are three bowl fragments one each from the 17th (**Illustration 21, 1**), 18th (**Illustration 21, 2**) and 19th centuries.
- **Trench 2, U/S** *(2/8/0=10)*. This is another unstratified group, this time from Trench 2, comprising just two bowl fragments and eight plain stems. Although this group includes material from all periods of pipe production and use, the majority of the fragments are 17th- or early 18th-century types.

4.6.4 The pipes themselves

The clay tobacco pipes from the Upper Chapel are interesting in that seven of the nine bowl fragments recovered from the site are 17th- or early 18th-century forms, a relatively rare phenomenon in Sheffield.

The earliest bowl form from the site is a rim fragment of *c*1640-1660 from context (204) (the fill of grave [203]). This particular fragment appears to have been burnt but clearly has a bottered and milled rim. A slightly later rim fragment of *c*1660-1700 was also recovered from this context together with a number of plain stems, four of which are clearly of late 18th- or 19th-century types. This either suggests some later disturbance to the possible grave fill or that the grave itself dates from the late 18th or 19th century.

The only marked pipe to have been recovered from the excavations came from the unstratified material from Trench 1 (**Illustration 21, 1**). This pipe dates from *c*1650-1670 and is stamped on the base of the heel with the initials WL. This pipe is most likely to have been produced by William Lee (1) of Rotherham, who is known to have been working *c*1655-1680/81 (White 2004, 175).

Three of the bowl fragments from the Upper Chapel had either a milled band (**Illustration 21, 2 & 4**) or a cut (**Illustration 21, 3**) across the base of their heel. The application of a band of milling, or a cut mark, across the heel would appear to be rather rare, although these features have not been systematically recorded nationally. It is unclear whether these bands or cut marks represent a poor attempt at marking a pipe, or whether they are a tally of some kind. In a recent survey of clay tobacco pipes from Yorkshire during the 17th and 18th centuries, large numbers of Civil War period pipes from Pontefract and Sandal castles had milled bands on or immediately adjacent to the heel. In this particular instance the application of these bands would appear to have been peculiar local phenomenon (White 2004, 73).

The late 17th and early 18th century is represented by one heel fragment from the unstratified deposit from Trench 2. The top half of the bowl is missing but it would appear to be a forward leaning type, typical of the transitional period (*c*1680-1720).

Finally, the latest two bowl fragments to be recovered from the Upper Chapel are a rim fragment from context (107) (*c*1840-1880) and a bowl/stem junction from the unstratified deposit from Trench 1 (*c*1800-1900). Both fragments are typical 19th-century forms.

All of the stem fragments from the site are plain and all periods of pipe production and use are represented in this assemblage. There are no fragments from the shorter-stemmed 'cutty' style pipes of the later 19th or earlier 20th centuries suggesting that all of the pipes had been deposited by the mid 19th century.

Only two mouthpieces were recovered, both from Trench 1, one from context (106) and the other from the unstratified deposit, both have simple cut tips with no obvious finish or glaze and are most likely to have come from long-stemmed pipes of the late 18th or early 19th centuries.

4.6.5 Conclusion

Although the pipe assemblage from the Upper Chapel is a relatively small one, it is one of the few sites to have been excavated in Sheffield in recent years that has produced a number of earlier bowl forms. Given how rare pipes of this date are from Sheffield, it is unfortunate that five of these should have come from unstratified deposits. Despite this, they provide a useful addition to the corpus of pipe material that is being accumulated for Sheffield and they add greatly to our knowledge of the early pipes from the city.

4.7 Assessment of the glass

by Dr P. Marshall

4.7.1 Introduction

A total of eighteen pieces of glass was recovered during excavations at the Upper Chapel, as summarised in **Table 4** below.

4.7.2 Discussion

The assemblage is fragmentary in character, and contains small sherds of 18th- and 19th-century material, including both window and vessel glass. Many sherds were unidentifiable due to their small size. Due to the small size of the assemblage and its fragmentary nature, no further work is recommended.

Context	Quantity	Description
106	5	4 flat clear, 1 curved clear
107	1	blue/clear, flat
109	3	2 blue/green, 1 orange/brown
U/S	6	2 green neck, 1 clear flat, 1 clear curved, 2 green curved
204	1	unidentifiable
209	1	unidentifiable
210	1	unidentifiable
Total	**18**	

Table 4 – Glass from excavations at the Upper Chapel

4.8 Assessment of the animal bone

by Sarah Viner

4.8.1 Methodology

The method used in the assessment of bones from the Upper Chapel followed a modified version of that outlined by Davis (1992) and Albarella and Davis (1996). Briefly, the elements included as 'countable' were: loose upper and lower teeth (in mammals); jaws with at least one tooth in place; cranium (complete or partial zygomaticus); atlas; axis; scapula (glenoid cavity); coracoid (in birds); distal humerus (at least half), distal radius (at least half), proximal ulna, carpal 3 (C3), distal metacarpal (at least half), carpometacarpus (in birds), pelvis (ischial part of the acetabulum); distal tibia (at least half); calcaneum; scafocuboid; distal metatarsal (at least half); phalanges 1, 2, and 3.

In addition to these 'countable' elements, other 'non-countable' specimens were recorded. These included horncore, antler, bones with evidence of sawing or bone working, and ribs and vertebrae (recorded as belonging to a small, medium or large sized animal).

4.8.2 Discussion

The bones were generally well preserved with little indication that they had been exposed to weathering. There was no evidence of attrition caused by scavengers.

A small collection of bones (ten countable specimens) were recorded and are summarized in **Table 5** below. Cattle (*Bos*) was the most common taxa, with sheep/goat (*Ovis/Capra*) and rabbit (*Oryctolagus*) both represented by a single specimen. Although two loose teeth were found there were no ageable mandibles, the absence of which will have implications for establishing age profiles should full analysis be undertaken.

Many of the cattle bones (6) were distal metapodials (both metacarpals and metatarsals). A number of these distal ends had been sawn from the shaft of the bone. Three pieces of non-countable bone showed evidence of sawing, again these probably originated from metapodials. These bones, in addition to the bone handle fragment found in the assemblage, suggest that the majority of the faunal remains were deposited as refuse from bone working. Cut marks on the single rabbit specimen (a pelvis) indicates that this is most likely to be the remains of food.

It is probable that many of the bones included in the assessment are debris from bone working, but unfortunately cannot provide further archaeological information as they are predominantly unstratified. No further work is recommended for this assemblage.

Context	*Bos*	*Ovis/Capra*	*Oryctolagus*
U/S	8(3)	1(1)	
110			1(1)
Total	**8**	**1**	**1**

Table 5 – The number of countable animal bones and measurable elements (those numbers in brackets) from excavations at the Upper Chapel

4.9 Assessment of the animal bone from the gravestone watching brief

by Linzi Harvey

4.9.1 Introduction

A total of thirteen fragments of animal bone were recovered during the watching brief on the relaying of the gravestones at the Upper Chapel, these are described below in **Table 6**.

4.9.2 Discussion

A single sheep/goat rib fragment, showing signs of butchery was recovered from the area of Grave 10. From the area of Grave 20, 12 fragments of cow skull and horn core were recovered. The horn is cleanly chopped through around 70mm from the skull, with a smaller additional chop mark further towards the base. It is likely this horn core is debris from horn object manufacture.

The animal bone assemblage from Chapel Walk is small and fragmentary. It has little potential to provide additional archaeological information. Therefore, no further work is recommended on this assemblage.

Context	Fragment count	Description and measurements
Grave 10	1	Small *ovis/capra* rib fragment, clearly butchered (chopped) at one end. Kitchen waste?
Grave 20	12	*Bos* skull fragment with short section of horn corn attached. Horn is chopped cleanly through at about 70mm from skull, with one additional partial chop mark nearer base. Debris from horn working?
TOTAL	**13**	

Table 6 – Animal bone from the gravestone watching brief at the Upper Chapel

4.10 Assessment of the waterlogged plant remains

By Ellen Simmons

4.10.1 Sampling and recovery

Two soil samples from the excavation of grave [108] at the Upper Chapel were sub-sampled and processed by wash over for waterlogged plant remains. Material was collected in 8mm, 2mm, 1mm, 500um and 300um meshes and stored in ethanol in glass jars. The heavy residue was dried and sorted by eye for organic remains and artefacts.

A preliminary assessment of the material was carried out by scanning the > 8mm, 2mm, > 1mm, > 500 µm and > 300µm fractions under a low power microscope, and recording the abundance of the main classes plant material present. The abundance of other types of material preserved by waterlogging, such as beetle remains, were also recorded where present. This data is recorded below in **Table 7.**

4.10.2 Plant types represented

Neither sample was found to contain a significant abundance of waterlogged plant remains. Sample 1 from the grave fill (115) did, however, contain large numbers of

wood chips, some of which were larger than 8mm and therefore suitable for wood identification. Small numbers of wild plant seeds, leaves and roots were present in the sample labelled SK2 residue, which was from the fill of the coffin, but the majority of this sample was made up of hairs/fibres and roots.

4.10.3 Conclusions and recommendations for further work

Preservation of plant remains was by waterlogging although no significant abundance of material, other than the wood chips in sample 1 (115), was found to be present Large numbers of hairs or fibres were also present in the SK2 residue from the coffin fill. No further analysis of the waterlogged plant material in these samples would therefore be recommended, due to low diversity and low density. The greater than 8mm fraction of sample 1 (115) did, however, yield between 10 and 50 wood chips which would be of a suitable size to enable wood identification, although it is doubtful whether this would add to the archaeological understanding of the site.

Sample No.	**< 1 >**								
Context No.	1 1 5					SK2			
Volume (litres)	1					3			
Size Fraction	>8mm	>2mm	>1mm	>500µm	>300µm	>2mm	>1mm	>500µm	>300µm
seeds	n/a	-	-	-	-	-	+	-	-
leaves	n/a	n/a	n/a	n/a	n/a	+	+	-	-
wood (chips)	+	+++ +	+++ +	+++ +	+++ +	-	-	-	-
roots	-	-	-	-	-	++	++	++	+++
hairs / fibres	n/a	n/a	n/a	n/a	n/a	+++	+++ +	+++ +	+++ +

Abundance scale representing number of items of waterlogged material - <10, + >10, ++ >50, +++ >100, ++++ >500, n/a = none present

Table 7 – Waterlogged plant material from excavations at the Upper Chapel

4.11 Analysis of the coffin wood

by Dr I. Tyers

4.11.1 Introduction

Samples of timbers from the Upper Chapel supplied for dendrochronological analysis and wood identification comprised 6 sides of a coffin [114], 5 suitable for dendrochronological analysis and 1 suitable as a wood identification sample. All the wood identification samples were successfully analysed. Tree-ring analysis identified the five boards from Upper Chapel coffin were derived from a single, currently undatable, tree.

4.11.2 Methodology

The dendrochronological samples were all oak (Quercus) and supplied as cross-sections. The wood identification sample was a non-oak fragment. For the wood identification analysis microscopic cross-section's were taken from each sample in 3 planes (tangential, radial, and transverse), these were mounted on glass slides with

cover slips. The features were then examined at up to 400x magnification and compared with illustrations and keys in Schweingruber (1978).

Each tree-ring sample was assessed for the number of rings it contained, and whether the sequence of ring widths could be reliably resolved. For dendrochronological analysis samples need to contain 50 or more annual rings, and the sequence needs to be free of aberrant anatomical features such as those caused by physical damage to the tree whilst it was still alive. Standard dendrochronological analysis methods (see e.g. English Heritage 1998) were then applied to each suitable sample. The sequence of ring widths in each sample were revealed by preparing a surface equivalent to the original horizontal plane of the parent tree with a variety of bladed tools. The width of each successive annual growth ring was revealed by this preparation method. The complete sequence of the annual growth rings in the suitable samples were then measured to an accuracy of 0.01mm using a micro-computer based travelling stage. The sequence of ring widths were then plotted onto semi-log graph paper to enable visual comparisons to be made between sequences. In addition cross-correlation algorithms (e.g. Baillie & Pilcher 1973) were employed to search for positions where the ring sequences were highly correlated (Tyers 2004). Highly correlated positions were checked using the graphs and, if any of these were satisfactory, new composite sequences were constructed from the synchronised sequences. Any t-values reported below were derived from the original CROS algorithm (Baillie & Pilcher 1973). A t-value of 3.5 or over is usually indicative of a good match, although this is with the proviso that high t-values at the same relative or absolute position needs to have been obtained from a range of independent sequences, and that these positions were supported by satisfactory visual matching.

4.11.3 Results

The six coffin boards provided for analysis comprised an ash (Fraxinus) base board, and five oaks, details of the oak boards are recorded in **Table 8** below. The use of non-oak boards for the bases of coffins appears to be relatively routine in early modern Sheffield, further examples having been seen at the Carver St Methodist Chapel excavations. Presumably this is cheaper, and the bases cannot be seen. The five rather fine oak boards are identified by tree-ring analysis as being obtained from a single tree, as summarized in **Table 9** below. There is a very high probability that the head and foot board represent the inner and outer parts of the same original board, as shown in **Figure 11** below. The composite series from these boards has been compared with English, European and some other oak reference data without successfully identifying a date for the material. It remains possible, although relatively unlikely, that the timber was derived from an aberrant local tree. It seems more likely that these boards were imported from somewhere for which currently there is no contemporaneous reference data.

Context/ Sample	Size (mm)	Rings	Sap Rings	Relative Date of measured sequence	Interpreted result
114 foot	120 x 12	100	-	R109-208	-
114 head	140 x 12	92	-	R16-107	-
114 lid	270 x 12	211	-	R-4-206	-
114 north	255 x 12	205	-	R1-205	-
114 south	250 x 12	179	-	R4-182	-

Dates given are relative with Relative Datum Year 1 at the beginning of the north board sequence. All the material is derived from a single tree.

Table 8 – Details of the analysed oak (Quercus) dendrochronological samples from coffin [114]

	head	lid	north	south
foot	\	16.22	15.14	12.10
head		12.76	12.75	15.88
lid			25.84	19.88
north				19.06

Table 9 – The t values (Baillie & Pilcher 1973) between the individual series from coffin [114] individual boards. \ overlap < 15 years. All are different boards derived from the same tree

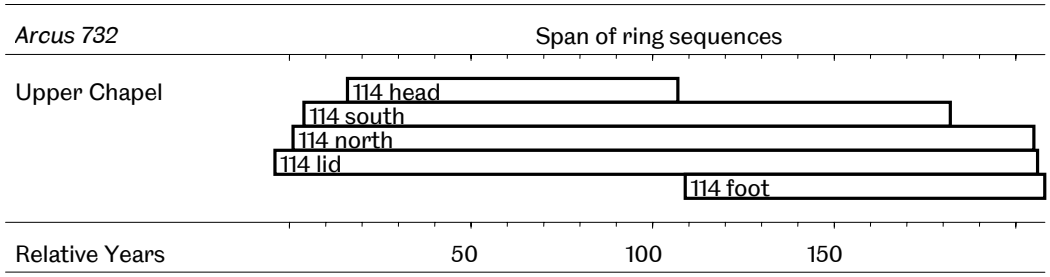

Figure 11 – Bar diagram showing the relative dating positions of the 5 sequences from coffin [114]

5 DISCUSSION

5.1 Medieval buried soil

The fortuitous discovery of the medieval buried soil preserved underneath the later wall footings of the boundary wall between the Upper Chapel and Pepper Alley has resulted in the amassing of one of the largest assemblages of medieval pottery recovered from an archaeological site in Sheffield, with the obvious exception of the assemblages recovered from excavations at Sheffield Castle.

The area around the Upper Chapel was part of the medieval town of Sheffield and the area is therefore likely to have been developed from an early date. Pepper Alley and

the Upper Chapel are shown on the earliest known map, produced by Ralph Gosling in 1736, which depicts the town prior to its late 18th-century expansion (May and Jessop 2003). This map also shows much of the medieval layout of the town preserved, with Prior Gate (later the High Street) linking the castle and market to the parish church (later the Cathedral). Fargate appears to have been part of the medieval town, an extension of Prior Gate, with tenements along the street frontage and gardens behind. Therefore, there was always potential for excavations in this area to uncover evidence for medieval activity.

However, previous excavations in the area demonstrated the high level of truncation that had occurred during late 18th- and 19th-century development of the area. Excavations along the course of Pepper Alley concluded that terracing and truncation of the original ground surface had taken place before laying of road surfaces associated with the redevelopment of Norfolk Row during the mid 19th century (Bell 2005). Excavations on the neighbouring Carmel House site showed that further truncation of the original ground surface probably took place in the context of terracing during the construction of the Carmel House and its associated buildings at the end of the 19th century (Baker 2006). However, the whole area was subject to several episodes of development and redevelopment during the 18th and 19th centuries and it is impossible to securely date the terracing and truncation to any particular phase. Indeed, it is likely that the truncated profile encountered over the area is the cumulative result of numerous phases of levelling and redevelopment, beginning around 1700 with the construction of the Upper Chapel and ending around 1900 with the construction of Carmel House.

Such truncations would have removed any archaeological evidence from earlier periods unless unusual preservation conditions existed. Such unusual conditions did occur on the Carmel House site as the lower portion of a medieval well had survived later truncation due to the depth of the feature (Baker 2006). A depth of 2.25m sunk into the natural sandstone bedrock had been preserved beneath the only portion of the 19th-century building to have been constructed without cellars. An important assemblage of medieval pottery was recovered from the well demonstrating that it was in use by the 13th century and continued in use until the 16th century, which represents a rare stratified collection of medieval material from Sheffield.

Fortunate preservation conditions have also occurred at the Upper Chapel, despite the original ground surface having yet again suffered another episode of truncation probably associated with terracing during the establishment of the chapel yard during the early 18th century. The southern boundary wall of Pepper Alley clearly existed before this date as it afforded protection from the terracing to the section of buried soil beneath. Medieval pottery discovered within this buried soil clearly demonstrated that the deposit formed the original level of the ground surface between the late 12th or early 13th and 15th century, although some of the pottery could date from the mid-11th century. The later footings of the boundary wall were clearly constructed not long after the 15th century due to the complete lack of any later pottery within the buried soil, despite the presence of residual pottery dating to the 16th and 17th century across other areas of the site demonstrating activity on the site during these centuries.

It is clearly unfortunate that it was impossible during machining to detect the narrowing of the buried soil as it became progressively more affected by the later terracing to the south of the boundary wall. This has resulted in a considerable amount of the medieval pottery having been included within the list of unstratified artefacts. It can be assumed that this medieval pottery will most probably have been

derived from the narrowing buried soil, as it was observed to have been collected from the northern edge of the site. It could also be suggested that the unstratified pottery dating to the 16th and 17th century might have been derived from this soil where it had existed away from the wall and had continued in use as the original ground surface prior to the 18th-century truncation.

The securely datable portion of the buried soil preserved beneath the later boundary wall is contemporary with the earlier phases of the use of the medieval well on the neighbouring Carmel House site. It appears most likely that the line of Pepper Alley could not have existed until the very latest part of the medieval period, unless of course it originally ran on a slightly different line for which evidence has been lost during later truncations. The buried soil will have been part of the ground surface of the area around or within the gardens and burgage plots that existed behind the houses on the Fargate street frontage, within which the medieval well would have been an important feature.

The significant amount of pottery relating to pottery production contained within the assemblage provides a rare insight into medieval activity within Sheffield. Some or all of the sherds within the assemblage are related to pottery production, either on the site or in the vicinity. The homogeneity of the assemblage suggests that it was all produced within a restricted area in contrast to typical medieval assemblages in which a wide variety of local and regional material occurs within the same contexts. The assemblage also contains a large number of overfired sherds, some of which show signs of distortion typical of kiln wasters and misfired vessels. There are also a few fragments of stone and fired clay that were probably part of kiln fittings and furniture. There is no archaeological evidence for the kiln itself on this or any of the previously excavated sites in the area, most probably again because any evidence was removed by later truncation, although of course the pottery could have been dumped some location from the location of manufacture. Characterisation studies of the medieval pottery have clearly demonstrated that a proportion of the pottery assemblage, although part of a broader tradition of the manufacture of Northern Gritty ware, is unique in manufacture to Sheffield and will have been produced locally. The evidence suggests that this is one of the most important assemblages of medieval pottery to have been excavated in Sheffield in recent years in that it represents the first excavated evidence for medieval industry within the medieval core of the town. Conversely, the presence of York Gritty ware and Brackenfield ware, the latter of which to date has not been identified outside north-east Derbyshire, within the assemblage indicates that contrary to the (admittedly sparse) evidence from other sites in the city, the Don Valley was not the only source of medieval pottery drawn on by the inhabitants. This means that the medieval pottery assemblage from Sheffield as a whole is beginning to resemble typical assemblages from medieval towns in the wider area which generally include a wide variety of regional wares as well as locally manufactured wares

The pottery assemblage from the Upper Chapel is one of the most important assemblages of medieval pottery to have been excavated in Sheffield in recent years. This importance is due to not only the insight it provides into the medieval pottery production of this unique fabric type, but also to the opportune insight it provides us along with the contemporary assemblage from the Carmel House well into medieval activity within this area of Sheffield. The importance of the information that the combination of these two sites provide is such that publication in an appropriate journal of the results derived from the full reports relating to these two sites is recommended.

5.2 Eighteenth and nineteenth century Unitarian burial ground

Only four graves were present within the footprint of the electricity substation and associated service trench within the Unitarian burial ground of the Upper Chapel. This is obviously only a very small proportion of the total number of over 160 graves recorded by the burial plans and registers as being located within the precincts of the Upper Chapel. The damp and waterlogged soil conditions had resulted in varied preservation conditions across the site, which affected the four skeletons contained within separate coffins found in the excavated graves. Only one of these graves was fully excavated and found to contain two skeletons. Only fragmentary remains were discovered of both SK[1] and the coffin in which it had been buried due to the damp soil conditions. However, the waterlogged conditions deeper down the grave had resulted in the virtually intact survival of the lower coffin SK[2], which allowed the interior to retain water and therefore preserve the contents and allow their complete retrieval. Of the other three graves, two were barely impacted upon and no burials discovered within the excavated depth. Only a portion of the fourth grave was impacted upon and was therefore only partially excavated; only fragmentary remains survived of SK[3] and SK[4] and the coffins within which they had been buried, again due to the damp soil conditions, although the lower coffin demonstrated better preservation suggesting that waterlogged conditions may exist deeper down the grave. The small number of graves and burials excavated combined with the poor preservation of the majority of the skeletons precludes the possibility of any making any observations about the interred population of the burial ground.

The pottery derived from the excavated grave fills suggests an 18th- or early 19th-century date for the graves, but with a small residual component of sherds dating from the 13th to the 17th century, which is what would be expected on a site that has seen continuous activity since the medieval period. The clay tobacco pipe also supports this 18th- or early 19th-century date, although again with a residual component dating from the 17th century. The date of the material culture excavated from the graves reflects the documentary evidence from the burial records, which record the date span of burials as 1723 to 1854, and the evidence on the legible inscriptions recorded during the gravestone survey of the chapel yard, which give a date span of 1717 to 1858.

This dating evidence makes the Unitarian burial ground of the Upper Chapel contemporary with other excavated cemeteries within Sheffield, such as the Methodist Chapel at Carver Street (McIntyre and Willmott 2003) and Sheffield Cathedral (O'Neill, Baker and Swales 2007). However, the Upper Chapel differs greatly from either of these two cemeteries in that it saw the burial of only a small number of individuals in comparison to these larger cemeteries. The earliest burial records demonstrate that the cemetery associated with the former parish church of St. Peter and St. Paul (later the Cathedral) was in use as a burial ground from at least the 16th century until the passing of the Burial Act in 1855. As a major parish church belonging to the Church of England the cemetery witnessed a phenomenal number of burials, there are 34,186 records of burials at the church between 1813 and 1855 alone. The Methodist Chapel at Carver Street was constructed in 1805 and was the largest Methodist Chapel in Sheffield. The cemetery was regarded as the only major burial ground for the non-conformist population of Sheffield during the first half of the 19th century (Hunter 1869). The burial records span the period between 1806 and 1855 and witnessed the burial of an estimated 1,600 inhumations (Witkin and Belford 2000).

Archaeological evidence from 18th- and 19th-century burials within all three of these

cemeteries has demonstrated that graves were regularly re-used during this period, with multiple 'stacked' burials within the same grave cut. How far this was just the re-use of the graves in the context of family plots or was instead due to overcrowding is unclear from the archaeological evidence at Sheffield Cathedral and the Methodist Chapel at Carver Street. At Sheffield Cathedral the original level of the graveyard had been greatly affected by modern construction during the 20th century and none of the grave slabs recorded during the gravestone survey were in their original locations and so could not be related to any specific graves. There was also poor preservation of coffin nameplates at Sheffield Cathedral meaning that the name of a maximum of one individual could only ever be identified within any one grave. The preservation of coffin nameplates was slightly better from the Methodist Chapel at Carver Street and two legible nameplates from within the same grave both had the same surname. However, there was a widely documented lack of space within 19th-century burial grounds that led to severe overcrowding and the eventual passing of the 1855 Burial Act, which prevented further interment within inner-city cemeteries. The excavated graves from Sheffield Cathedral certainly demonstrate that a lack of respect was shown to earlier burials during later inhumations; with burials being pushed aside whilst the bodies and coffins were still in an early state of decomposition, or previous burials being removed during re-excavation of the grave and then replaced around the edges of the coffin belonging to the later inhumation.

However, the re-use of graves at the Upper Chapel appears to have occurred only within the context of family plots. The Upper Chapel appears unique out of the three cemeteries in that it can be confidently demonstrated to have the potential for all the graves to be present in an undisturbed state. It appears that the location of the gravestones at the time of survey still corresponded with the location of the burials they originally belonged to. The location of the gravestones had certainly not changed since the 1900 plan showing that the graveyard had been preserved unaffected by modern intrusion until the recent excavations. It is assumed that the gravestones originally stood upright due to the fact that the visible writing on the gravestones is always at the top of the stone. However, the limited evidence from the excavation of the four graves demonstrates that in three cases the position of a gravestone corresponded almost exactly with a grave underneath, and in the last case of a family plot where there was room for a double grave two gravestones had been mounted on the wall of the Chapel directly adjacent to the location of this plot.

Again the limited excavation evidence clearly demonstrates that respect was shown to the earlier burials when re-excavating the graves for the deposition of later inhumations. In all cases the re-excavation of the graves appears to have occurred only down as far as to reveal the coffin underneath but did not disturb it. The complete lack of any disarticulated human remains discovered within the grave fills or within the graveyard soil and general overburden above appears to indicate that burials had not been disturbed. Although overall conditions were poor for bone preservation and only a small area of the graveyard was excavated, it is unusual not to find any disarticulated human bone. The situation was completely different at both Sheffield Cathedral and the Methodist Chapel at Carver Street where considerable quantities of disturbed disarticulated human remains were discovered. It is clear that there appeared to be no issues of overcrowding affecting the burial ground at the Upper Chapel, presumably this is mainly due to the comparatively small number of people who wished to be interred at this small nonconformist chapel.

There is also the possibility that the Upper Chapel could differ from the other two contemporary cemeteries excavated in Sheffield in that there is the potential for a

higher percentage of the inhumations to have been of a higher or wealthy social status. However, this is clearly only an uncertain surmise at present given the small number of excavated burials. Skeletal evidence from the excavated burials at Sheffield Cathedral clearly showed the interred individuals to derive from a working class background, and the evidence from the coffin fittings supports this as they were in the main highly decorated fittings that were fashionable in the 19th century and could be mass produced at a relatively inexpensive cost. Inhumations at the Methodist Chapel at Carver Street represented a good cross-section of Sheffield's 19th-century population, with both significant public figures and members of the working class being interred. There are several indications that at least a proportion of inhumations at the Upper Chapel were of a higher or wealthy social status. The evidence from the gravestone survey shows that several of the ministers of the chapel were buried in the graveyard as were several members of the Sylvester family, including Field Sylvester who owned the Sylvester Wheel and associated cutlery works and as such would have been a prominent businessman in Sheffield.

The evidence from the intact coffin also suggests that the burials excavated may have been of a higher or wealthy social status. The majority of the intact coffin was made from oak, which was a more expensive wood than many other alternatives, and only the base was made from less expensive elm, presumably because the base could not be seen and gave the illusion of a top quality expensive coffin. Dendrochronological analysis of the oak demonstrated that the rather fine oak timbers were all derived from the same tree and they had possibly been imported. This reflects the results of the dendrochronological analysis of the waterlogged coffins from the Methodist Chapel at Carver Street, which were also single-break coffins constructed from mainly oak, although the bases of these coffins were constructed from Scots pine and there was also a coffin constructed completely from elm. Again these coffins demonstrated internal matching within oak timbers and also could not be dated suggesting that they were imported.

The evidence from the coffin fittings and grave goods also suggests that the burials excavated may have been of a higher or wealthy social status. There is a complete lack of any ornate coffin fittings recovered from the graves even though the recovery of coffin nails and upholstery studs demonstrates that conditions existed for preservation, although again this may be as a result of the small number of burials excavated. This lack of ornate coffin fittings differs from the situation at both Sheffield Cathedral and the Methodist Chapel at Carver Street where numerous ornate coffin fittings were recovered. Many non-conformists, particularly Quakers, regarded that excessive displays of wealth were in opposition to their beliefs and as a consequence the display of wealth was not through elaborate coffin furnishings and fittings but through the use of expensive materials in the construction of the basic coffin (Mahoney 2005). However, the situation at the Methodist Chapel at Carver Street demonstrates that this belief was not held by all sections of non-conformist society.

Given the importance of the potential for the burial ground to exist in a hitherto undisturbed state of original preservation and the potential for at least a proportion of the skeletons and coffins to be exceptionally well preserved due to the waterlogged ground conditions, it is of paramount importance that any further disturbance to the graveyard in the future is carried out under appropriate archaeological supervision in accordance with archaeological conditions set out within the planning process.

6 ARCHIVE

The site archive will be deposited with Sheffield City Museum, Weston Park under accession number SHEFM:2005.8. Copies of this report will be deposited with the archive and with the South Yorkshire Sites and Monuments Record.

7 COPYRIGHT

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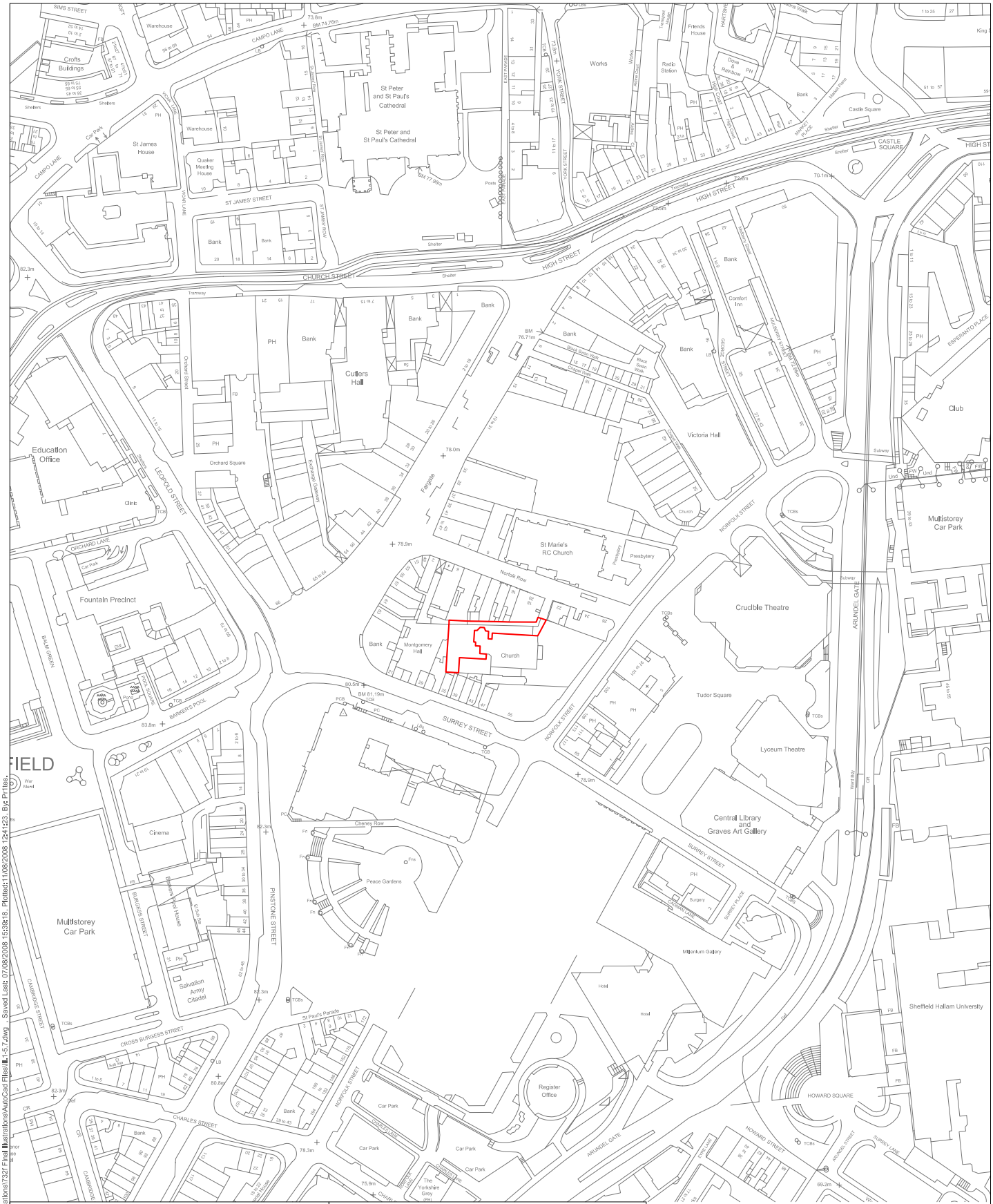
9 ILLUSTRATIONS



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N

Project: **Upper Chapel, Sheffield**

Title: **Site location**

Scale	Date
1:2500	July 2008
NGR	Drawn
SK 3541 8725	Chris Swales
Project No.	Illustration No.
732f	**1**

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Indicates top of gravestone

X Not a gravestone

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Project:
Upper Chapel, Sheffield

Title
Gravestone Location Plan

Scale	Date
1:150	July 2008
NGR	Drawn
SK 3541 8725	Chris Swales
Project No.	Ill. No.
732f	**2**

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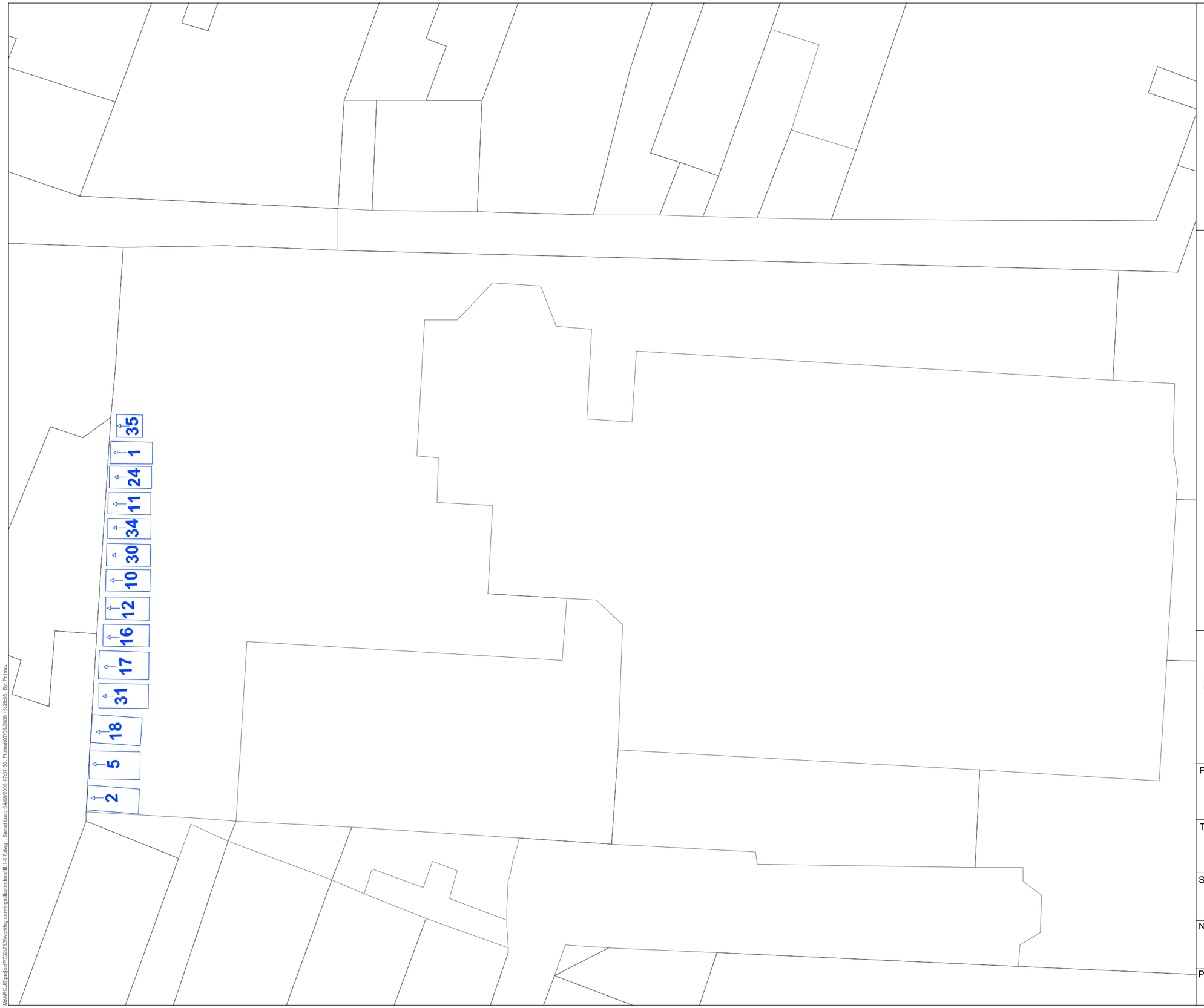

0 5m

Indicates top of gravestone

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Project:
Upper Chapel, Sheffield

Title
Location of repositioned gravestones

Scale	Date
1:150	July 2008
NGR	Drawn
SK 3541 8725	Jo Mincher
Project No. **732f**	Ill. No. **3**

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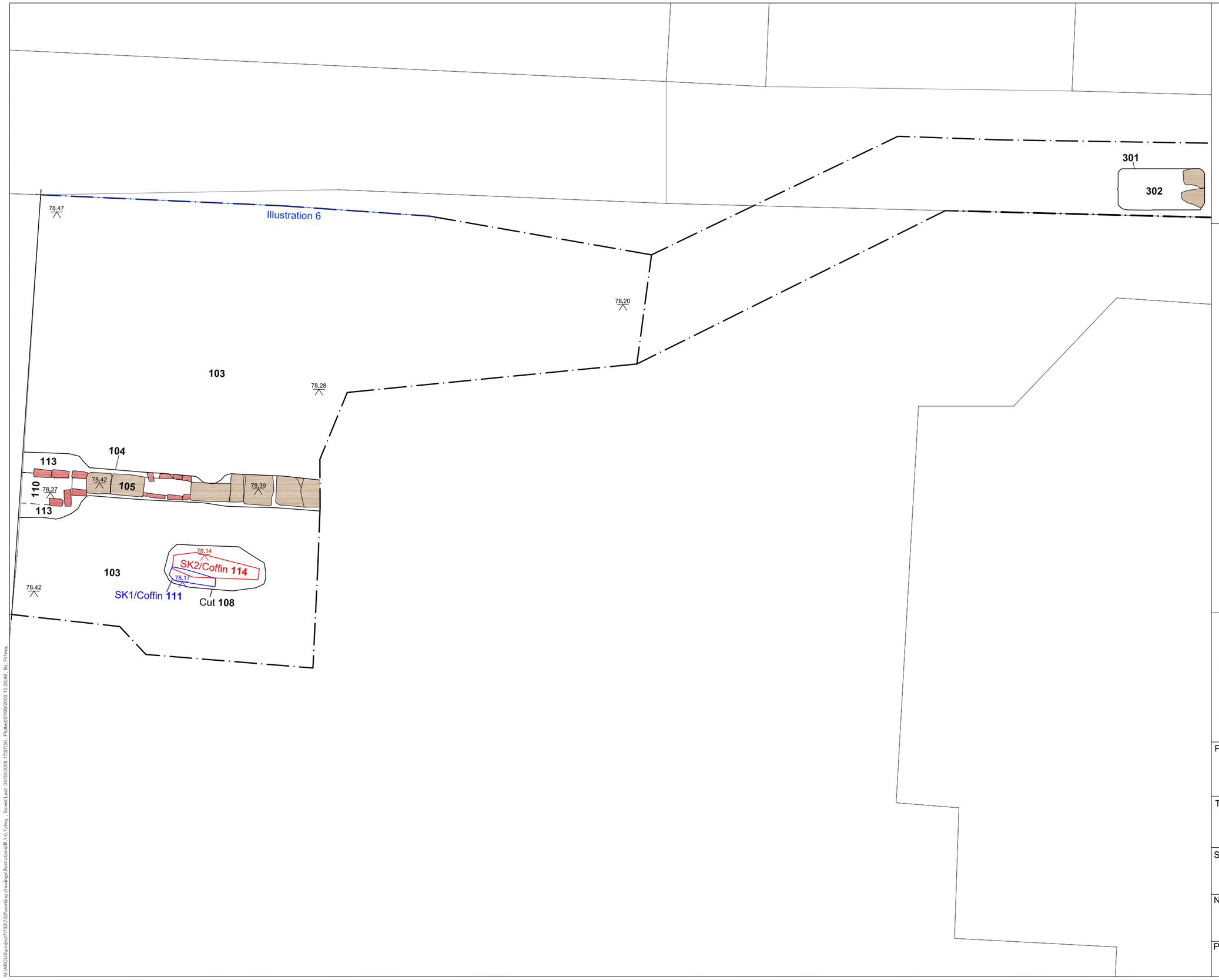
N

Project:
Upper Chapel, Sheffield

Title **Location of evaluation trench, service trench and watching brief burials**

Scale	Date
1:150	July 2008
NGR SK 3541 8725	Drawn Chris Swales
Project No. **732f**	Ill. No. **4**



0 2m

Key

- Red brick wall
- Red brick surface
- Stone wall
- Stone surface
- Concrete
- Mortar

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Project:
Upper Chapel, Sheffield

Title
Plan of evaluation trench

Scale	Date
1:50	July 2008
NGR	Drawn
SK 3541 8725	Chris Swales
Project No. **732f**	Ill. No. **5**

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Cut **201**

77.78

77.84

Cut **203**

77.80

Mortar pad
205

77.82

Cut **213**

77.65

77.05

SK3/Coffin **215**

77.71

77.05

SK4/Coffin **214**

76.75

77.07

77.05

76.75 Lowest coffin

77.73

76.75

77.76

77.72

77.72

Cut **208**

77.85

0 1m

Key

- Red brick wall
- Red brick surface
- Stone wall
- Stone surface
- Concrete
- Mortar

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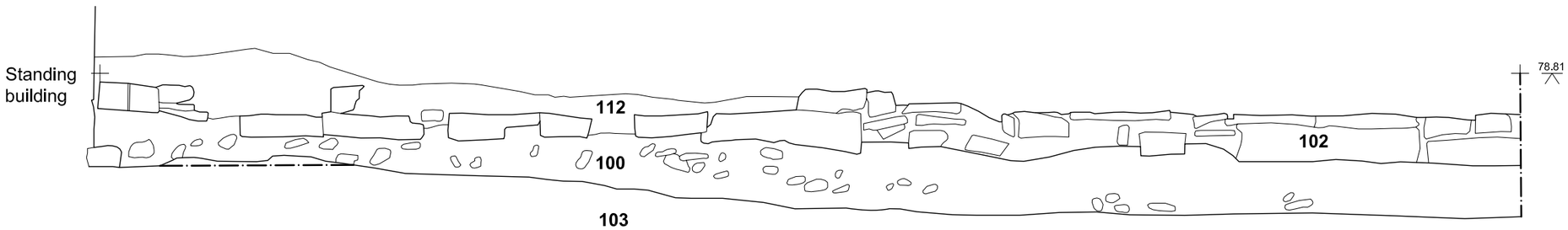
Project:
Upper Chapel, Sheffield

Title
Plan of watching brief burials

Scale	Date
1:25	July 2008
NGR	Drawn
SK 3541 8725	Chris Swales
Project No. **732f**	Ill. No. **6**

W

E



0 1m

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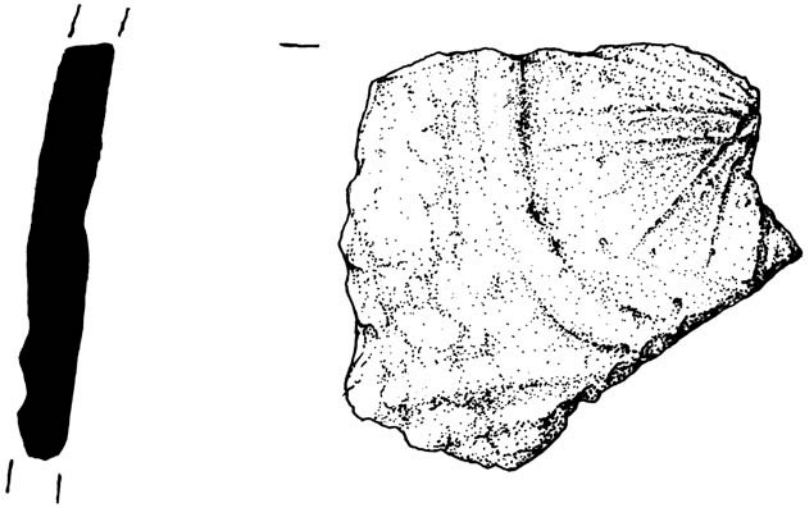
Project:
Upper Chapel, Sheffield

Title
South facing section of evaluation trench

Scale	Date
1:20	July 2008
NGR	Drawn
SK 3541 8725	Chris Swales
Project No.	Illustration No.
732f	**7**



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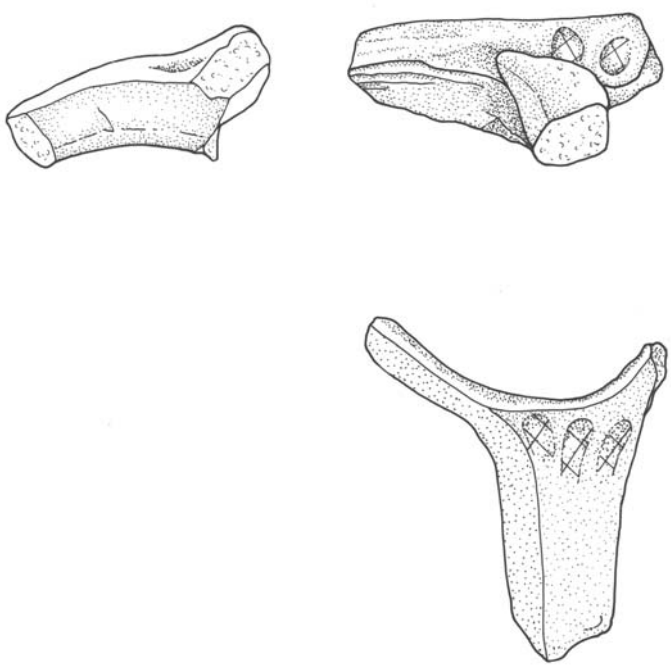
Project: Upper Chapel, Sheffield		Scale: 1:1	Date: July 2008
Title. Context [100]: Decorated body sherd of Reduced Gritty ware jug		NGR: SK 3541 8725	Illustrator: Adam Tinsley
		Project No.: 732f	Illustration No.: 8



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Project.
Upper Chapel, Sheffield

Title.
Context [100]: Rim and handle of Brackenfield 001 jug

Scale.
as shown

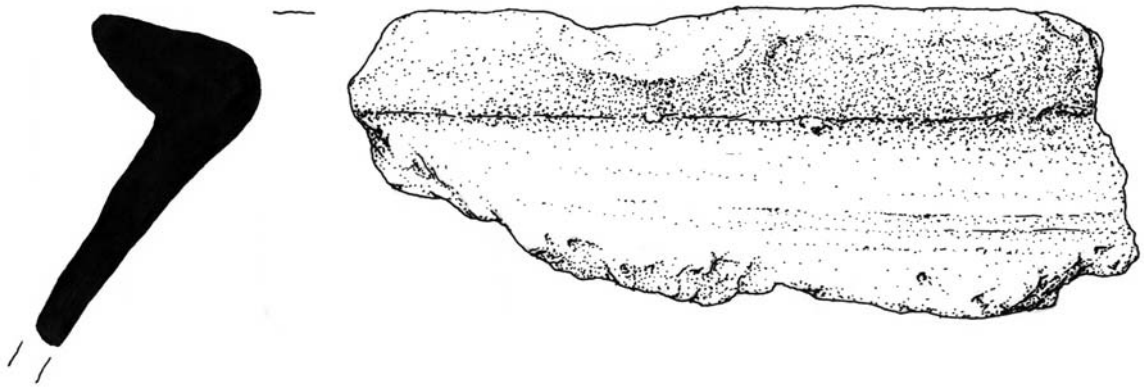
Date.
July 2008

NGR.
SK: 3541 8725

Illustrator.
Jo Mincher

Project No.
732f

Illustration No.
9



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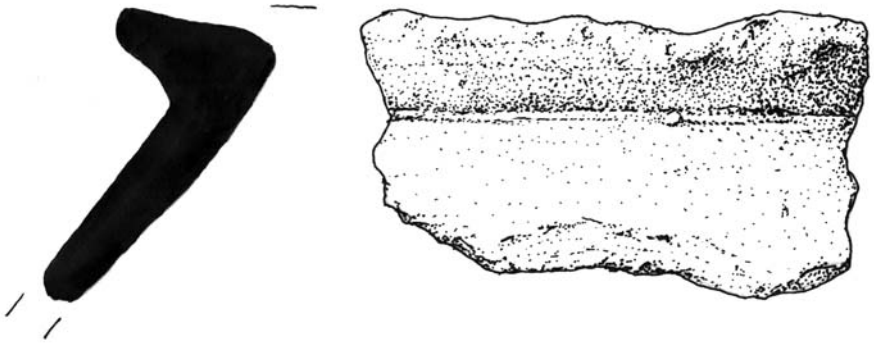
Project: Upper Chapel, Sheffield		Scale: 1:1	Date: July 2008
Title. Context [100]: Rim of Oxidised Gritty ware jar, undecorated		NGR: SK 3541 8725	Illustrator: Adam Tinsley
		Project No.: 732f	Illustration No.: 10



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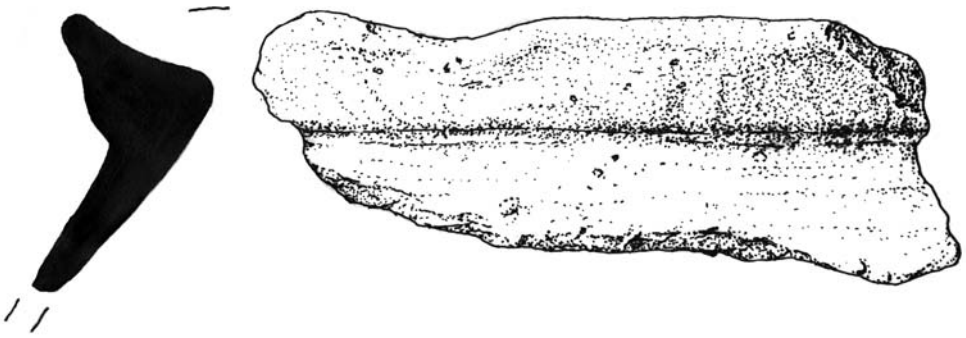
Project: Upper Chapel, Sheffield		Scale: 1:1	Date: July 2008
Title. Context [100]: Rim of Oxidised Gritty ware jar, dark self slip finish		NGR: SK 3541 8725	Illustrator: Adam Tinsley
		Project No.: 732f	Illustration No.: 11



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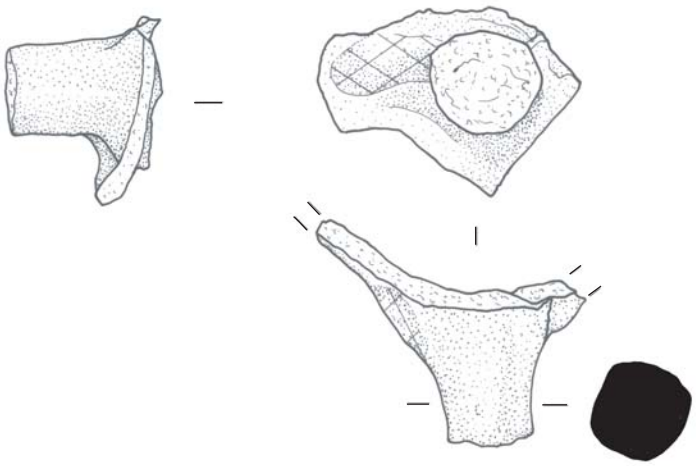
Project: Upper Chapel, Sheffield		Scale: 1:1	Date: July 2008
Title. Context [100]: Rim of Oxidised Gritty ware jar, green glaze exterior		NGR: SK 3541 8725	Illustrator: Adam Tinsley
		Project No.: 732f	Illustration No.: 12



0 5cm

Thumb marks

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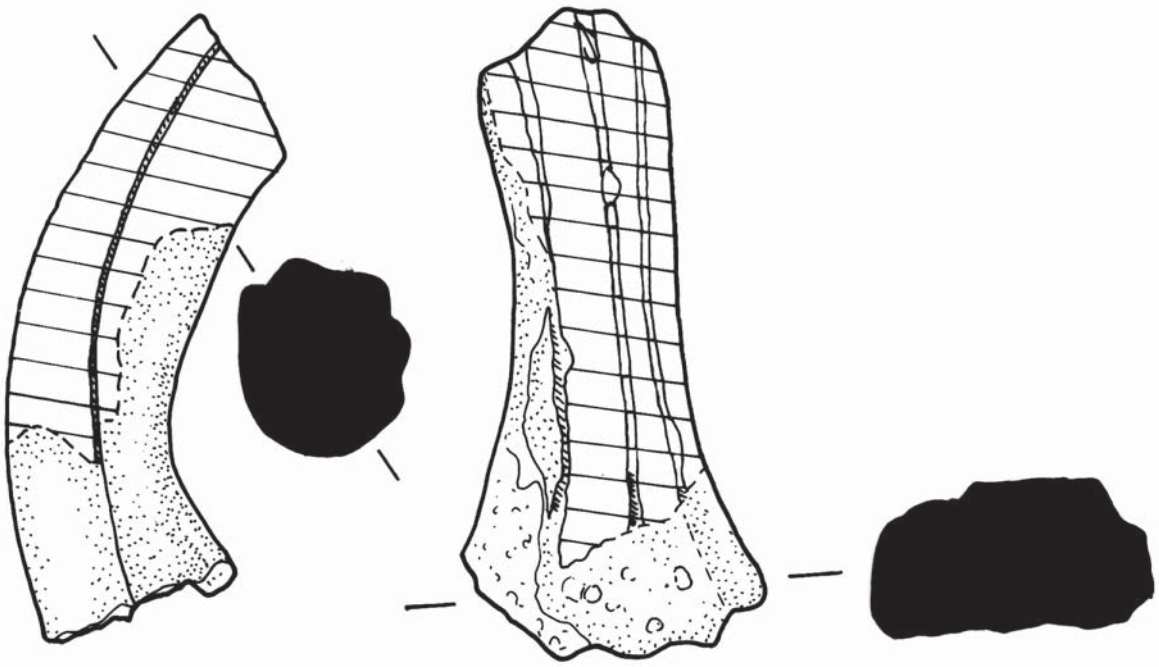
Project. **Upper Chapel, Sheffield**		Scale. as shown	Date. July 2008
Title. **Unstratified: Rod handle of Oxidised Gritty ware jug.**		NGR. SK: 3541 8725	Illustrator. Jo Mincher
		Project No. **732f**	Illustration No. **13**



0 5cm

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Project.
Upper Chapel, Sheffield

Title.
Unstratified: Rod handle of Oxidised Gritty ware jug

Scale.
as shown

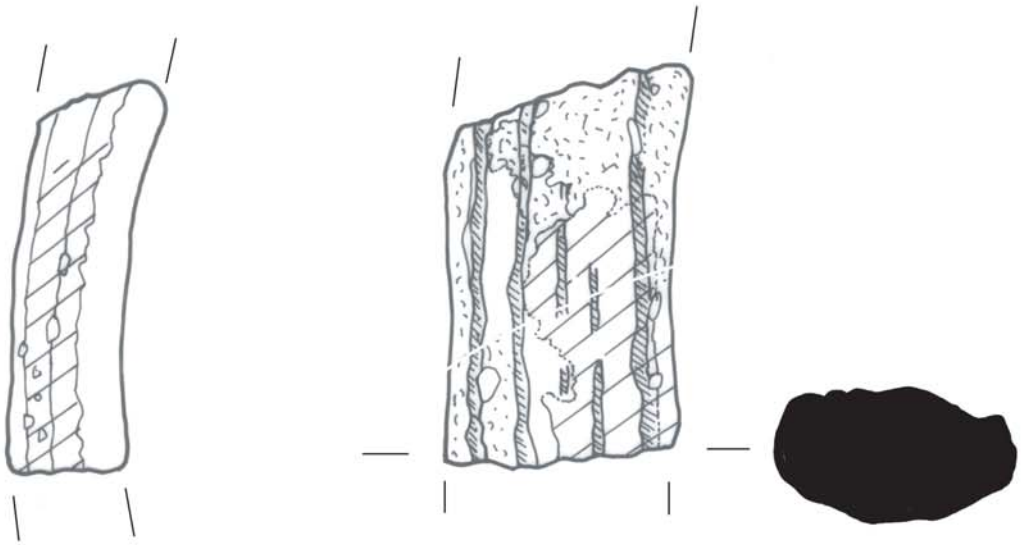
Date.
July 2008

NGR.
SK: 3541 8725

Illustrator.
Jo Mincher

Project No.
732f

Illustration No.
14



0 5cm

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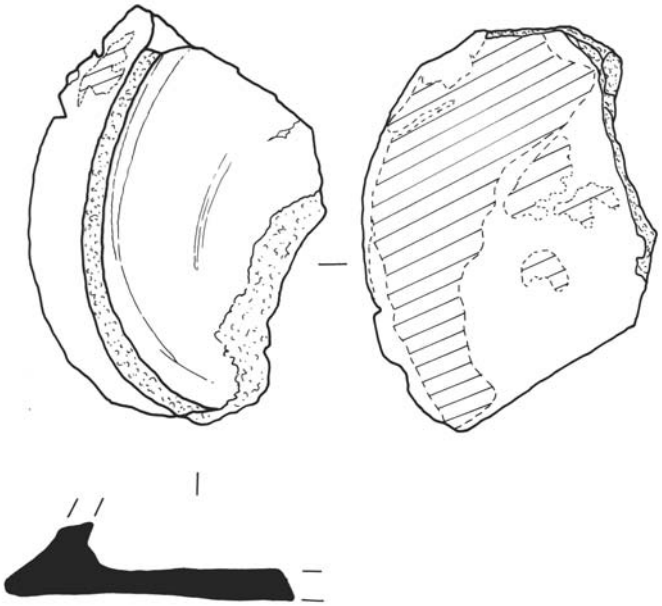
Project. **Upper Chapel, Sheffield**		Scale. as shown	Date. July 2008
Title. **Context [100]:Strap handle of Oxidised Gritty ware jug**		NGR. SK: 3541 8725	Illustrator. Jo Mincher
		Project No. **732f**	Illustration No. **15**



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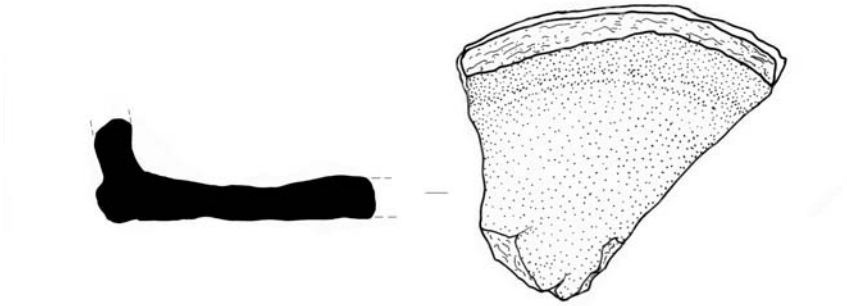
Project. **Upper Chapel, Sheffield**		Scale. as shown	Date. July 2008
Title. **Context [100]:Base of Reduced Gritty ware baulster jug.**		NGR. SK: 3541 8725	Illustrator. Jo Mincher
		Project No. **732f**	Illustration No. **16**



0 5cm

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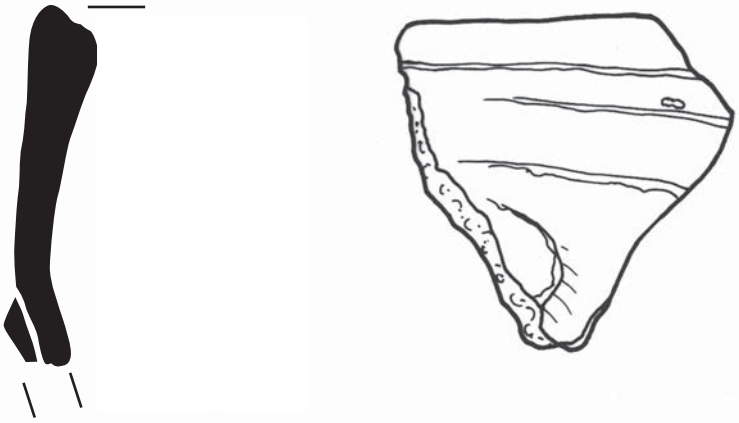
Project. **Upper Chapel, Sheffield**		Scale. as shown	Date. July 2008
Title. **Context [100] Base of Oxidised Gritty ware jug/jar**		NGR. SK: 3541 8725	Illustrator. Jo Mincher
		Project No. **732f**	Illustration No. **17**



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Fax: 0114 2797158

Project.
Upper Chapel, Sheffield

Title.
Context [100]:Rim of Oxidised Gritty ware jug

Scale.
as shown

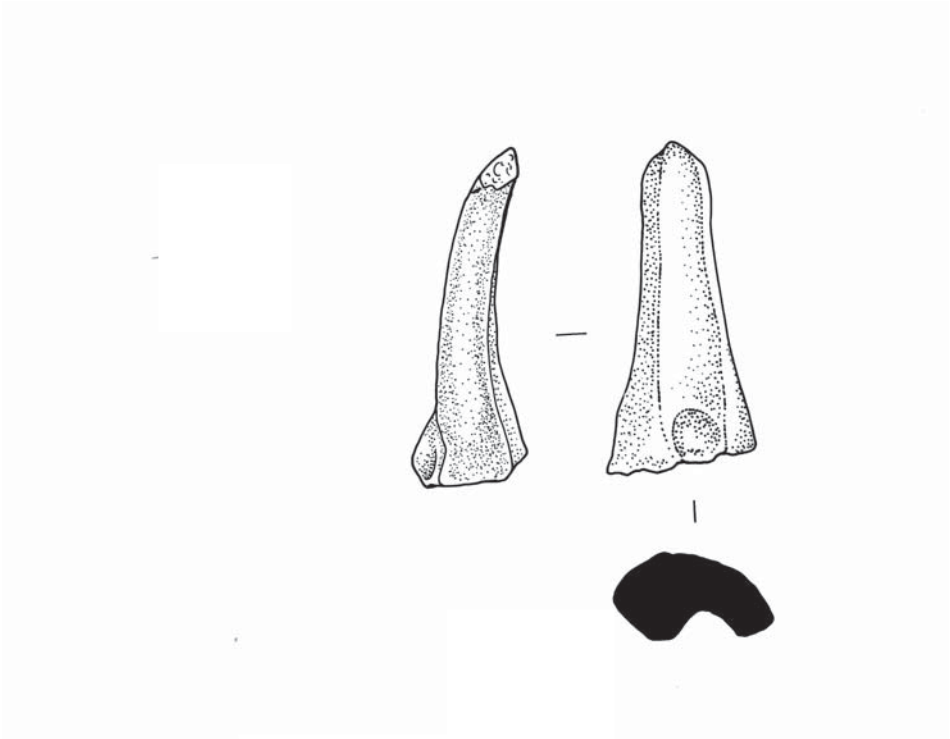
Date.
July 2008

NGR.
SK: 3541 8725

Illustrator.
Jo Mincher

Project No.
732f

Illustration No.
18



0 5cm

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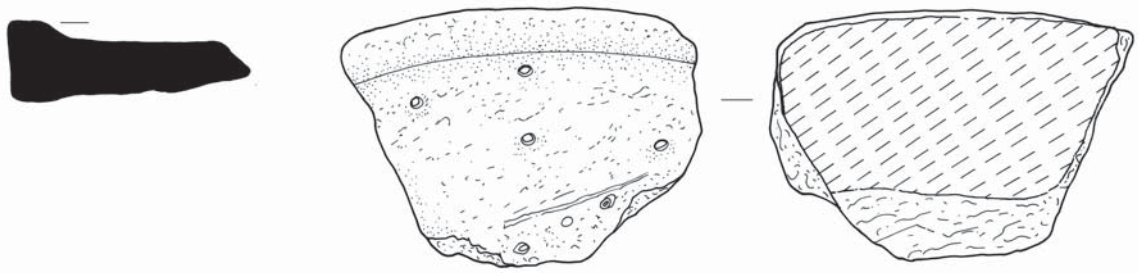
Project. **Upper Chapel, Sheffield**		Scale. as shown	Date. July 2008
Title. **Context [100]:Rim of Oxidised Gritty ware disc**		NGR. SK: 3541 8725	Illustrator. Jo Mincher
		Project No. **732f**	Illustration No. **19**



Decayed Glaze

0 5cm

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Project.
Upper Chapel, Sheffield

Title.
Context [100]:Rim of Oxidised Gritty ware disc

Scale.
as shown

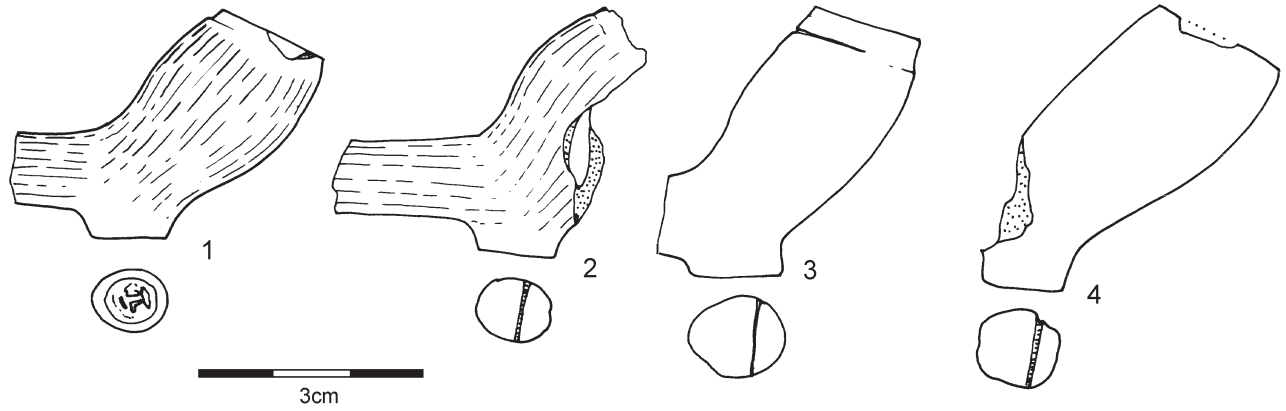
Date.
July 2008

NGR.
SK: 3541 8725

Illustrator.
Jo Mincher

Project No.
732f

Illustration No.
20



1. Heel bowl *c*1650-1670. Good burnish; no internal bowl cross; rim bottered but not milled; stem bore 7/64". The heel is satmped with the initials WL and is most likely a product of William Lee (1) of Rotherham *fl*11655-1680. (Trench 1; U/S; Bowl B)

2. Heel bowl *c*1660-1680. Good burnish; no internal bowl cross; rim bottered but not milled; stem bore 7/64"; milled band across the heel. (Trench2; U/S; bowl A)

3. Heel bowl *c*1660-1690. Not burnished; no internal bowl cross; rim bottered with a groove running around it rather than a band of milling; stem bore 7/64". Cut mark across the heel. (Trench 2; Context 200).

4. Heel bowl *c*1680 - 1710. Not burnished; no internal bowl cross; rim bottered but not milled; stem bore 7/64", Milled band across the heel. (Trench 1; U/S; Bowl A)

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Project. **Upper Chapel, Sheffield**		Scale. as shown	Date. July 2008
Title. **Clay tobacco pipe heel bowls**		NGR. SK: 3541 8725	Illustrator. S.D.White
		Project No. **732f**	Illustration No. **21**

10 PLATES

Plate 1 – SK[1] in coffin [111] within grave [108]

Plate 2 – SK[2] in coffin [114] within grave [108]

Plate 3 – Grave cut [108]

Plate 4 – Double grave [203]

Plate 5 – Graves [207] and [208] within multi-occupancy grave [213]

Plate 6 – SK[3] (with coffin [214] to the left) within grave [207]

Plate 7 – Stain of coffin [215] visible in grave fill (216) (with coffin [214] to left) within multi-occupancy grave [213]

Plate 8 – SK[4] in coffin [214] within multi-occupancy grave [213]

Plate 9 – Unexcavated coffin at limit of excavation

Plate 10 – Excavated drain structure [105]

Plate 11 – Context (100): Burnt sandstone with a thick encrustation of glaze on the surface and edges

Plate 12 – Context (100): Burnt sandstone with a stacking scar from an inverted jug on the surface

Plate 13 – Context (100): Part of a fired clay slab with glaze deposits and a stacking scar

Plate 14 – Context (100): A piece of fired clay, possibly from a kiln

Plate 15 – Context (204): Tin glazed earthenware pot disc interior

Plate 16 – Context (204): Tin Glazed earthenware pot disc, exterior showing recessed base

Plate 17 – Context (204): Rim of a Tin Glazed earthenware plate

Plate 18 – Context (109): Brown Salt Glazed Stoneware pot disc (internal surface)

Plate 19 – Context (109): Brown Salt Glazed Stoneware pot Disc (external surface)

Plate 20 – Unstratified: Late Blackware type pot disc (internal surface)

Plate 21 – Unstratified: Late Blackware type pot disc (external surface)

Plate 22 – Unstratified: Slipware pot rectangle with ground edges (internal surface)

Plate 23 – Unstratified: Slipware pot rectangle with ground edges (external surface)

Plate 24 – Context (204): Slipware pot rectangle with broken edge (internal surface)

Plate 25 – Context (204): Slipware pot rectangle with broken edge (internal surface)

APPENDIX 1 – CONTEXT AND SKELETAL INVENTORIES

Context Number	Sub-Division	Context Type	Description
100	Evaluation Trench	Deposit	Medieval buried soil along northern edge
101	Evaluation Trench	VOID	VOID
102	Evaluation Trench	Structure	Sandstone wall footing along northern boundary of graveyard
103	Evaluation Trench	Deposit	Natural sandstone clay geology – same as (300)
104	Evaluation Trench	Cut	E-W drainage channel filled by (113) containing drain structure [105]
105	Evaluation Trench	Structure	Drain structure within cut [104]
106	Evaluation Trench	Deposit	Upper fill of drain [105]
107	Evaluation Trench	Deposit	Lower fill of drain [105]
108	Evaluation Trench	Cut	E-W grave cut filled by (109) and wood chippings (115) at base – for SK[1] in coffin [111], and SK[2] in coffin [114]
109	Evaluation Trench	Deposit	Fill of E-W grave cut [108]
110	Evaluation Trench	Deposit	Fill of eastern end of drainage channel [104]
111	Evaluation Trench	Structure	Coffin in E-W grave [108]/(109) for SK[1]
112	Evaluation Trench	Deposit	Made ground levelling of graveyard truncating (100) – same as (200)
113	Evaluation Trench	Deposit	Fill of cut for drainage channel [104]
114	Evaluation Trench	Structure	Coffin in E-W grave [108]/(109) for SK[2]
115	Evaluation Trench	Deposit	Wood chippings in base of grave cut [108]
200	North of Chapel	Deposit	Made ground levelling of graveyard – same as (112)
201	North of Chapel	Cut	E-W grave filled by (202)
202	North of Chapel	Deposit	Fill of E-W grave cut [201]
203	North of Chapel	Cut	E-W double grave cut filled by (204)
204	North of Chapel	Deposit	Fill of E-W grave cut [203]
205	North of Chapel	Structure	Mortar pad partially covering grave cut [203]
206	North of Chapel	Structure	Sandstone slabs partially covering grave cuts [207] and [208]
207	North of Chapel	Cut	E-W grave cut filled by (209) within larger grave cut [213] – for SK[3] in coffin [215]
208	North of Chapel	Cut	E-W grave cut filled by (210) within larger grave cut [213]
209	North of Chapel	Deposit	Fill of E-W grave cut [207]
210	North of Chapel	Deposit	Fill of E-W grave cut [208]
211	North of Chapel	Deposit	Fill of E-W grave cut [213]
212	North of Chapel	Deposit	Made ground cinder levelling of graveyard below gravestones
213	North of Chapel	Cut	E-W large grave cut filled by (211)

Context Number	Sub-Division	Context Type	Description
214	North of Chapel	Structure	Coffin in grave fill (216) for SK[4]
215	North of Chapel	Structure	Coffin in E-W grave [207]/(209) for SK[3]
216	North of Chapel	Deposit	Fill of indistinct E-W grave cut within larger grave cut [213] – containing SK[4] in coffin [214]
300	Service Trench	Deposit	Natural sandstone clay geology – same as (103)
301	Service Trench	Cut	Possible E-W grave cut at base of service trench
302	Service Trench	Deposit	Fill of possible E-W grave cut [301]

Table 10 – Context inventory from excavations at the Upper Chapel

Sub-Division	Skeleton	Description	Details
Evaluation Trench	1	Supine Infant	SK in coffin [111] within E-W grave [108]/(109)
Evaluation Trench	2	Young Child	SK in coffin [114] within E-W grave [108]/(109)
North of Chapel	3	Supine Adult	SK in coffin [214] within grave fill (216)
North of Chapel	4	Supine Adult	SK in coffin [215] within E-W grave [207]/(209)

Table 11 – Skeletal inventory from excavations at the Upper Chapel

APPENDIX 2 – GRAVESTONE SURVEY

Gravestone 1
IN MEMORY OF
WILLIAM WARBURTON
who died NOV 10th 1818
Aged 42 Years.
Also of Mary Wife of the
above William Warburton
who departed this Life
May 1st 1836 aged 37 Years.

(carved at bottom of gravestone)
M.W.


Gravestone 1 (facing west)

Gravestone 2
(Illegible writing at very top of stone)
This stone is inscribed to
the Memory of ERNEST the son
of MICHAEL and MARY HUNTER
who died MAY 21 1834 aged 5 Years.
Also to their Daughter SOPHIA
the Wife of Mr EDWARD MAPPIN.
She died in London October 2 1849
aged 24 Years and was buried here.


Gravestone 2 (facing west)

Gravestone 3
(No visible writing)


Gravestone 3 (facing west)

Gravestone 4
HERE lie the remains of Wil
liam Spencer who died the (ƿ)
of March 1786 in the (ƿ) Year
of his Age.


Gravestone 4 (facing west)

Gravestone 5
Here lieth (ƿ) of John Son of Henry
Hall who died Feb 10 1796 Aged 3 Years
6 Months.
Here are Also deposited the Remains
of Henry Hall who died September
(ƿ) 1816 Aged 57 Years.


Gravestone 5 (facing west)

Gravestone 6
(Inscription illegible)


Gravestone 6 (facing west)

Gravestone 7
(Inscription illegible)


Gravestone 7 (facing west)

Gravestone 8
(Inscription illegible)


Gravestone 8 (facing west)

Gravestone 9
(Inscription illegible)


Gravestone 9 (facing west)

Gravestone 10
Rebecca the Wife
of Michael Hunter died
May 21 1767 Aged 36.
Michael Hunter died June ^{e}y
18th 1771 Aged 17. Michael
Hunter the Son of Michael
Hunter Jun^{r} died March 2nd 1785
Aged 11 Months. Elizabeth the Wife
of Michael Hunter Jun^{r} died
March 20th 1787 Aged 23 Years.
Also Ebenezar Fletcher his son
died April the 14th 1788 aged 2 Years.
Also Mary the second Wife of
Michael Hunter Jun^{r} who died
March 1st 1828 aged 69 Years.
Mr Mich^{e} Hunter Died
Jan^{ry} 29th 1831 aged
71 years.


Gravestone 10 (facing west)

Gravestone 11
(Inscription illegible)


Gravestone 11 (facing west)

Gravestone 12
(Inscription illegible)


Gravestone 12 (facing west)

Gravestone 13
(Inscription illegible)


Gravestone 13 (facing west)

Gravestone 14
(Inscription illegible)


Gravestone 14 (facing west)

Gravestone 15
(Inscription illegible)


Gravestone 15 (facing west)

Gravestone 16
(Inscription illegible)


Gravestone 16 (facing west)

Gravestone 17
John Kitchin departed this life April
The 18th 1791 Aged 61 Years
Also Mary Wife of the above said
John Kitchin died January 3rd
1816 in the (?) Year of her Age.


Gravestone 17 (facing west)

Gravestone 18
In Memory of REBECCA the
Wife of SAMUEL LUCAS who died
Novr 25th 1799 Aged 34 Years
Also of the above said Samuel Lucas
who died the 3rd of January 1831 aged
70 years.
Also of SAMUEL their Son who died
the 11th of August 1835 aged 44 Years.
Also of WILLIAM their Son who died
the 17th of July 1858 aged (?) Years.


Gravestone 18 (facing west)

Gravestone 19
(Inscription illegible)


Gravestone 19 (facing west)

Gravestone 20
(No inscription visible but carved border is visible around edge of stone)


Gravestone 20 (facing west)

Gravestone 21
(Inscription illegible)


Gravestone 21 (facing west)

Gravestone 22
IN MEMORY
of
The (P) JOSEPH EVANS
(P) the faithful
(P) of this congregation
He died Dec^{r} 31st 1803
Aged 75 years.
SUSANNA EVANS
(formerly SUSANNA HAYNES)
his aged and virtuous Relict
died (P) June 1815
and was (P)


Gravestone 22 (facing east)

Gravestone 23
(No inscription visible but remains of carved border is visible round edge of stone)


Gravestone 23 (facing east)

Gravestone 24
(Inscription illegible apart from date 1820)


Gravestone 24 (facing west)

Gravestone 25
(Inscription illegible)

Gravestone 25 (facing east)

Gravestone 26
(Inscription illegible)

Gravestone 26 (facing east)

Gravestone 27
(Inscription illegible)

Gravestone 27 (facing west)

Gravestone 28
(Inscription illegible)

Gravestone 28 (facing east)

Gravestone 29
(Inscription illegible)

Gravestone 29 (facing east)

Gravestone 30
IN MEMORY
of Mary Dickinson Who
Departed this Life the 7th of
May 179(?) Aged (?) Years.

Gravestone 30 (facing west)

Gravestone 31
(Inscription illegible apart from name Dickinson and date 1780)

Gravestone 31 (facing west)

Gravestone 32
In Memory of Jane
Woodall Wife of
John Woodall (ꝑ)
who departed this
Life May (ꝑ) 1807
Aged (ꝑ) Years.

Gravestone 32 (facing west)

Gravestone 33
Here Lyeth
the Body of
Joseph Smith who
departed this life
y 17 of June 1726
(4 illegible lines)
ALLSO MARY HIS DAU
GHTER WAS BURYED THE
(ꝑ) OF SEPTEM
(illegible section)
ALSO
SAMUEL HIS SON
BURYED Y 12th of MAY 1723.

Gravestone 33 (facing west)

Gravestone 34
(Gravestone raised slightly above yard surface)
Here lie
waiting for the glorious
refurrection of the juft
and Innocent the dear
Remains of Thomas ^{e}y Son
of Tho^{s} and Elizth Haynes
who died Dec^{r} 20th 1743
Aged 8.
Alfo of William another Son
who died Mar 2nd 174(ꝑ) Aged
3 Years.
Alfo the Rev^{d} Thomas Hayne^{s}
late Minifter of thif Place
who died 3rd Dec^{r} 1758 Aged 58
the Memory of the Juft is Blefsed.


Gravestone 34 (facing west)

Gravestone 35
IN MEMORY of Elizabeth
Haynes Wife of the late Rev
Thomas Haynes who died
June (ꝑ) 17(ꝑ)
(the rest of the inscription is illegible)


Gravestone 35 (facing east)

Gravestone 36
(Inscription illegible)


Gravestone 36 (facing west)

Gravestone 37
(Standing gravestone. Inscription illegible, possibly in Latin)


Gravestone 37 (facing east)

Gravestone 38
(Standing gravestone)
Rebekah
Wife of John Wadsworth
Daughter of Field
& Rebekah Sylvester
was buried here Jan 12
A.D. 1735 Aged 50 years.
FIELD SYLVESTER
SON OF JOSHUA & JUDITH
SYLVESTER OF MANSFIELD
BORN MAY 11th 1654
EXPIRED MAY 10th 1717.
He y^{t} Hath mercy on (illegible bible reference)
Happy is he (illegible bible reference)
WILLIAM SON OF JOHN
WADSWORTH & REBEKAH
HIS WIFE DYD FEBR^{y} 13th
1723 AGED 19 WEEKS.
REBEKA THE WIDOW
OF FIELD SYLVESTER
DIED JULY ^{e}y 28th
172(?) AGED 75
YEARS.


Gravestone 38 (facing south)

Gravestone 39
Here lieth y Body of
James Sh(ꝑ)ld who
Departed this life May
(rest is illegible)

Gravestone 39 (facing west)

Gravestone 40
(Gravestone uncovered below modern paving)
JOHN SON
OF WILL^{n} RADCLIFF
DYED OCT 17 AGED
36 WEEKS 1722.
Mary Shemald (uncertain reading of surname)
Widow died (ꝑ)
1729 Aged 60 years.
William Radcliff
Died (ꝑ) 1745
Aged (ꝑ). Alfo Thomas
Radcliff his son died
21st of Sep 1765 Aged 21 Years.
Alfo Hannah the Wife of
William Radcliff depart
ed this life June (ꝑ) 177(ꝑ)
Aged (ꝑ) Years.

Gravestone 40 (facing west)

APPENDIX 3 – POTTERY AND CLAY TOBACCO PIPE DATA TABLES

Context	Type	No.	Wt.	ENV	Part	Form	Decoration	Date range	Notes	Illustration /Plate No.
100	Brackenfield 001	1	75	1	Rim & handle	Jug	Very thin pale green glaze	Medieval	White to pale buff in colour, rod handle springs from jug rim; cf Cumberpatch 2004a	Illustration 2
100	York Gritty ware	1	21	1	BS	Hollow ware	U/Dec	MC11th - MC13th	Sample 3; coarse, soft orange sandy	
100	York Gritty ware	1	28	1	BS	Hollow ware	Spots of glaze externally	MC11th - MC13th	Similar to Sample 3	
100	Oxidised Gritty ware	3	98	3	BS	Hollow ware	Discoloured green glaze ext	Medieval	Slightly harder and denser than some of the body sherds, probably fired to a higher temperature	
100	Oxidised Gritty ware	27	287	27	BS	Hollow ware	Sparse patchy thin green glaze ext	Medieval	Soft and abraded sherds showing some variation in the density and size of inclusions	
100	Oxidised Gritty ware	1	35	1	Rim	Jar	Dark, self-slip finish ext	Medieval	Sharply everted jar rim, see text for discussion	Illustration 4
100	Oxidised Gritty ware	1	36	1	Rim	Jar	Patch of green glaze ext; ?splashed	Medieval	Sharply everted jar rim, see text for discussion	Illustration 5
100	Oxidised Gritty ware	1	64	1	Rim	Jar	U/Dec	Medieval	Sharply everted jar rim, see text for discussion; slightly coarser fabric than others	Illustration 3
100	Oxidised Gritty ware	1	104	1	Rim	Disc	Stabbed perforations and raised lip on one side of disc	Medieval	U/ID object; thick disc with raised edge and partial stabbings	Illustration 13
100	Oxidised Gritty ware	1	35	1	Rod handle	Jug	Traces of thin green glaze on top of handle	Medieval	Abraded	
100	Oxidised Gritty ware	1	14	1	Rim	Jug	Patchy green glaze ext	Medieval	Flat topped jug rim	Illustration 11
100	Oxidised Gritty ware	1	79	1	Base	Jug/Jar	Slightly splayed base with spots of glaze on the underside	Medieval		Illustration 10
100	Oxidised Gritty ware	1	27	1	Base	Hollow ware	U/Dec	Medieval	Slightly splayed, footed base in a slightly coarser fabric than normal	
100	Oxidised Gritty ware	1	34	1	Strap handle	Jug	Grooves and misfired green glaze on top of handle	Medieval	Harder, denser fabric, possibly not the standard fabric in this group	Illustration 8
100	Oxidised Gritty ware	1	47	1	Flat base	Jar/Cooking pot	U/Dec but with very small spots of dark glaze ext	Medieval	A light buff fabric, perhaps somewhat denser than some examples	
100	Oxidised Gritty ware	2	30	2	Flat base	Jar/Cooking pot	U/Dec, one with streaks of glaze ext	Medieval	Orange rather than buff in colour but with a similar, but finer, range of inclusions to the standard type	
100	Oxidised Sandy ware (GRE)	1	11	1	BS	Hollow ware	Traces of possible impressed decoration and thin green glaze	Medieval	Sample 1	

Context	Type	No.	Wt.	ENV	Part	Form	Decoration	Date range	Notes	Illustration /Plate No.
100	Oxidised Sandy ware (GRE)	2	21	2	BS	Hollow ware		Medieval	Similar to Sample 1	
100	Reduced Gritty ware	1	11	1	BS	Hollow ware	Spots of green glaze int; ?splashed	Medieval	Sample 2	
100	Reduced Gritty ware	10	235	9	BS	Hollow ware	Green glaze ext	Medieval	Overfired and in some cases distorted body sherds	
100	Reduced Gritty ware	1	148	1	Base	Hollow ware	U/Dec	Medieval	Upwardly bulged base; overfired	
100	Reduced Gritty ware	1	35	1	BS	Jug	Applied strips and incised radiating lines ext, green glaze	Medieval	Overfired and distorted	Illustration 1
100	Reduced Gritty ware	1	98	1	Base	Baluster jug	Blistered glaze ext	Medieval	Dense, overfired fabric	Illustration 9
100	Reduced Gritty ware	1	64	1	Base	Baluster jug	Traces of thin green glaze ext and on underside of base	Medieval	Overfired dense grey fabric	
100	Reduced Gritty ware	1	64	1	Rod handle	Jug	Traces of thin friable green glaze on top of handle	Medieval	Abraded	
100	Reduced Sandy ware	3	39	3	BS	Hollow ware	Thick brown glaze ext	Medieval	Reduced but with similar inclusions as in the oxidised wares	
106	?Blackware	1	5	1	Base	Hollow ware	Black glaze ext	C17th	Secondarily burnt	
106	Bone China	1	1	1	Handle	Cup	U/Dec	C19th		
106	Bone China	2	10	2	BS	Hollow ware	U/Dec	M - LC19th		
106	Bone China	1	2	1	Rim	Saucer	U/Dec	M - LC19th		
106	BSGSW	1	5	1	BS	Hollow ware	Incised line ext	LC18th - C19th		
106	Creamware	1	1	1	BS	Hollow ware	U/Dec	c.1740 - c.1820		
106	Fine Redware	1	7	1	Rim	Hollow ware	Blue band and moulded band below rim	C19th	Fine redware fabric	
106	Sponged ware	1	10	1	BS	Hollow ware	Blue sponged decoration ext	1830+		
106	TP Bone China	1	2	1	Rim	Saucer	Chinese landscape border int	C19th		
106	TP Whiteware	1	5	1	BS	Hollow ware	Sepia geometric/leaf decoration ext	M - LC19th		
106	TP Whiteware	1	6	1	Footring base	Plate	Willow	M - LC19th		
106	Whiteware	1	1	1	Handle	Cup	U/Dec	M - LC19th		
106	Whiteware	1	1	1	Rim/spout	Jug	U/Dec	M - LC19th		
107	Creamware	2	2	2	BS	Flatware	U/Dec	c.1740 - c.1820		
107	Slip Banded ware	1	2	1	Rim	Hollow ware	Diffuse blue painted line with brown slip lines above & below	C19th		
107	Sponged ware	1	3	1	BS	Hollow ware	Blue sponging on body	c.1835+		
107	Whiteware	1	1	1	BS	Hollow ware	Blue TP decoration	M - LC19th		
107	WSGSW	1	2	1	Rim	Plate	Moulded wickerwork pattern around rim	c.1720 - c.1780		

Context	Type	No.	Wt.	ENV	Part	Form	Decoration	Date range	Notes	Illustration /Plate No.
109	BGCW	1	11	1	BS	Hollow ware	Metallic brown glaze int & ext	C18th - C19th		
109	BGFW	1	29	1	BS	Hollow ware	Black glaze int & ext	C18th	Buff fabric with sparse round red grit	
109	Blackware type	1	3	1	BS	Hollow ware	Metallic brown glaze int & ext	C17th - C18th	?Late Blackware	
109	BSGSW	1	22	1	Ring foot base	Hollow ware	U/Dec	C18th - C19th		
109	BSGSW	1	1	1	BS	Hollow ware	U/Dec	C18th - C19th	Very small pot disc	Plates 8,9
109	BSGSW	1	1	1	BS	Hollow ware	Ridge and groove ext	LC18th - C19th		
109	Creamware	2	6	2	Recessed base	Hollow ware	U/Dec	c.1740 - c.1820	Crazed and discoloured	
109	Mottled ware	1	21	1	Rim	Dish	Pie-crust rim, mottled glaze int	C18th	Press moulded dish, a form more usually associated with Slipware	
109	Mottled ware	1	6	1	Base	Hollow ware	Mottled glaze int	C18th	Press moulded dish	
109	Pearlware	1	26	1	Profile	Dish	U/Dec	c.1740 - c.1820	Small blemish on rim with blue colour; firing error; angular ring foot base	
109	Slipware	1	9	1	BS	Dish	Red slip int with wavy white line under clear glaze	C18th	Press moulded dish, dark red fabric	
109	Slipware	1	5	1	BS	Dish	Red-brown and white slip int	C17th - EC18th	Abraded and flaked	
109	Tin Glazed Earthenware	1	2	1	BS	Flatware	Part of blue painted decoration int	LC17th - C18th		
109	WSGSW	2	9	2	Rim	Plate	Moulded seed/barley design around rim	c.1720 - c.1780		
109	WSGSW	1	2	1	Base	Dish	U/Dec	c.1720 - c.1780	Flat base	
109	WSGSW	1	2	1	Knob	Lid	Small round knob	c.1720 - c.1780		
115	Colour Glazed ware	1	8	1	BS	Hollow ware	Black glaze ext, green glaze int	C18th - C19th	Buff body; unusual sherd	
200	BSGSW	2	10	2	BS	Hollow ware	U/Dec	C18th - C19th		
200	BSGSW	1	4	1	Rim	Bowl	Incised lines and rouletted decoration ext	LC18th - C19th	Folded rim	
200	Edged ware	1	1	1	Rim	Plate	Moulded edge with blue paint	c.1810 - c.1830		
200	Whiteware	3	7	3	BS	Hollow ware	U/Dec	M - LC19th	Crazed and slightly discoloured	
200	WSGSW	1	2	1	Base	Hollow ware	U/Dec	c.1720 - c.1780		
202	Unglazed Red Earthenware	1	1	1	BS	Hollow ware	U/Dec	C18th - C19th	Small fragment	
204	BGCW	1	9	1	BS	Hollow ware	Thin hard brown glaze int	C18th - EC19th	Ext surface not present	
204	Coal Measures Purple ware	1	19	1	BS	Hollow ware	Patchy glaze int & ext	C15th - C16th		
204	Late Blackware	1	25	1	Base	Hollow ware	Black glaze int	C18th	Footed base, unglazed	

Context	Type	No.	Wt.	ENV	Part	Form	Decoration	Date range	Notes	Illustration /Plate No.
204	Mottled ware	1	6	1	BS	U/ID	Mottled glaze int & ext	C18th	Small diameter vessel, could be a candlestick	
204	Pearlware	1	4	1	BS	Flatware	U/Dec	c.1780 - c.1840		
204	Reduced Sandy ware	1	68	1	Rim & handle	Jug	Repeated comb impressed decoration on handle; traces of glaze ext	C13th - C15th	Abraded; pale grey reduced fabric with sparse quartz and black non-crystalline grit	
204	Slipware	1	7	1	BS	Dish	Layered and feathered slip int	C18th	Press moulded dish; sherd has been reshaped deliberately	Plates 14,15
204	Tin Glazed Earthenware	1	11	1	Recessed base	Flatware	Blue and painted landscape int	LC17th - C18th	Abraded & flaked	Plates 5,6
204	Tin Glazed Earthenware	1	4	1	BS	Plate	Blue hand painted design int	LC17th - C18th	Flaked	Plate 7
209	?BGCW	1	31	1	Rim	Pancheon	U/Dec	C18th - EC19th	Internal surface removed	
209	BGCW	1	17	1	BS	Hollow ware	Brown glaze int & ext	C18th - C19th		
209	BGCW	1	5	1	Base	Hollow ware	Brown glaze ext	C18th - C19th	Stacking scar on ext	
209	BGFW	4	84	4	Rim & BS	Jar	Brown glaze int & ext	C18th - EC19th	Distinctive everted rim; cf sherds in cxt 210 and 210	
209	Blackware	1	1	1	BS	Hollow ware	U/Dec	C17th	Could be Late Blackware (C18th) but appears to be finer	
209	BSGSW	1	1	1	BS	Hollow ware	Incised line ext	C18th	Very thin walled vessel	
209	Coarse Blackware	1	9	1	BS	Hollow ware	U/Dec	C17th	Utilitarian Blackware	
209	Creamware	1	2	1	BS	Hollow ware	Relief moulded decoration	c.1740 - c.1820	Could be a lid	
209	Mottled Coarseware	2	12	2	BS	Hollow ware	Mottled glaze int & ext	C18th		
209	Mottled Coarseware	1	23	1	Base	Hollow ware	Mottled glaze int & ext	C18th		
209	Porcelain	1	4	1	Fragment	Component	U/Dec	C19th	Probably an electrical component	
209	Slipware	5	100	1	Profile	Plate	Trailed and feathered slip decoration int	C18th	Press moulded plate with pie crust rim, some blackening ext	
209	Slipware	1	20	1	Rim	Plate	Trailed and layered slip decoration int	C18th	Press moulded plate with pie crust rim, some blackening ext	
210	BGFW	1	6	1	BS	Hollow ware	Black glaze int & ext	C18th - EC19th	Orange fabric with fine quartz; cf. cxt 211 for a similar sherd	
210	BGFW	2	5	2	BS	Hollow ware	Hard, thin purple glaze int & ext	C18th - EC19th		
210	BSGSW	1	4	1	BS	Mug	Rilled band ext	C18th		
210	Creamware	1	4	1	BS	Flatware	U/Dec	c.1740 - c.1820		
211	BGFW	1	26	1	BS	Hollow ware	Black glaze int & ext	C18th - EC19th	Orange fabric with fine quartz; cf. cxt 210 for a similar sherd	
211	Mottled Coarseware	1	8	1	BS	Hollow ware	Mottled glaze int & ext	C18th	Mottled glaze on an orange body	
216	BGCW	1	35	1	Base	Pancheon	U/Dec	C18th - C19th		
216	Blackware	1	2	1	BS	Hollow ware	U/Dec	C17th	Could be late Blackware; C18th	

Context	Type	No.	Wt.	ENV	Part	Form	Decoration	Date range	Notes	Illustration /Plate No.
216	Creamware	1	1	1	BS	Flatware	U/Dec	c.1740 - c.1820		
SK2	Mottled ware	1	1	1	BS	Hollow ware	U/Dec	C18th		
U/S	BGCW	8	226	7	BS	Pancheon	Brown glaze int	C18th - C19th		
U/S	BGCW	1	182	1	Rim	Pancheon	Brown glaze int; bifid rim	C18th - C19th	Fired inverted	
U/S	BGCW	1	218	1	Rim	Pancheon	Brown glaze int, profiled rim	C18th - C19th	Flaked glaze int	
U/S	BGCW	11	197	11	BS	Hollow ware	Hard, thin brown glaze int & ext	C18th - C19th		
U/S	BGCW	2	26	2	Base	Hollow ware	Brown glaze int only	C18th - C19th	Use wear on base	
U/S	BGFW	1	31	1	Base	Jar	Black glaze int & ext	C18th - EC19th		
U/S	BGFW	1	18	1	Rim	Jar	Finger impressions on top of rim, brown glaze int & ext	C18th - EC19th		
U/S	BGFW type	1	36	1	Rim	Jar	Brown glaze int & ext	C18th - C19th	Hard, dense oxidised fabric with occasional red non-crystalline grit	
U/S	BGFW type	1	8	1	BS	Hollow ware	Brown glaze int & ext; utilised sherd	C18th - EC19th	Pot disc	
U/S	Blackware	1	20	1	Flat base	Hollow ware	Black glaze int & ext	C17th	Stacking scar on underside of flat base	
U/S	Blackware	1	28	1	Base	Hollow ware	Purple glaze int	C16th - C17th	Footed base	
U/S	Blackware type	1	17	1	Handle & BS	Hollow ware	Brown glaze int & ext, raised ridge ext	C17th	Fine red fabric with white non-crystalline incs	
U/S	Blue Banded ware	4	23	3	Rim	Bowl	Blue lines and bands ext	C19th		
U/S	Blue Banded ware	2	3	2	BS	Carinated bowl	Blue bands ext	C19th		
U/S	Blue Banded ware	1	1	1	BS	Hollow ware	Blue band and rouletted band ext	C19th		
U/S	Bone China	1	1	1	Rim	Hollow ware	Relief moulded decoration around rim	M - LC19th	Small thin sherd	
U/S	BSGSW	1	38	1	Base	Bowl	U/Dec	C18th		
U/S	BSGSW	4	35	4	BS	Hollow ware	U/Dec	C18th		
U/S	BSGSW	1	13	1	Rim	Mug/tankard	Everted rim, incised lines around vessel	C18th		
U/S	BSGSW	5	33	5	BS	Hollow ware	Incised lines ext	C18th	One with a buff body, remainder grey	
U/S	BSGSW	1	10	1	Rim	Dish	U/Dec	C18th	Sharply everted bowl rim	
U/S	Cane Coloured ware	1	6	1	Flat base	Dish	U/Dec	C19th		
U/S	Coarse Blackware	1	4	1	BS	Hollow ware	Dark glaze on red body	C18th		
U/S	Coarse Sandy ware	1	18	1	Base	Hollow ware	U/Dec	Medieval	Sample 4; Harder and denser than normal with a reduced core	
U/S	Colour Glazed ware	1	8	1	Handle	Teapot/jug	Moulded handle with brown glaze	C19th		

Context	Type	No.	Wt.	ENV	Part	Form	Decoration	Date range	Notes	Illustration /Plate No.
U/S	Creamware	9	114	8	Rim/profile	Plate	Moulded wavy edge	c.1740 - c.1820		
U/S	Creamware	1	12	1	Base	Hollow ware	U/Dec	c.1740 - c.1820	Splayed or baluster base	
U/S	Creamware	3	42	3	Flat base	Flatware	U/Dec	c.1740 - c.1820		
U/S	Creamware	1	15	1	Footring base	Plate	U/Dec	c.1740 - c.1820		
U/S	Creamware	1	6	1	Ring foot base	Bowl	U/Dec	c.1740 - c.1820	Angular ring foot base	
U/S	Creamware	1	6	1	Rim	Plate	Moulded 'feather' edge	c.1740 - c.1820		
U/S	Creamware	1	10	1	BS	Jug/sauce boat	Relief moulded design on body	c.1740 - c.1820		
U/S	Creamware	1	2	1	BS	Footring base	U/Dec	c.1740 - c.1820		
U/S	Creamware	1	2	1	BS	Lid	Green and brown underglaze paint with diffuse edge	c.1740 - c.1820	Probably a teapot lid	
U/S	Edged ware	1	3	1	Rim	Plate	Moulded edge with blue paint	c.1810 - c.1830		
U/S	Late Blackware	1	7	1	Handle & BS	Mug/tyg	Black glaze int & ext	C17th / C18th	Red fabric; probably Late Blackware rather than C17th Blackware	
U/S	Late Blackware	1	8	1	BS	Hollow ware	Black glaze int & partially ext	C18th		Plates 10,11
U/S	Late Blackware	1	7	1	Rim	Jar	Black glaze int & ext	C18th	Overhanging rim	
U/S	Late Blackware	1	4	1	Rim	Dish	Black glaze int & ext	C18th	Dark red dense fabric	
U/S	Late Blackware type	1	18	1	Rim	Dish/plate	Dark, slightly mottled glaze int	C18th	cf. Slip coated ware thrown plates, but this has a dark red dense fabric	
U/S	Midlands Purple ware	1	35	1	Handle & BS	Hollow ware	Metallic purple glaze ext	C16th - C17th	Narrow strap handle	
U/S	Mocha ware	1	40	1	Base & body	Bowl	Broad white band with blue mocha tree	C19th	Cane coloured ware body	
U/S	Mottled Coarseware	1	25	1	Base	U/ID	Dark mottled glaze int & ext	C18th - C19th	Small footed base, stacking scar on underside	
U/S	Mottled Coarseware	1	15	1	BS	Hollow ware	Mottled glaze int	C18th		
U/S	Mottled ware	1	12	1	BS & handle stump	Hollow ware	Dark mottled glaze int & ext	C18th		
U/S	Mottled ware	7	47	7	BS	Hollow ware	Dark mottled glaze int & ext	C18th	Darker than normal	
U/S	Mottled ware	1	15	1	Base	Hollow ware	Dark mottled glaze int & ext	C18th	Footed base	
U/S	Mottled ware	1	1	1	BS	Hollow ware	Dark glaze ext, light mottled glaze int	C18th	Flake	
U/S	Mottled ware	1	3	1	BS	Hollow ware	Mottled glaze int & ext	C18th		

Context	Type	No.	Wt.	ENV	Part	Form	Decoration	Date range	Notes	Illustration /Plate No.
U/S	Oxidised Gritty ware	1	20	1	BS	Hollow ware	Rilled body with a whitish coating of decayed or misfired glaze	Medieval	Reduced core with oxidised margins	
U/S	Oxidised Gritty ware	3	77	3	BS	Hollow ware	Spots of glaze on two sherds	Medieval	Harder and denser texture than some examples	
U/S	Oxidised Gritty ware	1	37	1	Handle	Pipkin	U/Dec	Medieval	Short, thin, slightly curved pipkin handle	Illustration 12
U/S	Oxidised Gritty ware	1	12	1	Base	Hollow ware	Sparse, thin green glaze int	Medieval	Similar to Sample 5	
U/S	Oxidised Gritty ware	1	46	1	Rod handle	Jug	Traces of friable green glaze ext	Medieval	Handle is attached to neck rather than the rim	Illustration 6
U/S	Oxidised Gritty ware	1	14	1	Rim	Jar	U/Dec	Medieval	Sharply everted jar rim; form resembles Humberware jars; see text for discussion	
U/S	Oxidised Gritty ware	1	55	1	Rod handle	Jug	Green glazed on top of grooved handle	Medieval		Illustration 7
U/S	Oxidised Gritty ware type	1	8	1	BS	Hollow ware	Whitish coating with flecks of green glaze ext	Medieval	Harder, denser and finer in texture than the standard OSw but with a similar range of (finer) inclusions	
U/S	Oxidised Gritty ware type	1	28	1	Neck/BS	Jug	Flakey and decayed/misfired green glaze ext	Medieval	Harder, denser and finer in texture than the standard OSw but with a similar range of (finer) inclusions	
U/S	Oxidised Sandy ware	1	13	1	BS	Hollow ware	U/Dec	Medieval	Sample 5; harder and denser than many sherds but with similar incs	
U/S	Pearlware	1	1	1	Rim	Saucer/dish	Blue underglaze painted design int	c.1780 - c.1840		
U/S	Quartz gritted semi-vitrified ware	1	55	1	Base	Hollow ware	U/Dec	Medieval	Small base in a hard, dense, semi-vitrified quartz tempered fabric with many parallel linear voids; see text	
U/S	Reduced Gritty ware	1	38	1	BS	Hollow ware	Patchy dark green glaze on one side	Medieval	Probably overfired; see also cxt 100	
U/S	Reduced Gritty ware	1	28	1	Rod handle	Hollow ware	Thin friable green glaze ext	Medieval	Resembles the oxidised ware but is reduced with a thin oxidised margin	
U/S	Reduced Gritty ware	1	34	1	Base (?)	U/ID	Patchy green glaze on one side	Medieval	Thin flat plate, possibly a base	
U/S	Redware	1	112	1	BS	Pancheon	Clear glaze int	C17th - EC18th		
U/S	Slip Banded CC ware	1	4	1	Rim	Bowl	Brown and white slip lines ext	C19th		
U/S	Slipware	1	22	1	BS	Dish/plate	Unusual cellular design; brown, white and pale red-brown	C18th	Press-moulded dish or plate	

Context	Type	No.	Wt.	ENV	Part	Form	Decoration	Date range	Notes	Illustration /Plate No.
U/S	Slipware	1	5	1	BS	Dish	Tri-coloured layered slip int	C18th	Sub-rectangular pot 'disc' with polished edges	Plates 12,13
U/S	Slipware	1	8	1	Rim	Dish/plate	White slip on red int, linear design, pie-crust rim	C18th	Press moulded dish, black deposit on underside	
U/S	Slipware	2	36	2	BS	Dish/plate	Tri-coloured layered slip decoration; parallel bands	C18th	Press moulded dish	
U/S	Slipware	1	39	1	Base	Dish/plate	Tri-coloured feathered slip int with embossed raised circles	C18th	Press-moulded dish; unusual decoration	
U/S	Slipware	1	12	1	BS	Dish/plate	Tri-coloured feathered slip int.	C18th	Press-moulded dish	
U/S	Slipware type 1	1	10	1	Rim	Plate	Trailed white slip wavy line around rim	C17th - EC18th		
U/S	Sponged ware	4	31	3	BS	Hollow ware	Blue sponging ext	c.1830+		
U/S	Sponged ware	1	1	1	Rim	Hollow ware	Blue sponging ext	c.1830+		
U/S	Tin Glazed Earthenware	1	2	1	Flat base	Flatware	Pale blue glaze int & ext	LC17th - C18th		
U/S	TP Bone China	1	4	1	Rim	Cup	Red geometric frieze around rim	M - LC19th		
U/S	TP Whiteware	3	42	1	Rim	Flatware	Willow border	M - LC19th	Crazed and slightly discoloured but unlikely to be Pearlware	
U/S	TP Whiteware	2	14	1	Rim	Flatware	Willow border	M - LC19th	Flaked	
U/S	TP Whiteware	1	7	1	Rim	Jug/sauce boat	Unidentified leaf and spray pattern int & ext	M - LC19th		
U/S	TP Whiteware	1	16	1	Rim	Hollow ware	Dark 'Flow Blue' dendritic pattern	c.1835+		
U/S	TP Whiteware	10	194	1	Rim	Plate	Wild Rose	MC19th	Pattern popular c.1830 - c.1860; widely manufactured as Pearlware & Whiteware	
U/S	TP Whiteware	1	3	1	BS	Hollow ware	Faint TP design ext, probably a Chinese landscape	M - LC19th		
U/S	Unglazed Red Earthenware	1	31	1	BS	U/ID	Heavily sooted int	C18th - C19th		
U/S	Unglazed Red Earthenware	1	16	1	BS	Hollow ware	U/Dec	C18th - C19th		
U/S	Unglazed Red Earthenware	1	53	1	BS	U/ID	U/Dec	?C19th	Heavily sooted internally	
U/S	Whiteware	1	21	1	Base	Flatware	U/Dec	M - LC19th		
U/S	Whiteware	1	3	1	BS	Hollow ware	Bluing ext, probably from Flow Blue decoration	c.1835+		
U/S	Whiteware	1	5	1	Ring foot base	Hollow ware	U/Dec	M - LC19th	Rounded ring foot base	
U/S	Whiteware	1	1	1	BS	Hollow ware	U/Dec	M - LC19th		
U/S	WSGSW	1	4	1	Ring foot base	Hollow ware	U/Dec	c.1720 - c.1780	Angular ring foot base	

Context	Type	No.	Wt.	ENV	Part	Form	Decoration	Date range	Notes	Illustration /Plate No.
U/S	WSGSW	3	5	3	BS	Hollow ware	U/Dec	c.1720 - c.1780		
U/S	WSGSW	1	1	1	BS	Hollow ware	Scratch Blue design ext	c.1720 - c.1780		
U/S	WSGSW	1	4	1	Rim	Plate	U/Dec	c.1720 - c.1780		
U/S	WSGSW	1	1	1	Rim	Hollow ware	Everted rim	c.1720 - c.1780		
U/S	WSGSW	1	9	1	BS	Plate	U/Dec	c.1720 - c.1780		
U/S	WSGSW	1	7	1	Rim	Plate	Moulded dot, diaper and basket design	c.1720 - c.1780		
U/S Tr 2	BGCW	1	7	1	BS	U/ID	Brown glaze int only	C18th - EC19th		
U/S Tr 2	BSGSW	1	8	1	Flat base	Hollow ware	Two shallow grooves above flat base ext	C18th - EC19th		
U/S Tr 2	BSGSW	3	9	2	BS	Hollow ware	U/Dec	C18th - EC19th		
U/S Tr 2	BSGSW	1	2	1	Rim	Dish	U/Dec	C18th - EC19th		
U/S Tr 2	BSGSW	1	2	1	BS	Hollow ware	Stamped design ext	C18th - EC19th		
U/S Tr 2	Mottled ware	1	11	1	BS	Hollow ware	Mottled glaze int & ext	C18th		
U/S Tr 2	Redware	1	16	1	BS	Dish	Clear glaze int, rilled ext	C17th - EC18th	Flaked int	
	Total	**327**	**5441**	**305**						

Table 12– Pottery from excavations at the Upper Chapel

Context	Type	No.	Wt.	ENV	Part	Form	Decoration	Date range	Notes	Plate
1002	Burnt stone	1	139	1	Fragment	Kiln fragment	N/A	Medieval	Burnt pinkish sandstone with a thick coating of green glaze on side & edge with jug spout stacking scar	1
100	Fired clay	1	24	1	Fragment	Fired clay	N/A	Medieval	Fragment of soft, oxidised fired clay with linear impressions on one side	4
100	Fired clay	1	51	1	Fragment	Kiln furniture	N/A	Medieval	Flat fired clay slab with green glaze and curved stacking scar on one side	3
100	Stone	1	328	1	Fragment	Kiln structure	N/A	Medieval	Burnt pinkish sandstone with green glaze on one side	2
200	Burnt stone	1	9	1	Fragment	N/A	N/A	Undated	?Related to kiln fragments	
	Total	**5**	**551**	**5**						

Table 13 – Fragments of the kiln from excavations at the Upper Chapel

Context	Type	No.	Wt.	ENV	Part	Form	Decoration	Date range
106	CBM	2	8	1	Fragment	?Tile	N/A	Undated
U/S	Roof tile	2	103	1	Fragment	Roof tile	U/Dec	Undated
	Total	**4**	**111**	**2**				

Table 14 – Ceramic building material and other items from excavations at the Upper Chapel

Abbreviation	
BGCW	Brown Glazed Coarseware
BGFW	Brown Glazed Fineware
BSGSW	Brown Salt Glazed Stoneware
CBM	Ceramic building material
ext	External
int	Internal
N/A	Not applicable
Slip Banded CC ware	Slip Banded Cane Coloured ware
U/Dec	Undecorated
WSGSW	White Salt Glazed Stoneware

Table 15 – Key to abbreviations used in Tables 12-14

Sample No.	AV Sample number	Context	Description	Type name (AV)
Sample 1	V4878	100	Oxidised Sandy ware (10g)	Glazed Red Earthenware
Sample 2	V4879	100	Overfired sherd (11g)	Northern Gritty ware
Sample 3	V4880	100	York Gritty ware type ware (21g), softer and coarser then the Northern Gritty ware	York Gritty ware
Sample 4	V4881	U/S	Harder OGW type ware (18g)	Northern Gritty ware
Sample 5	V4882	U/S	Harder OGW type ware (14g)	Northern Gritty ware

Table 16 – Samples of pottery taken for analysis by Alan Vince (AV)

cname	TSNO	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO
MEDLOC	V4878	20.02	7.71	1.28	0.22	0.29	2.52	0.93	0.38	0.045
NGR	V4879	19.88	6.73	1.12	0.17	0.49	2.68	0.81	0.10	0.175
YG	V4880	21.96	6.35	1.41	0.11	0.28	3.79	0.86	0.20	0.052
NGR	V4881	22.90	5.73	1.50	0.16	0.36	4.15	0.69	0.08	0.058
NGR	V4882	22.12	6.44	1.59	0.13	0.32	3.54	0.74	0.26	0.052

Table 17 – Chemical analysis of pottery samples: percent oxides of major elements

cname	TSNO	Ba	Cr	Cu	Li	Ni	Sc	Sr	V	Y	Zr*	La	Ce	Nd	Sm	Eu	Dy	Yb	Pb	Zn	Co
MEDLOC	V4878	507	136	33	54	52	19	81	135	17	78	51	92	51	9	1	3	2	1,466	109	17
NGR	V4879	570	95	20	105	44	17	93	122	12	43	33	63	35	7	1	4	2	364	153	25
YG	V4880	524	144	25	110	62	15	92	147	13	46	26	43	27	9	1	3	2	517	115	19
NGR	V4881	632	125	33	127	55	20	148	143	21	40	42	78	43	12	2	4	2	211	104	16
NGR	V4882	537	127	33	110	53	22	125	148	27	70	56	97	56	12	2	4	3	490	106	15

Table 18 – Chemical analysis of pottery samples: parts per million of minor and trace elements

Grave	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes
Slab N of Grave 3	Slip Banded Cane Coloured ware	1	24	1	Baluster base	Hollow ware	Blue slip line ext	C19th	
Slab N of Grave 3	Late Blackware	1	27	1	BS	Hollow ware	Black glaze int & partially ext	C18th	Resembles a pot disc, but probably by chance
10	Slipware	1	6	1	BS	Dish	Brown, red-brown and white slip int, feathered	C18th	Press moulded slipware dish; sherd reused as pot disc
11	Creamware	1	2	1	Recessed base	Hollow ware	Black slipline ext	c.1740 - c.1820	
	Total	**4**	**59**	**4**					

Table 19 – Pottery from the gravestone watching brief at the Upper Chapel

Tr	Cxt	Bags	Ref	B	S	M	Date	Heel	64	Bur	X	M4	Rim	TT	TF	Cname	Sname	Other	P	T	M	Dec/Mod	Comments
1	106	5			12		1800-1900			0													Plain C19th stems all heavily iron stained.
1	106	5				1	1790-1880			0				C	0								Mouthpiece from a long-stemmed pipe; most likely late C18th or C19th.
1	107	8			16		1800-1900			0													Plain C19th stems all iron stained; two have traces of green glaze.
1	107	8		1			1840-1880	-	-	0	-	0	c	-	-								C19th rim fragment with a faint mould line around the rim suggesting that the mould has been altered or repaired during lifetime.
1	110	15			1		1790-1880			0													

Tr	Cxt	Bags	Ref	B	S	M	Date	Heel	64	Bur	X	M4	Rim	TT	TF	Cname	Sname	Other	P	T	M	Dec/Mod	Comments
1	U/S	19	A	1			1680-1710	H	7	0	0	0	B	-	-							Milled heel	
1	U/S	19	B	1			1650-1670	H	7	G	0	0	B	-	-	WP	L		H	R	S		
1	U/S	19	C	1			1800-1900	-	4	0	-	-	-	-	-								Mostly likely a spur form originally.
1	U/S	19			26		1660-1900			*													As this is an unstratified deposit the individual elements within the group have not been broken down. This is a group of plain stems of mixed date, at least 3 are burnished.
1	U/S	19				1	1640-1700			0				C	0								
2	200	49		1			1660-1690	H	7	0	0	*	B	-	-							Cut heel	Rim has a groove round it rather than a band of milling. The heel has a cut mark across it.
2	200	49			1		1800-1900			0													
2	200	49			1		1650-1750			-													
2	202	42			1		1790-1880			0													
2	204	53	A	1			1660-1700	-	-	0	-	0	B	-	-								Rim fragment only.
2	204	53	B	1			1640-1660	-	-	0	-	/	B	-	-								Rim fragment only - burnt.
2	204	53			2		1660-1750			-													Two plain stems with abraded surfaces, likely late C17th/early C18th
2	204	53			4		1800-1900			0													
2	209	58			2		1800-1900			0													
2	210	62			1		1650-1700			A													
2	211	47			1		1650-1700			0													
2	U/S	45	A	1			1660-1680	H	7	G	0	0	B	-	-							Cut heel	
2	U/S	45	B	1			1680-1720	H	5	0	0	-	-	-	-								
2	U/S	45			8		1640-1880			*													As this is an unstratified deposit the individual elements within the group have not been broken down. This is a group of plain stems of mixed date, at least two are burnished.
			Total	**9**	**76**	**2**	**= 87**																

Table 20 – Clay tobacco pipe from excavations at the Upper Chapel