

Report 2915



nps archaeology

## Archaeological Trial Trench Evaluation at the Church of St Mary at the Quay, Ipswich, Suffolk

IPS 661



### Prepared for

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## Contents

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<i>Summary</i> .....	1
1.0 Introduction .....	1
2.0 Geology and Topography .....	3
3.0 Archaeological and Historical Background.....	5
4.0 Methodology .....	6
5.0 Results.....	8
5.1 The Upper Deposits.....	8
5.2 Metalled surface, possible floor and make-up deposits (southern portion of trench).....	9
5.3 Grave cuts .....	12
5.4 Burials .....	12
5.5 Dating of graveyard deposits.....	28
5.6 The lower deposits and central sondage .....	28
6.0 Finds .....	32
6.1 Pottery .....	32
6.2 Ceramic Building Material.....	33
6.3 Mortar .....	34
6.4 Fired Clay .....	34
6.5 Metal Finds.....	35
6.6 Clay Tobacco Pipe .....	36
6.7 The Glass .....	36
6.8 Flint.....	36
6.9 Stone .....	37
6.10 Human Skeletal Remains .....	37
6.11 Faunal Remains .....	37
6.12 Worked Bone Object .....	43
6.13 Shell .....	44
7.0 Environmental Evidence .....	44
7.1 Plant Macrofossils and other remains.....	44
8.0 Conclusions .....	46
<i>Acknowledgements</i> .....	47
<i>Bibliography and Sources</i> .....	47
Appendix 1: Sedimentology and Environmental Significance .....	49
Appendix 2a: Context Summary .....	59

Appendix 2b: OASIS Feature Summary.....	60
Appendix 3a: Finds by Context .....	61
Appendix 3b: OASIS Finds Summary .....	68
Appendix 4: Pottery .....	69
Appendix 5: Ceramic Building Material .....	73
Appendix 6: Fired Clay.....	75
Appendix 7a: Animal Bone.....	76
Appendix 7b: Animal Bone Measurements .....	82
Appendix 7c: Animal Bone – Tooth Record .....	83
Appendix:8 The Plant Macrofossils and Other Remains .....	84
Appendix 9: OASIS Record.....	86
Appendix 10: Archaeological Specification .....	89

## **Figures**

- Figure 1 Site location
- Figure 2 Trench location
- Figure 3 Plan showing central sondage, natural and location of sections
- Figure 4 West facing baulk section to a depth of 1.20m
- Figure 5 North and east facing baulk sections to a depth of 1.20m
- Figure 6 Lower west facing baulk section
- Figure 7 Lower east facing baulk section
- Figure 8 Lower north facing baulk section
- Figure 9 West facing section of lower central sondage
- Figure 10 Plan showing metallised surface (5), Skeleton 6 and grave cuts [7], [9] and [11]
- Figure 11 Plan showing Skeletons 30 and 31
- Figure 12 Plan showing Skeleton 44
- Figure 13 Plan showing Skeleton 55
- Figure 14 Plan showing Skeleton 34
- Figure 15 Plan showing Skeletons 48, 49 and 50
- Figure 16 Plan showing Skeleton 56
- Figure 17 Location of boreholes 01 and 02

## **Plates**

- Plate 1 The deposits to a depth of 1.20m below current ground level, looking south
- Plate 2 Metallised surface [05] and grave cuts, looking south
- Plate 3 The deposits between 1.20m and c.1.75m below current ground level, looking east
- Plate 4 Skeleton 31, looking west
- Plate 5 Skeleton 30, looking west
- Plate 6 Skeleton 55, looking west
- Plate 7 Skeleton 34, looking west
- Plate 8 Skeleton 48, looking west
- Plate 9 Skeleton 44, looking west
- Plate 10 Skeleton 50, looking west
- Plate 11 Skeleton 49, looking west
- Plate 12 Skeleton 56, looking west

- Plate 13 The deposits between a depth of c.1.30m and 2.30m below current ground level, looking south
- Plate 14 The lower deposits and surface of the natural sand looking north
- Plate 15 Bone Stylus
- Plates 16-19 Borehole 02

### **Tables**

- Table 1 Pottery quantification
- Table 2 CBM quantification by form
- Table 3 Quantification of the faunal assemblage by number of fragments, feature type and context
- Table 4 Quantification of the faunal assemblage by weight, feature type and context
- Table 5 Quantification of the faunal assemblage by weight, feature type and context
- Table 6 Description of sediments in Borehole 02

Location:	Church of St Mary at the Quay, Key Street, Ipswich, Suffolk
District:	Suffolk County Council
Grid Ref.:	TM 1665 4424
Planning Ref.:	IP/10/00089/FUL
HER No.:	IPS 661
OASIS Ref.:	124208
Client:	Suffolk Mind
Dates of Fieldwork:	16 January - 17 February 2012

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## **Summary**

*An archaeological evaluation was conducted for Suffolk Mind ahead of a proposal to redevelop the redundant church of St Mary at the Quay, Key Street, Ipswich, Suffolk including the construction of a new extension to the east end of the church. A trench measuring 3m by 2m was excavated through the archaeological sequence to test the archaeological remains and density of burials present at the site. A total of eleven articulated burials were located within the trench which range in date from Middle Saxon to late post-medieval.*

*Near the present street frontage a metalled deposit may represent an earlier surface of what is now Key Street. A clay and chalk deposit also located near the street frontage may represent a floor associated with a medieval building. Dumped midden deposits of Middle Saxon date were located near the base of the trench probably in a marsh environment which may have been periodically inundated with water from the tidal estuary. The deposits were probably laid down as part of an attempt at land reclamation close to the Saxon foreshore. An unconventionally aligned and positioned skeleton was found within the midden deposits. It was unclear as to whether the skeleton was associated with an earlier graveyard or whether the body was dumped or possibly washed up on the foreshore.*

*A possible Late Glacial-Early Holocene soil was recorded sealing the natural sand.*

## **1.0 INTRODUCTION**

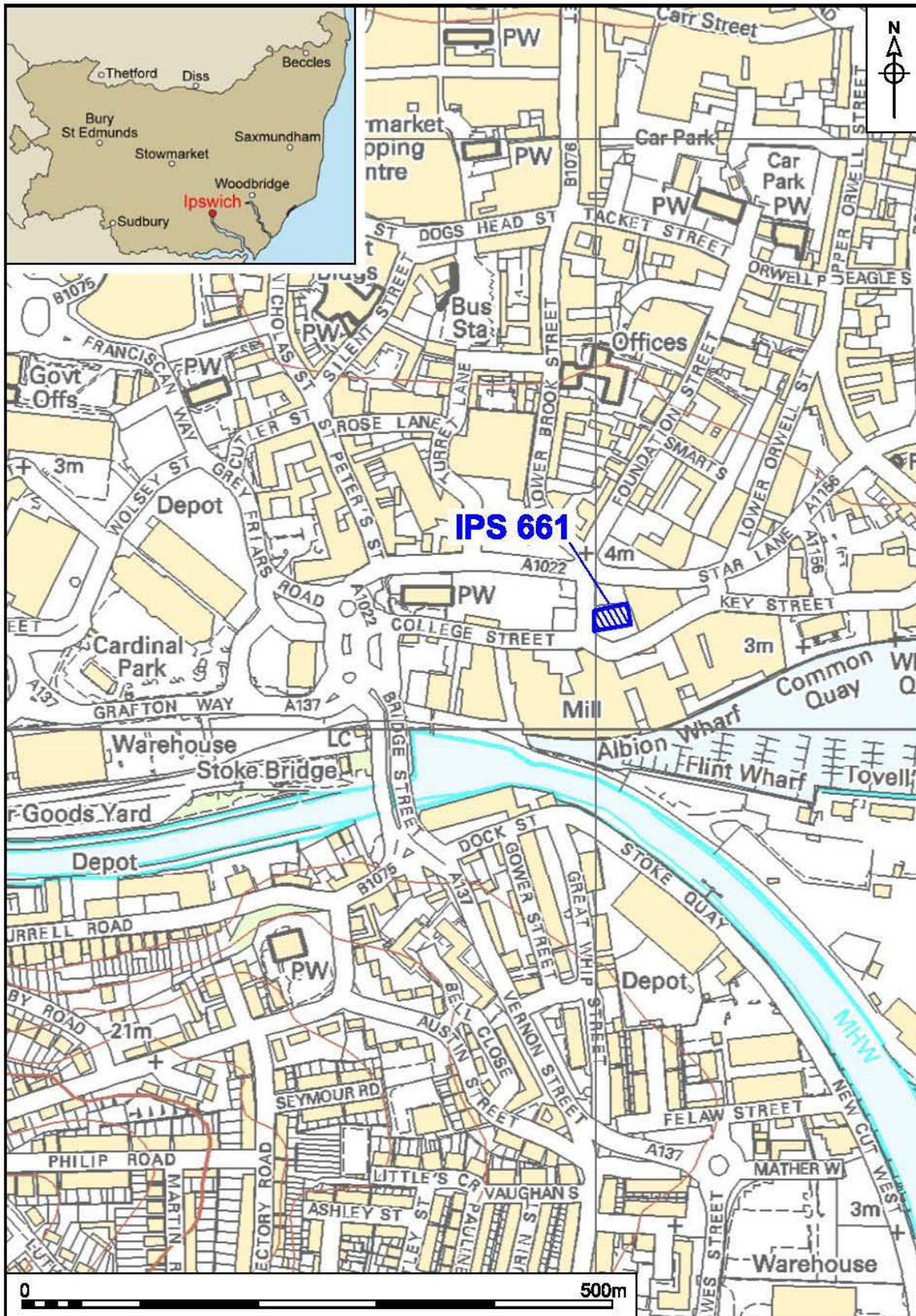
Proposals to redevelop the redundant church of St Mary at the Quay, Key Street, Ipswich, Suffolk (Fig. 1), including the construction of a new extension, required a programme of archaeological excavation to mitigate the impacts of the proposed development on the archaeological resource.

The first phase of the programme was a small trial excavation to try to determine the extent and survival of burials within the churchyard and any earlier riverside structures they may overlie with the aim of allowing accurate costs and resourcing requirements to be prepared for the larger excavation of the footprint of the new extension. The trial excavation measured 3m by 2m to give a standard evaluation percentage of 5% of the development area (Fig. 2).

The site lies within the nationally important area of Archaeological Importance defined for Anglo-Saxon and medieval Ipswich.

616000

616500



244500

244000

243500

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Figure 1. Site location. Scale 1:5000



Archaeological work previously carried out to the immediate east and south of this site showed that the south aisle wall of St Mary's church lies approximately on the original bank of the River Orwell, and to the south of this line waterlogged deposits of increasing thickness occur. These deposits include possible waterfront revetments and successive landfill as land was reclaimed on the river edge and used for occupation including industrial activity.

The foundation date for the church is not known; it may be one of the St Mary's listed in Domesday Book and is certainly in existence by 1254 (Taxation of Norwich)

This work was undertaken to fulfil planning requirements set by Suffolk County Council (Planning Ref. IP/10/00089/FUL) and a Brief issued by Suffolk County Council Archaeological Service (SCCAS) (Keith Wade 9 August 2011). The work was conducted in accordance with a Project Design and Method Statement prepared by NPS Archaeology (Ref.NAU/NP/BAU2915). This work was commissioned and funded by Suffolk Mind.

This programme of work was designed to assist in defining the character and extent of any archaeological remains within the proposed redevelopment area, following the guidelines set out in *Planning Policy Statement 5: Planning for the Historic Environment* (Department for Communities and Local Government 2010). The results will enable decisions to be made by the Local Planning Authority about the treatment of any archaeological remains found.

The site archive is currently held by NPS Archaeology and on completion of the project will be deposited with Suffolk County Council following the relevant policies on archiving standards.

## **2.0 GEOLOGY AND TOPOGRAPHY**

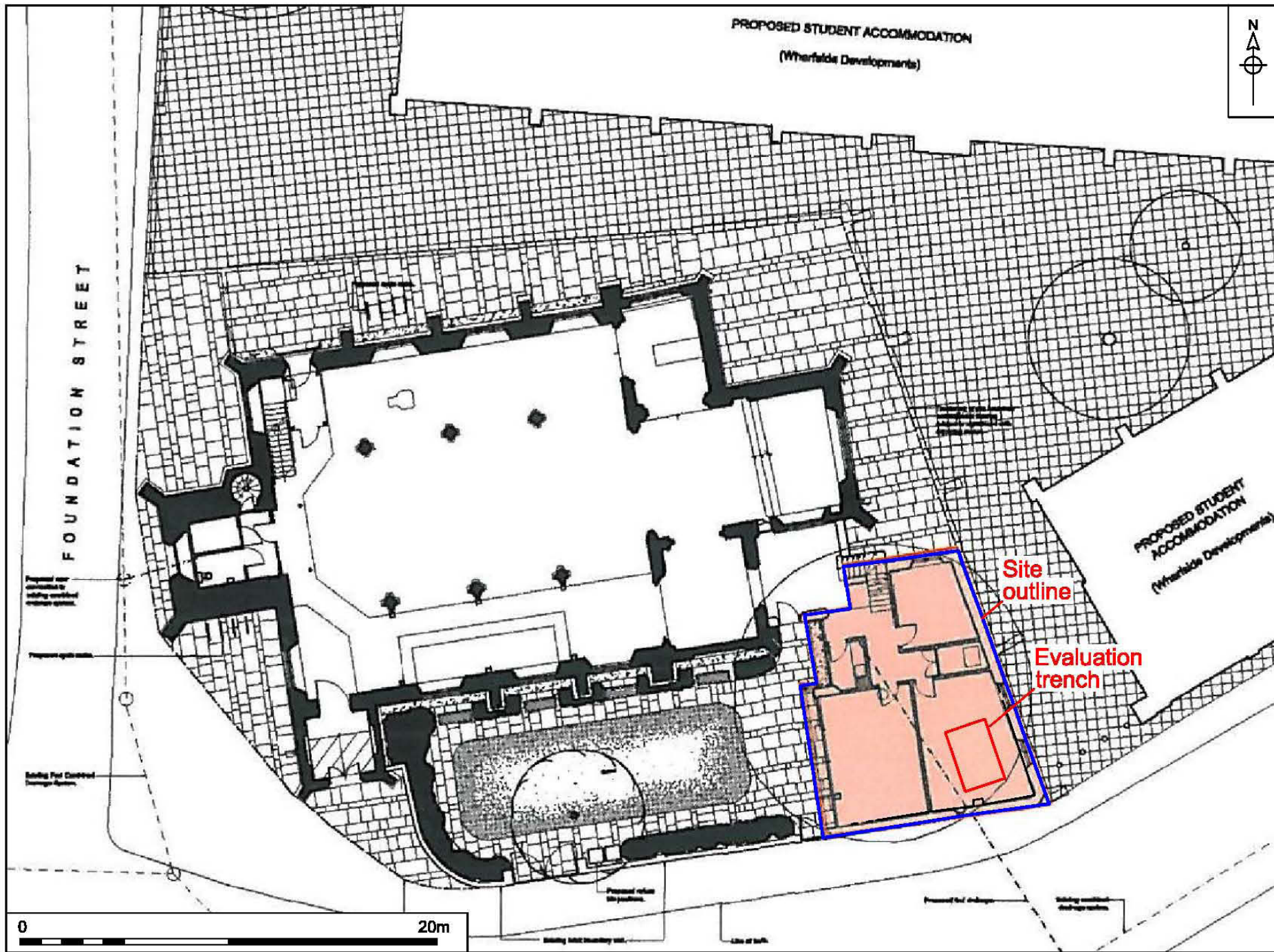
Geological deposits below the site of St Mary at Quay are Upper Cretaceous chalk overlain by Palaeocene Woolwich and Reading beds – interbedded clays and sands (BGS 1985). Above this solid geology are Pleistocene and Holocene deposits which are recorded as River Terrace sands and gravels of Devensian, Ipswichian, or Wolstonian eras on the Quaternary Geology map of the British Geological Survey 1991 (BGS 1991).

St Mary at the Quay, one of 12 medieval churches in Ipswich, is situated in the heart of the town's dockland. The area is mostly given over to commerce activity with few residents.

The River Orwell flows through the heart of Ipswich and was the reason for the town's importance in the Middle Saxon period. It is tidal which allowed a great port to develop.

The site of St Mary at the Quay church is located approximately 100m north of the 19th-century quay 'Albion Wharf', a focus of the local malting industry for over 160 years, now converted into modern residential accommodation. St Mary at the Quay is on the north side of an incising bend of the river and as such it would be expected to cut into older sediments.

A temporary benchmark which had a value of 3.93m OD was established on the ground surface adjacent to the trench.



Based on a drawing supplied by Molyneux Kerr Architects

Figure 2. Trench location. Scale 1:250

### 3.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

St Mary at the Quay, one of 12 medieval churches in Ipswich, is situated in the heart of the town's dockland which in the middle ages was the home of prosperous merchants. Four of the town's ancient churches share a dedication to St Mary - St Mary Le Tower, St Mary at the Elms, St Mary at Stoke and St Mary at the Quay (the last because of its close proximity to the river and the busy port). The church stands in Key Street, its vane displays a large Key and it has often been called 'the Key Church'. The term is not however a misnomer; the quay was known as the 'Kay' in 1306 and it is not surprising that this word (and its Danish equivalent 'Kaai') should develop into 'Key'.

An important part of the medieval port of Ipswich was located within the parish including the Common Quay, the Customs House and the homes of wealthy merchants who traded from the port. Much of the northern part of the parish was occupied by the Blackfriars monastery (which was dissolved in 1538). In the parish's south-west part, near Foundation Street, was Henry Tooley's 'Foundation' - his almshouses - which remain today and had close associations with their parish church.

Although an earlier building is known to have existed, the present church was constructed between c.1443-1543 (Tricker 2005). Recent evidence from excavations by Suffolk County Council Archaeological Service (SCCAS) suggests that the north bank of the River Orwell lay further north than it does today, closer to St Mary at Quay a century before the 15th/16th-century construction of the church. Archaeological investigations on the site immediately adjacent to St Mary at Quay - at Cranfields Garage (ESF 19608) to the south-west of Key Street revealed the remains of significant stone built buildings of 14th-century date which had originally stood on the water's edge.

A trial trench evaluation (IAS 6406) was carried out in 2005 at the site of the former Albion Maltings on Albion Wharf immediately to the south of St Mary at the Quay. Complex, well-stratified multi-period deposits were recorded in the western part of the site beginning just 0.50m below the current ground surface. These included two post-medieval wells, a fragment of late medieval/post-medieval septaria-built wall and the remains of a possible cobbled surface of 13th- to 14th-century date. A substantial amount of dumping and reclamation activity (principally of 13th- to 14th-century date) was also recorded in this part of the site. In the eastern part of the site a substantial wooden structure (at least 19 piles up to 1.5m in length) was recorded in unexpectedly deep 'river mud' deposits. This has been interpreted as a possible pier or jetty -type structure within some kind of previously unknown inlet. The date of the structure was difficult to determine but the balance of evidence suggested it was late medieval. An earlier 0.75m thick peat deposit was also recorded but could not be dated. Definite natural sub-soil was not located in this eastern part of the site at -0.90m AOD, c.1.50m deeper than anticipated.

An excavation was carried out at St Bartholomew's Wharf, College Street (ESF 20093, IPS 587), a short distance to the west of St Mary at Quay. The site was found to be almost entirely occupied by a single cellared room of late 19th-century date; almost certainly associated with the former St Peter's Iron Works. The depth of this cellaring was such that it had truncated the majority of earlier evidence for

any occupation of the College Street frontage. This depth and difficulties with groundwater in the enclosed space also meant that it was difficult to relate the earlier foreshore deposits to those seen elsewhere on other sites. No evidence of the well-preserved *in situ* hurdles of the earlier medieval period was seen here. Although by no means certain, the deposits below the water table here, and the levels at which they were encountered (below 1.00m AOD), suggests that the excavation was located to the south of any such occupation of the foreshore associated with the Anglo-Saxon settlement.

An excavation carried out by SCCAS on Key Street, a short distance to the south-east of St Mary at the Quay and north of the Common Quay found evidence of prehistoric, Saxon, medieval and post-medieval occupation. A medieval cemetery overlying occupation dating from the Middle Saxon to the 12th century was also found.

The inference from these local archaeological investigations is that the church of St Mary at the Quay is also built on land that was once very close to the north bank of the River Orwell. A discussion of the early development of Ipswich (Wade 1989) illustrates the position of St Mary at Quay as being almost directly on the north bank of the much wider River Orwell and separated from the water by what appears to be a predecessor of Key Street.

#### **4.0 METHODOLOGY**

The objective of this evaluation was to determine as far as reasonably possible the presence or absence, location, nature, extent, date, quality, condition and significance of any surviving archaeological deposits within the development area.

The Brief required the excavation of a hand dug trench measuring 3m from north to south and 2m from east to west (giving an approximate 5% sample of the total footprint of the proposed extension) located in the south-east corner of the churchyard (Fig. 2). This location was selected as it was considered to be the optimum location for examining pre-cemetery deposits and also minimized the risks to the roots of a mature lime tree present on the site.

When the trench reached a depth of 1.20m the edges were shored. The base of the excavation was stepped twice to reach the natural deposits and to allow the sections to be recorded (Fig. 3). The trench was fenced at all times.

Where partial skeletons from recognisable graves were encountered within the trench they were excavated and packed, labelled and stored accordingly so that the skeletal remains can be reunited with the rest of the skeleton when uncovered during the larger excavation phase.

Spoil, exposed surfaces and features were scanned with a metal-detector. All metal-detected and hand-collected finds other than those which were obviously modern, were retained for inspection.

Environmental samples were taken from five deposits - midden deposits [47], [51] and [52], probable upper marsh tidal flooding deposit [53] and a possible soil [54] that had developed into a surface of sand bars of probable late glacial/early Holocene date.

All archaeological features and deposits were recorded using NPS Archaeology pro forma. Trench locations, plans and sections were recorded at appropriate

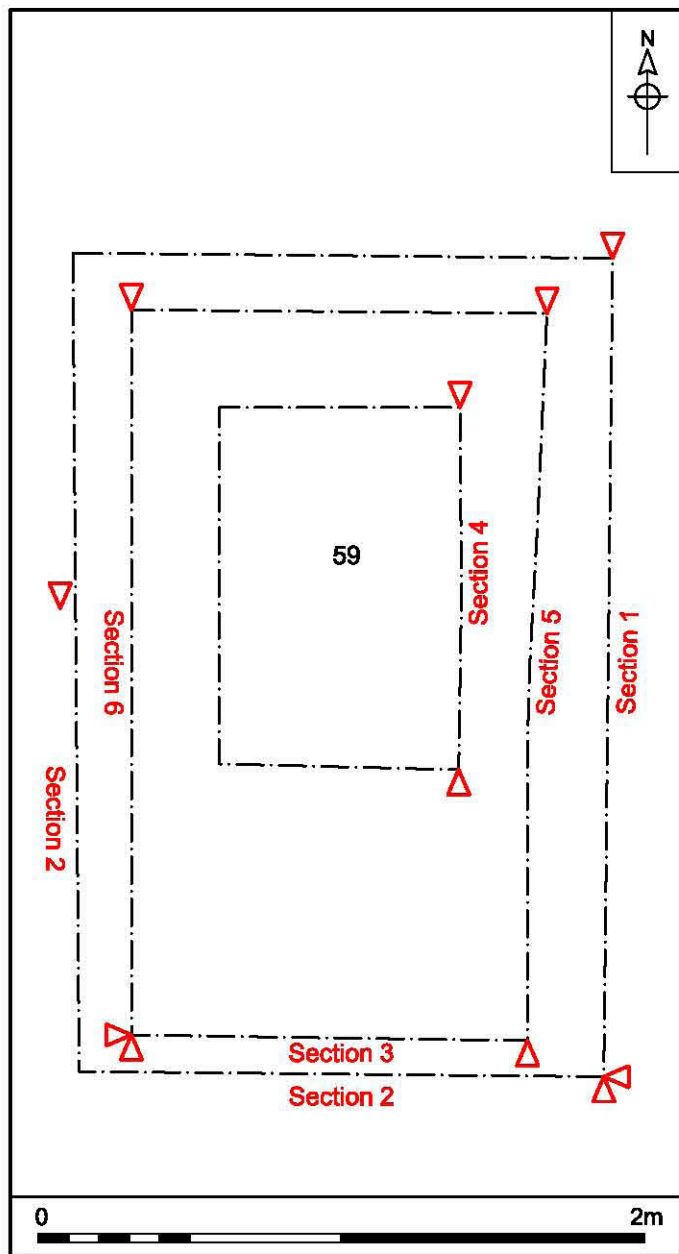


Figure 3. Plan showing central sondage, natural and location of sections. Scale 1:25

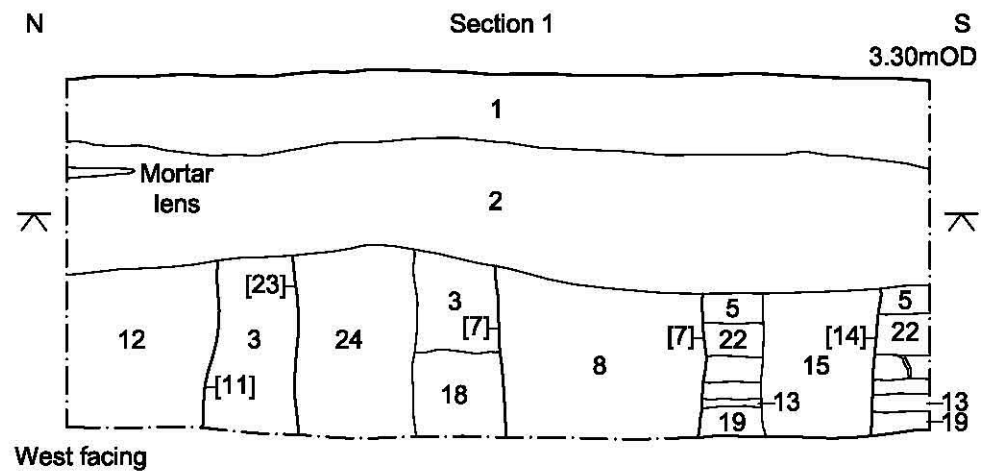


Figure 4. West facing baulk section to a depth of 1.20m. Scale 1:25

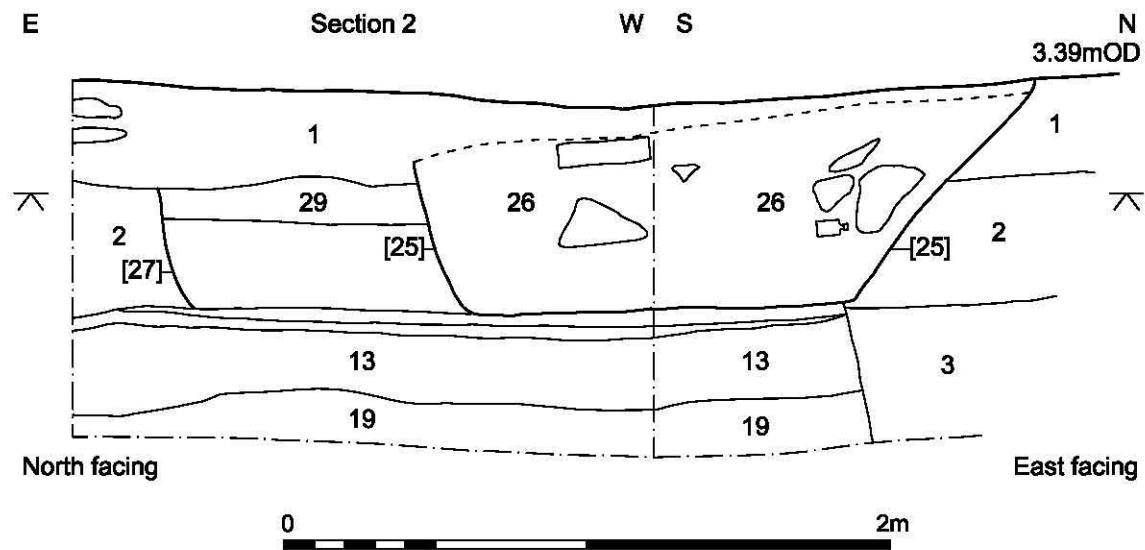


Figure 5. North and east facing baulk sections to a depth of 1.20m. Scale 1:25

scales. Colour, monochrome and digital photographs were taken of all relevant features and deposits where appropriate.

The temporary benchmark used during the course of this work was transferred from an Ordnance Survey benchmark with a value of 4.20m OD, located on the west face of St Mary at the Quay church.

Site conditions were good, with the work taking place in mainly dry, cold weather.

## 5.0 RESULTS

### 5.1 The Upper Deposits

(Figures 3, 4 and 5; Plate 1)

The uppermost material in the trench consisted of a dark grey humic silt topsoil [01]. The deposit was an average of 0.30m deep and contained a large number of small roots (up to 0.03m in diameter) originating from the lime tree situated close to the northern edge of the trench.

The deposit produced thirty-one sherds of pottery. One sherd was Middle Saxon (between 650 and 850) and the rest dated between the 16th and late 18th-20th centuries. The deposit also produced two fragments of ceramic building material, six fragments of clay tobacco pipe stem, five bottle fragments, nine pieces of animal bone, an oyster shell fragment and six iron objects including a possible coffin plate. A small quantity of disarticulated human bone was also recovered.



Plate 1. The deposits to a depth of 1.20m below current ground level, looking south

Modern rubbish pit [25] was seen to truncate the topsoil [1] in the south-west corner of the trench (Fig. 5). The 0.70m-deep pit measured a minimum of 0.80m from east to west and 1.25m from north to south, extending beyond the limit of

excavation to both west and south. The fill of feature ([26]) consisted of un-compacted dark grey silt sand which contained several large limestone blocks (possibly fragments of grave slab) along with modern bottle glass, a metal spring and a modern drinks container.

The topsoil was removed and found to overlay a mixed churchyard soil consisting of a brownish grey sand silt with mortar, brick and tile fragment inclusions [2]. A moderate number of tree roots up to 0.04m in diameter were present within the deposit which was found to have an average depth of 0.45m. Forty–six sherds of pottery were recovered from this context; one of Middle Saxon date, one Late Saxon and the rest were late medieval to post-medieval, spanning the late 15th–20th centuries. Five undated iron objects, twenty-five pieces of animal bone, thirteen fragments of clay pipe, six shards of post-medieval glass and a post-medieval button were also collected from this context.

The deposit contained a moderate quantity of disarticulated human bone but no articulated burials. No grave cuts were visible within the deposit.

Relatively modern pit [27] was seen to truncate the mixed churchyard soil in the north facing section of the trench (Fig. 5). This 0.45m-deep feature measured a minimum of 0.90m from east to west (it was truncated by pit [25] to the west) and contained building rubble (yellow brick, red roof tile and orange sand) in a mid brown silt sand matrix [28]. This may well be construction waste associated with the rebuilding of the southern boundary wall in the late 19th century (Tricker 2005).

## **5.2 Metalled surface, possible floor and make-up deposits (southern portion of trench)**

(Figures 5-8 and 10; Plate 2)

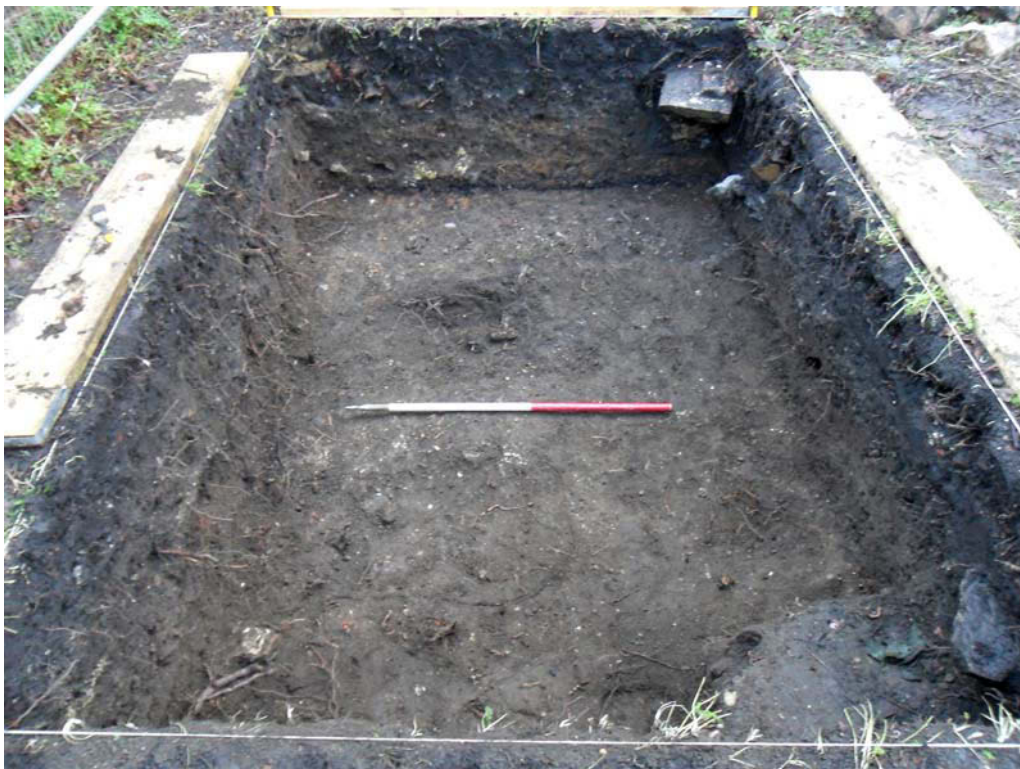


Plate 2. Metalled surface [5] and grave cuts, looking south

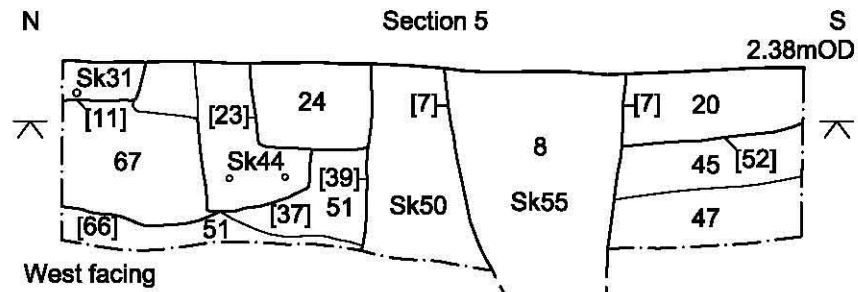


Figure 6. Lower west facing baulk section.  
Scale 1:25

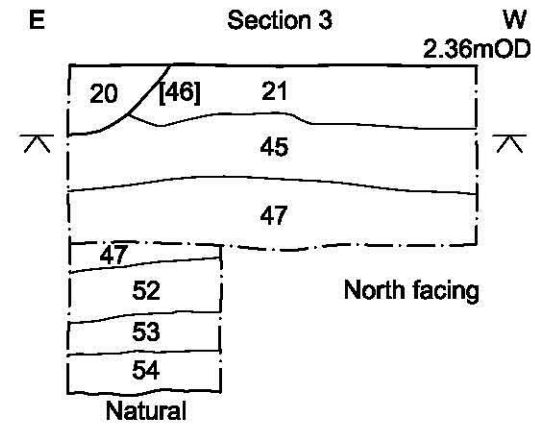


Figure 8. Lower north facing baulk section.  
Scale 1:25

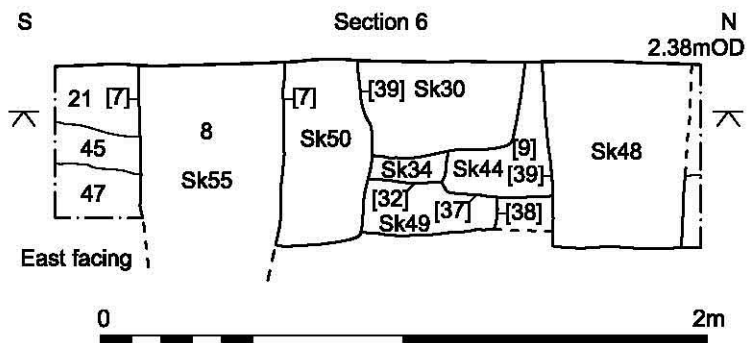


Figure 7. Lower east facing baulk section.  
Scale 1:25

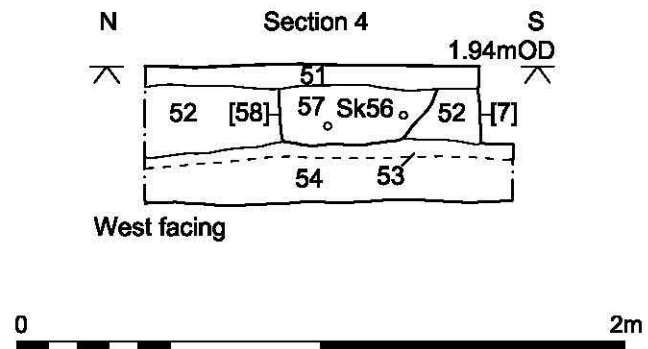


Figure 9. West facing section of lower central sondage. Scale 1:25



The mixed churchyard soil and modern waste pits were removed revealing a marked difference between the deposits at the southern and northern portions of the trench at a depth of approximately 0.75m below the current churchyard ground level.

At the southern end of the trench (adjacent to the southern boundary wall of the church) a thin deposit of ash and cinders [04] was exposed in plan. The deposit was 0.80m wide at the eastern baulk and 0.70m wide at the western baulk. This 0.08m thick spread of material was interpreted as being a dump of hearth waste. A single sherd of pottery from a Martincamp flask dating to the 17th century along with a fragment of clay tobacco pipe and a piece of oyster shell were collected from the context.

The whole of the northern edge of the layer had been truncated by east-west aligned grave cut [7] (Figs 6, 7 and 10). This grave proved to essentially demarcate the southern boundary of the graveyard (at least until relatively modern times c.1900) within the trench which had resulted in all deposits below the hearth waste layer [4] being undisturbed by burials and preserved to the surface of the natural geology.

The hearth waste [4] overlay a deposit with an average depth of 0.07m and which consisted mainly of flint gravel with a small quantity of brick and tile [5]. The deposit was very compact and appeared to be a metalled surface. This surface was tentatively interpreted as the surface of an earlier (c.17th-century) incarnation of the present Key Street. The surface was removed to reveal layer [22] - a mid brown gritty sandy silt with occasional flint gravel, oyster and ceramic building material (CBM) fragments. This undated layer, only present towards the eastern edge of the trench and up to 0.12m thick, was interpreted as a dump of material acting as make-up/levelling for metalled surface [5]. On removal of [22] a layer of pale brown chalky clay [13] was encountered. The layer was an average of 0.26m thick and extended an average distance of 0.70m into the trench from the southern end. An apparently *in situ* medieval brick was found mortared to the surface of the deposit adjacent to the eastern edge of the trench but other CBM fragments recovered from the fabric of the deposit were a mixture of medieval and post-medieval items suggesting the brick may have been re-used. A single sherd of pottery of late 13th- to early 14th-century date and five pieces of bone from domesticated animals were also collected. The deposit was therefore tentatively interpreted as being part of a floor, possibly associated with a structure positioned on the Key Street frontage. The dating of the feature is problematic given the conflicting dating evidence but there is a possibility that it is of late 13th- to early 14th-century date. If that is the case, the structure predates the church and may have been demolished to make way for the church yard.

Possible floor [13] was underlain by a layer of pale greenish brown slightly sandy silt [19] which contained a small quantity of charcoal, shell and chalk flecking. The deposit, an average of 0.14m thick, produced a bone styli or parchment pricker of probable medieval date (6.12 below), pottery with a probable spot date of late 13th to early 14th century and a single redeposited sherd of Middle Saxon pottery. The five fragments of CBM collected from the deposit were of medieval date with the exception of a piece of post-medieval plain roof tile which may be intrusive or misidentified. The deposit was interpreted as a dump of material, probably laid

down in the late 13th- to early 14th-century, the function of which was to raise the level of the land.

On removal of make-up layer [19] a further make-up layer [21] consisting of a mid to dark orange brown silt sand with a small quantity of oyster shell fragments and flint pebbles was revealed. Still extending an average distance of 0.70m into the trench from the southern end the 0.20m-thick deposit yielded five sherds of pottery of Middle and Late Saxon date, two pieces of possible daub or oven dome and nineteen fragments of animal bone from pig/boar, mammal, cattle and bird/fowl. Fragments of a human skull were also present within this layer. It would appear likely that this material has been imported and redeposited.

Make-up layer [21] had been cut by a pit [46] in the south east corner of the trench. The feature, with a minimum width of 0.32m east-west and 0.70m north-south was filled with [20] - a mid grey brown sand silt with oyster shell and flint stones and pebbles. Two fragments of medieval roof tile were recovered from the fill of this probable waste disposal pit.

Make-up layer [21] was found to seal yet another layer of material laid down for the purposes of land reclamation. This layer ([45]) was an average of 0.22m thick and consisted of dark brown, grey mottled, slightly silty clay. Occasional charcoal flecks and oyster shell fragments were present within this deposit which had a firm, plastic consistency. Five pottery sherds were retrieved from the deposit, one of Middle Saxon date, three Late Saxon and two dating to between the late 13th and early 14th centuries. Other finds were a fragment of post-medieval roof tile, an iron nail, eleven pieces of animal bone, and a small quantity of disarticulated human bone. The dating evidence recovered from this layer is confusing but perhaps on balance it is most likely to be of late 13th- to early 14th-century date with the Saxon pottery being redeposited and the roof tile intrusive or mis-identified.

Layer 45 overlay deposit [47]=[51] (which extended over the entire footprint of the trench) and is discussed below in section 5.6 of the results dealing with the lower deposits.

### **5.3 Grave cuts**

In the remaining area of the trench (c.2.30m to the north of the possible occupation and make-up deposits) at least three, possibly four, east to west aligned grave cuts were discernable at this level ([7], [9], [11] and [23]). On commencement of excavation of grave [7] a probable neo-natal burial [Sk6] was encountered and recorded at a depth of c.0.80m below the current ground surface. This burial was the least deeply interred of all the burials encountered within the trench. This burial (for which no grave cut was discernable), was situated within the upper fill of the grave of an adult, the skeleton of which ([Sk55]) was much deeper within the cut and is discussed below.

### **5.4 Burials**

(Figures 6, 7, 9-16; Plate 3)

A total of ten articulated burials ([Sk6], [Sk30], [Sk31], [Sk34], [Sk44], [Sk48], [Sk49], [Sk50], [Sk55], and [Sk56] ) were located, excavated and recorded in the 2.30m by 2.0m area of the trench to the north of the metalled surface, possible

floor and its associated make-up layers. The one exception to this ([Sk60]) almost certainly interred after c.1900 subsequent to the repositioning of the southern boundary wall further south, was located towards the southern end of the trench.



Plate 3. The deposits between 1.20m and c.1.75m below current ground level, looking east

With the exception of the neo-natal burial ([Sk6]) discussed above, all the skeletons appeared to be adult or young adult and in a supine position. None of the skeletons were wholly recovered as they had either been subject to truncation by later grave digging or extended beyond the limit of excavation to either the east or west.

The burials were interred at a depth of between 1.10m and 2.0m below the current ground surface of the church yard (again with the exception of neo-natal burial [Sk 6]) which was buried at a depth of c.0.80m.

Ten of the eleven burials were orientated on an approximate east-west alignment, with the skull to the west and feet to the east, in the conventional Christian manner. However one burial ([Sk56]) was anomalous in this respect and is discussed below in section 5.6 dealing with the lower deposits.

Coffin nails and furniture were recovered from many of the graves suggesting the majority were coffin burials but this inference may have been affected by the high degree of intercutting of graves which had taken place during the long life of the graveyard.

Two possible grave cuts ([23] and [66]) were observed in the eastern baulk section of the trench. If these features were graves they would have extended beyond the limit of excavation to the east.

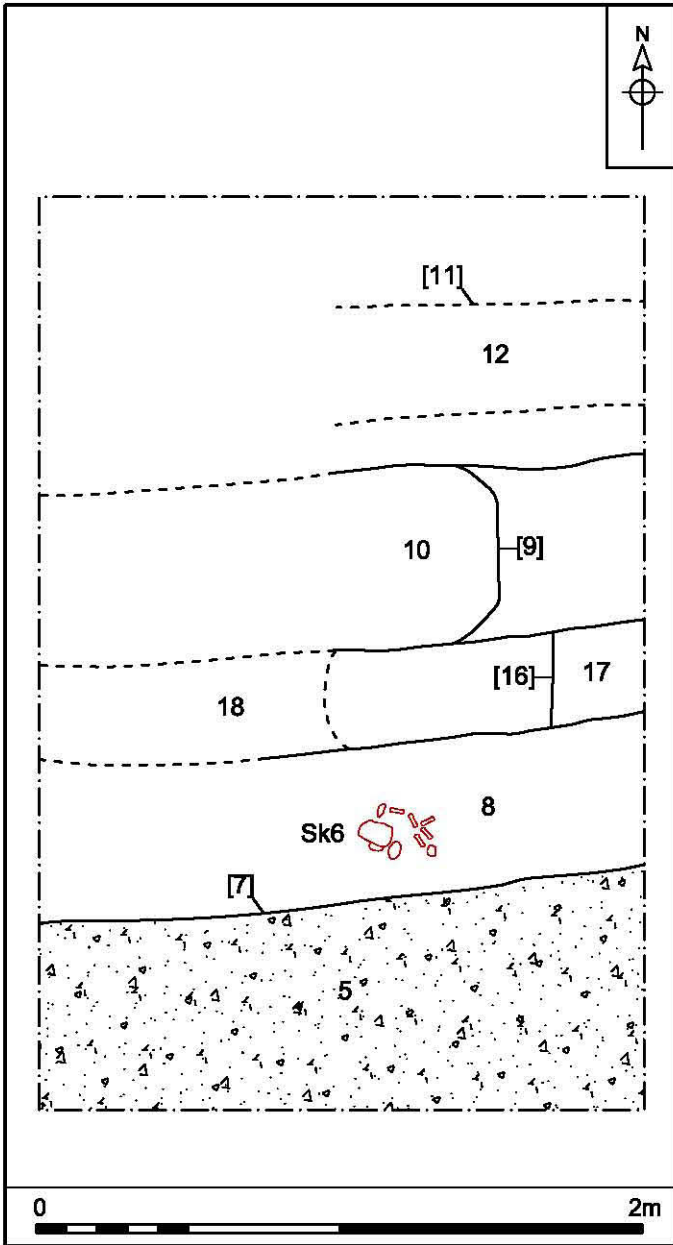


Figure 10. Plan showing metallised surface (5), Skeleton 6 and grave cuts [7], [9] and [11]. Scale 1:25

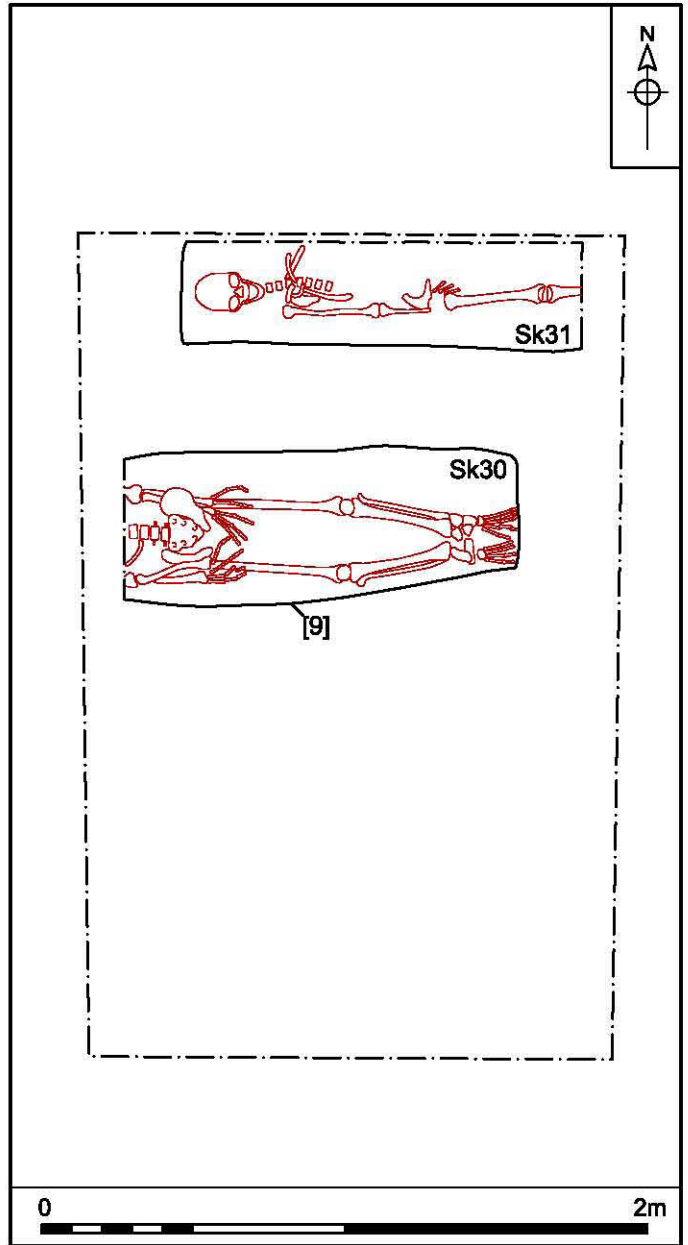


Figure 11. Plan showing Skeletons 30 and 31. Scale 1:25

## Skeleton 31

(Figures 6, 10 and 11; Plate 4)



Plate 4. Skeleton 31, looking west

Skeleton 31 ([Sk31]) was orientated east-west and in a supine position within grave [11]. The top of the skull was 1.26m below current ground level. The skeleton extended beyond the limit of excavation to the east and the lower legs were left *in situ*. Preservation was variable. The lower spine, left pelvis, left ribs and arm were not present. The left leg was present but left under the section.

Grave fill [12] - a mid brown sand silt contained the following finds:

- fifteen pieces of animal bone from cattle, undiagnostic mammal, pig/boar and sheep/goat
- seven fragments of medieval and post-medieval brick and tile
- five fragments of clay tobacco pipe
- five iron coffin fittings and an iron nail
- five fragments of copper alloy plate
- two pottery sherds ranging in date from the 16th to 19th centuries
- a quantity of disarticulated human bone

The grave cut was visible below mixed graveyard soil [2] and cut grave [36] ([Sk48]). It was stratigraphically amongst the latest interments.

A burial date of c.17th-19th century is suggested for this coffin burial.

## Skeleton 30

(Figures 7, 10 and 11; Plate 5)



Plate 5. Skeleton 30, looking west

Skeleton 30 ([Sk30]) was east to west aligned and in a supine position within the grave cut [9]. The top of the pelvis was 1.36m below current ground level. The skeleton extended beyond the limit of excavation to the west and the upper arms and torso were left *in situ*. Preservation was good.

Grave fill [10] - a mid brown sand silt contained the following finds:

- fifteen pieces of animal bone from cattle, undiagnostic mammal, pig/boar and sheep/goat
- a single fragment of medieval roof tile, three fragments of clay tobacco pipe
- four shards of post-medieval vessel glass
- fourteen iron objects including eleven nails
- three pottery sherds ranging in date from Middle Saxon to 16th-18th century
- a quantity of disarticulated human bone

The grave cut was visible below mixed graveyard soil [2] and grave [32] ([Sk34]) and was stratigraphically among the latest interments.

A burial date of c.18th- to 19th-century is suggested for this coffin burial.

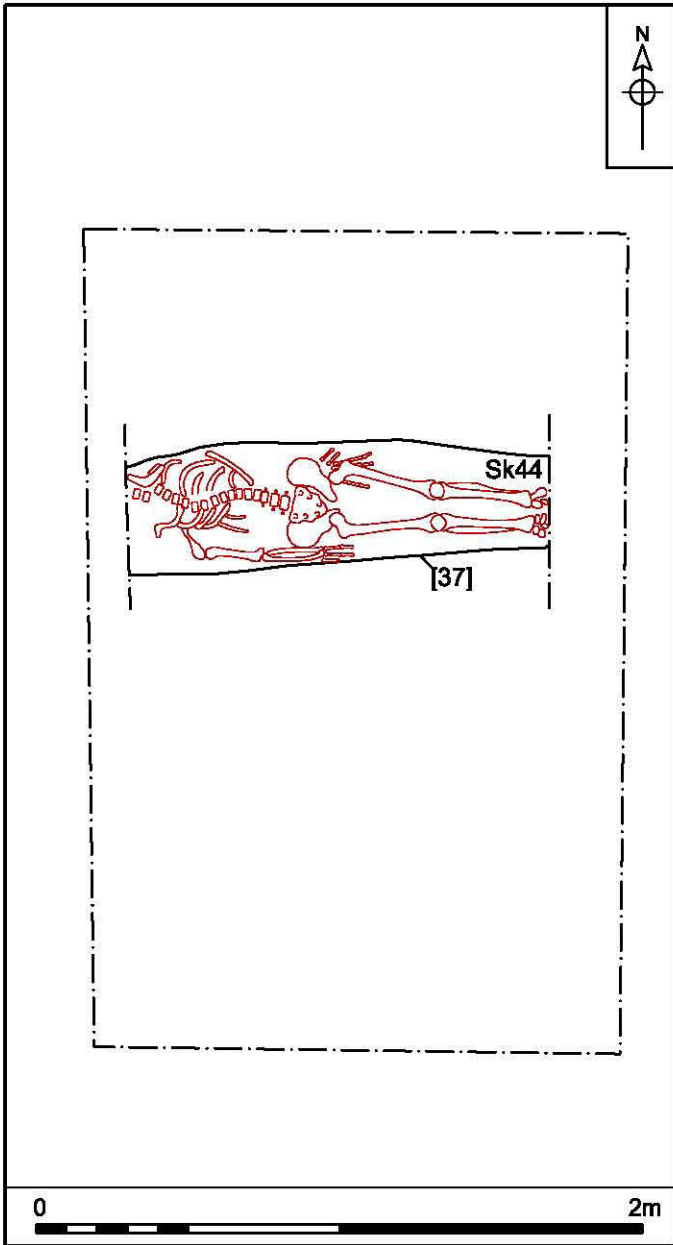


Figure 12. Plan showing Skeleton 44.  
Scale 1:25

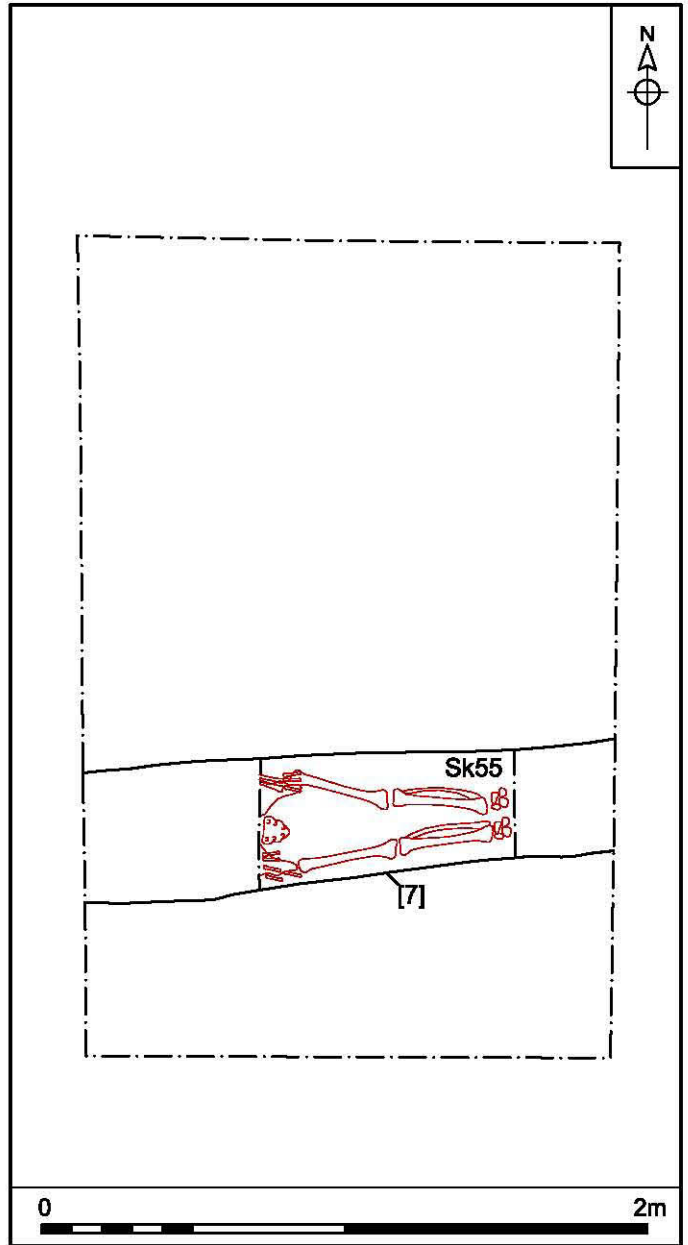


Figure 13. Plan showing Skeleton 55.  
Scale 1:25

## Skeleton 55

(Figures 6, 7, 10 13; Plate 6)



Plate 6. Skeleton 55, looking west

Skeleton 55 ([Sk55]) was east-west aligned and in a supine position within grave [7]. The top of the sacrum was 2.03m below current ground level. The skeleton extended beyond the limit of excavation to the east and west. The feet, legs, pelvis, sacrum and hands were excavated and collected. Preservation was good.

The grave fill [8] - a mid brown sand silt yielded the following finds:

- fifty-four pieces of animal bone from cattle, undiagnostic mammal, pig/boar and sheep/goat and a small animal, possibly a rabbit
- two pieces of prehistoric struck flint
- twenty-six fragments of brick and tile ranging in date from medieval to 18th-19th century
- eleven fragments of clay tobacco pipe
- two shards of post-medieval vessel glass
- twelve iron objects including coffin handle, fittings and nails
- twenty-seven pottery sherds comprising one Roman, seven middle Saxon, six late Saxon, three medieval and ten post-medieval with four sherds of 18th- to 20th-century date



- a quantity of disarticulated human bone

An interment date of c.18th to 20th century is suggested for this coffin burial.

The grave cut was visible below mixed graveyard soil [2] and grave [39] ([Sk30]). Stratigraphically it was among the latest interments.

### **Skeleton 60**

Only the skull of Skeleton 60 ([Sk60]) was available for inspection within the trench. As far as could be ascertained, this skeleton was east-west aligned and in a supine position within grave [14]. The top of the skull was 1.10m below current ground level. The skeleton extended beyond the limit of excavation to the east and preservation appeared to be good.

The fill [15] of the grave, a mid greyish brown sand silt, yielded the following finds:

A single pottery sherd of 16th- to 18th-century date and a small quantity of disarticulated human bone.

The grave cut was visible below mixed graveyard soil [02] and did not have any relationship with any other burial. It was among the latest interments.

An interment date of late 19th-20th century is suggested for this burial.

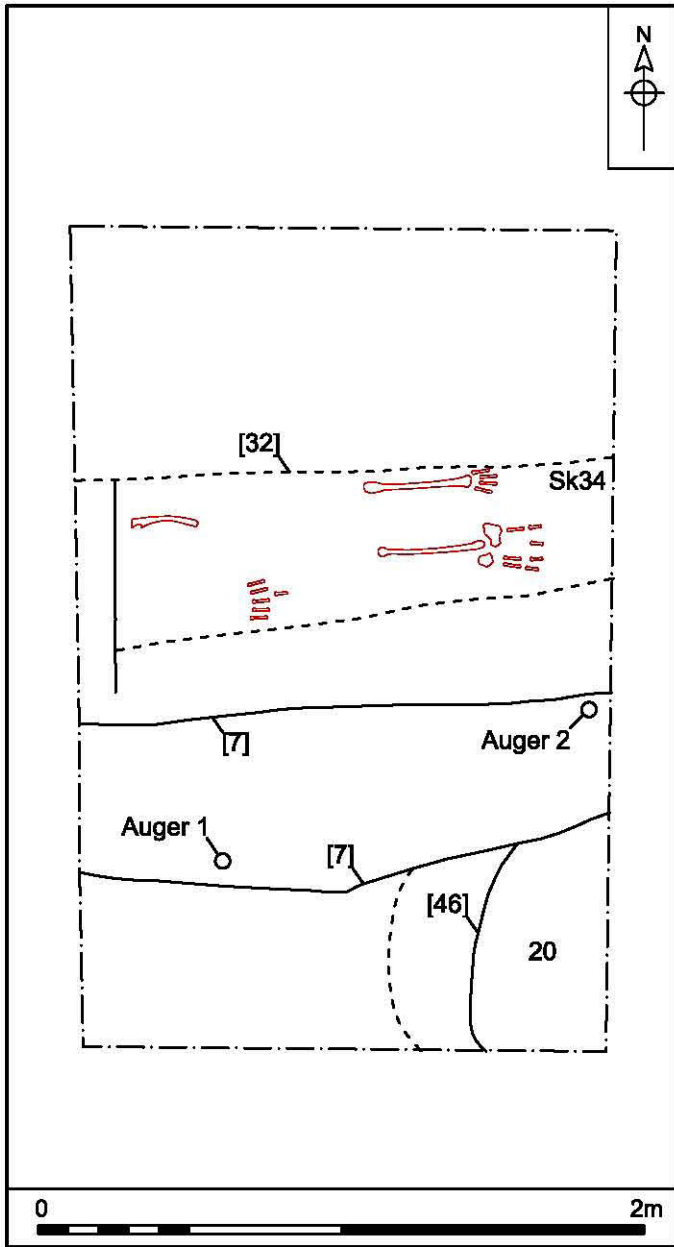


Figure 14. Plan showing Skeleton 34.  
Scale 1:25

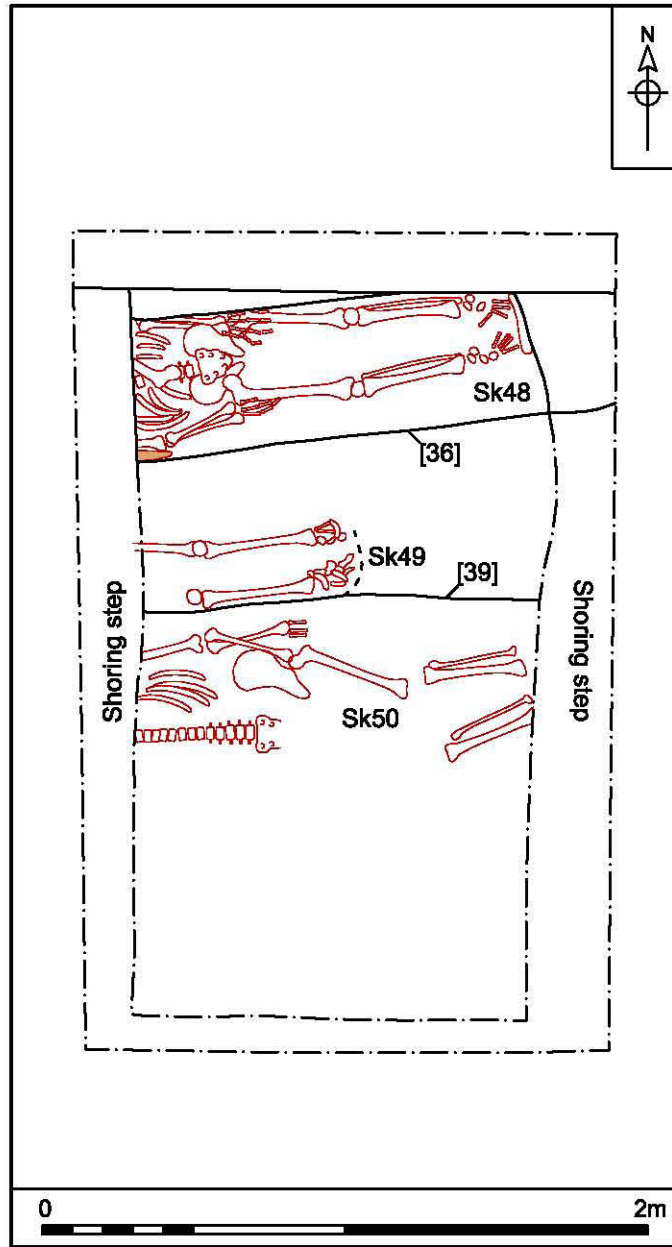


Figure 15. Plan showing Skeletons 48,  
49 and 50. Scale 1:25

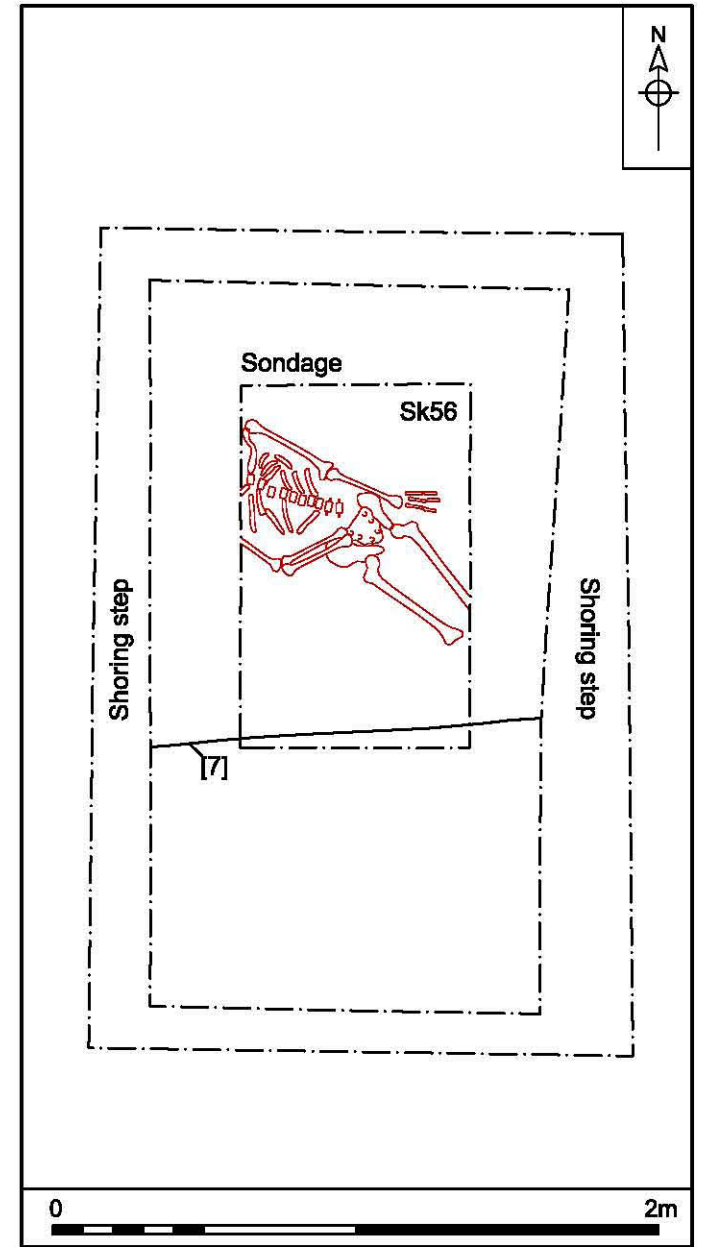


Figure 16. Plan showing Skeleton 56.  
Scale 1:25

## Skeleton 34

(Figures 7 and 14; Plate 7)

Skeleton 34 ([Sk34]) was east-west aligned and in a supine position within grave [32]. The right humerus was 1.57m below current ground level. The skeleton extended beyond the limit of excavation to the east. The burial had been badly disturbed by the interment of skeleton 30 leaving only the lower legs, feet, lower right arm and possibly a left tibia to be recorded and collected. The right humerus was present in the western baulk but was left *in situ*. Preservation of the bone was good.



Plate 7. Skeleton 34, looking west

The following finds were recovered from grave fill [33] which consisted of a mid to dark brown slightly sandy silt:

- five pieces of animal bone from cattle, undiagnostic mammal, and sheep/goat
- two fragments of roof tile, one medieval and one post-medieval
- three fragments of clay tobacco pipe
- an iron plate fragment and an iron nail
- a piece of daub with a possible wattle impression
- a sherd of 10th- to 11th-century Late Saxon pottery

- a quantity of disarticulated human bone

The grave was cut by grave cut [9] ([Sk30]) and truncated grave [37] ([Sk44]).

A late post-medieval interment date is suggested for this probable coffin burial.

## Skeleton 48

(Figures 7 and 15; Plate 8)

Skeleton 48 ([Sk44]) was east-west aligned and in a supine position within grave [36]. The right humerus was 1.79m below current ground level. The skeleton extended beyond the limit of excavation to the west. The upper arms and upper torso were left *in situ*, Preservation of the bone was good.

The following finds were recovered from the fill [40] of the grave which consisted of a mid brown sandy silt with occasional charcoal flecks and flint gravel:

- thirty pieces of animal bone from cattle, undiagnostic mammal, pig/boar and sheep/goat
- two fragments of medieval CBM
- three fragments of post-medieval CBM
- one fragment of clay tobacco pipe stem
- five iron coffin handles, three iron coffin fittings, five iron nails
- one struck flint
- a fragment of oyster shell
- two sherds of Late Saxon pottery and two of 16th- to 18th-century date
- a quantity of disarticulated human bone including two skulls

Grave [36] was cut by grave cut [11] ([Sk31]) and truncated grave [37] ([Sk44]).

A late post-medieval interment date is suggested for this coffin burial.



Plate 8. Skeleton 48, looking west

## Skeleton 44

(Figures 6, 7 and 12; Plate 9)

Skeleton 44 ([Sk44]) was east-west aligned and in a supine position within grave [37]. The skull was 1.55m below current ground level. The skeleton extended just beyond the limit of excavation to the east; parts of both feet were left *in situ*. The grave had been truncated by a later interment [36] ([Sk 48]) which had removed the left arm and the front of the skull. On lifting of the skeleton the bone proved to be very fragile and relatively poorly preserved.



Plate 9. Skeleton 44, looking west

The fill of grave [41] - a pale brown, sticky sand silt with moderate tiny chalk and mortar inclusions yielded the following finds :

- twenty-one pieces of animal bone from cattle, undiagnostic mammal and pig/boar
- one fragment of medieval roof tile
- seven fragments of probable shroud pins
- four iron nails
- one sherd of pottery of date
- a quantity disarticulated human bone

The grave was cut by graves [36] ([Sk48]), [32] ([Sk34]) and grave [38] ([Sk49]).

An interment date of c.15th-16th century is suggested for this probable shroud burial.

## Skeleton 50

(Figures 6 and 15; Plate 10)

Skeleton 50 ([Sk50]) was east-west aligned and in a supine position within grave [39]. The pelvis was 1.79m below current ground level. The skeleton extended beyond the limit of excavation to the east and west, both feet were left *in situ* as was the upper left torso. The right torso, pelvis arm and femur had been truncated by grave [7] ([Sk55]) to the south. On lifting of the skeleton the bone was found to be in reasonable condition.



Plate 10. Skeleton 50, looking west

The fill of grave [43] was a pale brown, soft, sand silt with rare fragments of shell and flecks of CBM. The following finds were recovered from the fill:

- thirty pieces of animal bone from cattle, undiagnostic mammal, sheep/goat, pig/boar and goose
- one fragment of Medieval roof tile and three of post-medieval date
- one fragment of clay tobacco pipe stem
- two iron coffin fittings and one iron nail
- one piece of Limestone with smoothed surfaces
- a quantity disarticulated human bone

The grave was cut by grave [7] ([Sk55]) to the south and grave [38] ([Sk49]) to the north.

A post-medieval interment date is suggested for this probable coffin burial.



## Skeleton 49

(Figures 7 and 15; Plate 11)

Skeleton 49 ([Sk49]) was east-west aligned and in a supine position within grave [38]. The left femur was 1.70m below current ground level. The skeleton extended beyond the limit of excavation to the west, only the lower legs and left femur were recorded and lifted. It is likely that the right femur had been disturbed and removed on the interment of Skeleton 50 ([Sk50]) to the south. On lifting of the skeleton the bone was found to be in good condition.



Plate 11. Skeleton 49, looking west

The fill of the grave [42], a dark grey, quite compact, sand silt with occasional charcoal and shell fragments yielded the following finds:

- twelve pieces of animal bone from cattle, undiagnostic mammal and pig/boar
- one fragment of post-medieval roof tile
- one fragment of clay tobacco pipe stem
- one sherd of pottery of 10th- to 11th-century date
- a fragment of oyster shell
- a quantity disarticulated human bone

The grave was cut by graves [37] ([Sk44]) to the north and [39] ([Sk50]) to the south.

A late medieval to early post-medieval interment date is suggested for this burial.

## 5.5 Dating of graveyard deposits

The dating of burials within a graveyard context using artefactual evidence is problematic. This is mainly because re-deposition of material is almost inevitable due to deposits being vulnerable to disturbance by a succession of interments. There proved to have been a great deal of intercutting of graves during the present work and the dates attributed to each burial are based on the balance of available evidence. However, it would seem reasonable that the burials span a date range of Middle Saxon through to late post-medieval.

## 5.6 The lower deposits and central sondage

(Figures 3, 8, 9, 16; Plates 12, 13 and 14)

On removal of the metalled surface, possible floor, associated make-up layers and the east-west aligned burials at the south end of the trench, a c.0.25m thick deposit ([47]=[51]) consisting of a damp/wet, mid to dark grey sand silt, was seen to extend over the whole trench. The surface of the deposit was at a depth of c.1.75m (c.2.08m AOD) which roughly coincided with the level of the modern water table.

At this stage the excavation of a central sondage measuring 1.20m north to south by 0.80m east to west was initiated (Fig. 3). The deposit contained quantities of oyster shell, crushed mortar, charcoal fragments and animal bone and was interpreted as dumped midden material consisting of domestic refuse- organic and inorganic on marginal land.

Finds recovered from the material comprised:

- ninety-six pieces of animal bone from cattle, undiagnostic mammal, pig/boar, sheep/goat and fowl
- three fragments of Roman box flue tile and a probable fragment of Roman imbrex
- five sherds of pottery dating to the Middle Saxon period
- a fragment of a probable Early Saxon loomweight.
- seven fragments of oyster shell

On removal of dumped midden material ([47]=[51]) a further layer of dumped midden material was encountered. This layer ([52]) was an average of 0.21m thick and was composed of a mid yellowish tinged greenish grey sand silt containing a small quantity of oyster shell and charcoal.

Finds recovered from the material comprised:

- forty-four pieces of animal bone from cattle, undiagnostic mammal, pig/boar and sheep/goat
- seven sherds of pottery - six dating to the Middle Saxon period and one to the late 13th-early 14th centuries (which is presumably intrusive).

The finds again suggest a Middle Saxon date for the deposition of this material.

The presence of these deposits indicates the development of an urban or proto-urban environment close to the margin of the River Orwell in the Middle Saxon period.

Diatom and pollen analysis would determine if this dumping occurred in water or in an intertidal zone. Given its location it is highly likely that perhaps regular tidal events and certainly storm surges would have frequently affected this land (Appendix 1).



Plate 12. Skeleton 56 looking west

On excavation of dumped midden material [52] described above within the area of the sondage a final skeleton ([Sk56]) was encountered. The skeleton, an adult, was approximately north-west to south-east aligned and was positioned in such a way that it was turned onto its left side to some degree (Plate 12). The right elbow was protruding from the body and the legs (only the femurs were within the excavated area) were angled to the right. The skeleton was either in a shallow (but unclear) cut ([58]) or simply within the lower layer of dumped make-up material [52]. The pelvis was 1.98m below current ground level.

Finds retrieved from the immediate vicinity ([57]) of the skeleton (and hence from within a grave cut if it existed) were very similar in date and composition to those from the layer in which the skeleton was situated. They comprised:

- nineteen pieces of animal bone from cattle, undiagnostic mammal, pig/boar and sheep/goat
- a piece of fired clay (possibly daub)
- three sherds of pottery dating to the Middle Saxon period (650-850 AD)

Skeleton 56 is probably of Middle Saxon date. It is possible that it was associated with an earlier churchyard but the unconventional alignment and positioning of the skeleton may point to the random dumping of a body or even an accidental drowning if the area was, as is suspected, at least intermittently inundated with water.

Below Skeleton 56 and lower dumped deposit [52], a series of naturally accumulated deposits were found to be present.

The uppermost of these deposits was [53], a laminated silt with sand which became increasingly silty and organic towards the top. The following finds were recovered from this c.0.10m-thick deposit:

- ten pieces of cattle bone
- a single sherd of pottery of Middle Saxon date
- a single human vertebra

It is likely that this deposit accumulated as a result of tidal flooding of a marshy area (Appendix 1)

Sealing the glacial sands in the base of the trench was a light brown grey sand with fine gravel and rare larger round gravel [54]. The deposit was approximately 0.15m thick within the area of the trench and yielded a single piece of animal bone from cattle.

This deposit was probably a bioactive soil with roots or worms burrowing through the sediments. If it is indeed a bioactive soil as the roots suggest there must have been a lower water table than at present and is therefore likely to be Late Glacial-Early Holocene in date and may contain evidence of prehistoric activity. Soil micromorphology of this deposit would determine if it is a relict soil (Appendix 1).

The surface of the natural geology, which consisted of clean, coarse grained orange sand, was encountered at a depth of 2.30m (1.49m OD) below the current ground surface of the church yard. No archaeological features were truncating the natural sand within the area of the sondage.



Plate 13. The deposits c.1.30m and 2.30m below current ground level, looking south



Plate 14. The lower deposits and surface of the natural sand, looking north

## 6.0 FINDS

All finds were processed (and apart from the human skeletal remains) recorded by count and weight and an Excel spreadsheet produced outlining broad dating. The human remains have not been quantified or weighed at this stage, due to their partial nature - their presence has been noted and the elements of each skeleton recorded.

Each material type has been considered separately and is included below organised by material and chronologically within that category. A list of finds in context order can be found in Appendix 3a.

### 6.1 Pottery

by Sue Anderson

Two-hundred and sixteen sherds (3,220g) of pottery were collected from 25 contexts during the evaluation (Appendix 4). Table 1 shows the quantification by fabric and period. A summary by context is included in Appendix 4.

Description	Fabric	Code	No	Wt/g	Eve	MNV
RB Grey Micaceous	RBGM	1.20	1	27		1
RB Coarse Grog	RBCG	1.30	1	36		1
<b>Total Roman</b>			<b>2</b>	<b>63</b>	<b>0</b>	<b>2</b>
Gritty Ipswich Ware	GIPS	2.31	17	427	0.23	17
Sandy Ipswich Ware	SIPS	2.32	17	475	0.19	15
<b>Total Middle Saxon</b>			<b>34</b>	<b>902</b>	<b>0.42</b>	<b>32</b>
Thetford-type ware	THET	2.50	25	284	0.56	24
Stamford Ware Fabric A	STAMA	2.61	1	6		1
Stamford Ware Fabric B	STAMB	3.71	3	37		3
<b>Total Late Saxon</b>			<b>29</b>	<b>327</b>	<b>0.56</b>	<b>28</b>
Medieval coarseware	MCW	3.20	2	11		2
Ipswich Glazed Ware	IPSG	4.31	38	443		8
Scarborough Phase I	SCAR1	4.41	4	51		1
London-type ware	LOND	4.50	1	12		1
<b>Total medieval</b>			<b>45</b>	<b>517</b>	<b>0</b>	<b>12</b>
Late medieval and transitional	LMT	5.10	1	15		1
Raeran/Aachen Stoneware	GSW3	7.13	2	58		2
<b>Total late medieval</b>			<b>3</b>	<b>73</b>	<b>0</b>	<b>3</b>
Iron-glazed blackwares	IGBW	6.11	1	2		1
Glazed red earthenware	GRE	6.12	13	439	0.32	12
Speckle-glazed Ware	SPEC	6.15	2	16		2
Non-local post-medieval earthenwares	NLPM	6.17	2	104	0.15	2
Border Wares	BORD	6.22	2	31	0.10	2
Tin glazed earthenwares	TGE	6.30	6	22	0.13	6
Staffordshire-type Slipware	STAF	6.41	1	20		1
Cologne/Frechen Stoneware	GSW4	7.14	4	31		4
Martincamp Ware Type III	MART3	7.363	1	4		1
Westerwald Stoneware	GSW5	7.15	11	76		11
<b>Total post-medieval</b>			<b>43</b>	<b>745</b>	<b>0.70</b>	<b>42</b>

Description	Fabric	Code	No	Wt/g	Eve	MNV
Late post-medieval unglazed earthenwares	LPME	8.01	2	61	0.10	2
Refined white earthenwares	REFW	8.03	19	133	0.70	15
Creamwares	CRW	8.10	17	101	0.11	17
Pearlware	PEW	8.11	5	16		5
English Stoneware	ESW	8.20	4	143		2
English Stoneware Staffordshire-type	ESWS	8.23	1	2		1
Porcelain	PORC	8.30	3	36	0.12	3
Staffordshire white salt-glazed stonewares	SWSW	8.41	3	24	0.19	3
Late glazed red earthenware	LGRE	8.50	2	20		2
Late slipped redware	LSRW	8.51	3	46	0.10	3
Late blackwares	LBW	8.52	1	11		1
<b>Total modern</b>			<b>60</b>	<b>593</b>	<b>1.32</b>	<b>54</b>
<b>Totals</b>			<b>216</b>	<b>3220</b>	<b>3.00</b>	<b>173</b>

Table 1. Pottery quantification

With the exception of two possible Roman sherds, the earliest pottery was Middle Saxon Ipswich Ware. This material is ubiquitous in the centre of the town, as is Late Saxon Thetford-type ware, because both were produced at a number of kiln sites in Ipswich. Most sherds of these periods were redeposited in later contexts, but there is potential for Saxon deposits to have survived on the site; some contexts contained only Saxon sherds (e.g. layers [21], [47] and [53]).

The small medieval group was dominated by Ipswich glazed ware, although most sherds were parts of up to three jugs. Only two coarseware sherds were identified. Other glazed wares included London-type ware and a Scarborough Ware vessel of uncertain form which had internal as well as external glaze, suggesting that it may have been an aquamanile. The largest group of medieval pottery (32 sherds) came from layer [19].

The late and post-medieval groups were typical of their periods in comprising largely glazed redwares and stonewares, with local wares generally dominating but with some exotics such as tin-glazed earthenwares and a Martincamp flask. Nine sherds of these periods came from graves, the rest from the upper layers.

The largest group was the modern pottery, which comprised largely factory-made whitewares (REFW, CRW, PEW, SWSW) as well as some redwares and stonewares. Most of the latter were utilitarian forms (kitchenware, plantpot, storage vessels), whilst the former were generally tablewares. The group is broadly of 18th- to 19th-century date and includes some of the earliest types of whiteware. One soft-paste porcelain bowl fragment may be a Lowestoft product. Much of this group was recovered from the upper layers of the site, although nine sherds were found in grave fills.

## 6.2 Ceramic Building Material

by Sue Anderson

One hundred and three fragments (5,818g) of ceramic building material (CBM) were recovered from sixteen contexts. Fifty of these were from grave fills, the

remainder being from layers and a surface. Table 2 shows the quantities present by type, and a full catalogue by context is included in Appendix 5.

Period	Type	form	No	Wt/g
Roman	Box flue tile	BOX	3	175
Medieval	Plain roof tile (med)	RTM	21	706
	Early brick	EB	3	231
	Flemish floor tile	FFT	1	110
Post-medieval	Plain roof tile (pmed)	RTP	44	1498
	Pantile	PAN	1	61
	Late brick	LB	23	2148
	Floor brick	FB	1	608
	Floor tile	FT	1	174
	Wall tile	WT	3	59
	Malting tile	MALT	2	48

Table 2. CBM quantification by form

Three fragments of Roman box flue tile were collected from layer [51]. This context also included a fragment of probable post-medieval roof tile, although there is a possibility that this could be a Roman *imbrex*. If so, the context may be Middle Saxon (the latest pottery date for it), as Roman tiles were often re-used in this period.

Medieval roof tile, identified based on fabric, firing and/or the presence of glaze, was relatively frequent in the assemblage, although generally it was accompanied by later roof tile. Only a few abraded fragments of estuarine clay early bricks were present, and there was only one fragment of a Flemish floor tile.

The majority of this assemblage is of post-medieval date and includes plain roof tile, pantile, fragments of late brick (some of which may be of 'Tudor' type), a white-firing floor brick, a red quarry tile, three fragments of a mid-18th-century tin-glazed wall tile and two pieces of malting tile.

### 6.3 Mortar

by Sue Anderson

One large fragment of lime mortar (267g) was found in grave fill [17]. The piece is sub-square with only one unbroken edge. It is in a cream-coloured lime mortar with medium-coarse sand and chalk aggregates. A shallow straight line impression is present on the underside and the section tapers from 23mm to 38mm in thickness. The thickest part has a straight edge. The function of the fragment is unknown, but it is possible that it formed part of a post-medieval mortar floor or was bedding for a tiled floor.

### 6.4 Fired Clay

by Sue Anderson

Five fragments (133g) of fired clay were recovered from four contexts (Appendix 6). A full quantification by context is included in the appendix. Two fragments from possible Late Saxon layer [21] were pieces of a flattish surface, oxidised externally, with straw impressions. An abraded fragment from grave fill [33] may



have a wattle impression. A fragment with a convex surface from grave fill [57] had a slightly reduced surface. These pieces may be fragments of daub or oven dome.

A grey fragment in a medium sandy fabric was found in ?Middle Saxon layer [51]. This had a convex surface and a central hole c.40mm in diameter. It is probably a fragment of an Early Saxon loomweight.

## **6.5 Metal Finds**

by Rebecca Sillwood

### **6.5.1 Iron**

The majority of the metalwork recovered from this evaluation was of iron, with almost all of the pieces being representative of coffin furniture. There were eighty-five objects of iron in total. Most of the pieces will require x-radiography to identify form and function, but there are some readily identifiable coffin handles and nails, most of which retain wood on their surfaces. Other possible survivals include coffin plates and decorative banding, visible to the naked eye as plate iron with rivets along its length. The dating of all of the metalwork will depend largely on the stratigraphy of the site, rather than any intrinsic dateable features of the finds. It is apparent that the iron is rather fragile and although corroded, does not appear ancient, being more likely to be around 200 years old.

### **6.5.2 Copper Alloy**

Thirteen fragments of copper alloy were recovered from the site; seven fragments of probable shroud pins were found in grave fill [41] (grave [37]), five plate or sheet fragments from grave fill [12] (grave [11]) and a 'Great Eastern Railway' button was found unstratified, in mixed graveyard fill [2].

It is no surprise that shroud pins were recovered, with burial shrouds in use over many centuries. The presence of iron nails as well as shroud pins in grave [37] indicates that the burial was shrouded in the coffin, although this grave does not have the same array of fittings as the other later ones, which could suggest a simpler interment.

The sheet or plate fragments are too corroded and fragmentary to assign a function, but as they were also found in a grave, it seems likely that they are part of the coffin furniture.

The button was unstratified, but is not unusual as it was found in an area serviced by the Great Eastern Railway, which was formed in the 1860s from an amalgamation of smaller companies.

### **6.5.3 Conclusions**

The metalwork from this church site is typical of a graveyard setting, with almost complete suites of coffin furniture recovered. Further archaeological excavation is to take place on this site, and it is likely that many more of these fittings will be recovered. With partial burials within the evaluation area, it is difficult to define whether the fittings that have been identified are complete, and careful matching of the burials and associated artefacts recorded during the evaluation with those found in any forthcoming excavation is recommended. X-radiography is also recommended for almost all of the iron finds (apart from those that are obviously

modern or nails) to aid closer identification. The copper alloy finds do not require this.

## **6.6 Clay Tobacco Pipe**

by Rebecca Sillwood

Sixty-two fragments of clay tobacco pipe were recovered from the site, from a variety of contexts, including several graves, topsoil and mixed graveyard soils. Sixty of these pieces were fragments of stem, and not closely dateable other than broadly to the 'post-medieval' period.

One complete bowl and a fragment of one other were found, and these can be placed into a typology (DUA Type Series (Grove 1984)). The fragmentary bowl was recovered from grave fill [12], and consists of only part of one side of the piece, with traces of rouletting to the lip. When complete this would have been a fairly large bowl and quite upright in profile, which is indicative of a later form, dating to the 18th century. This common form is similar to Type 25 (Grove 1984). The complete bowl came from grave fill [33], and is a smaller form, with a slightly swollen middle. The heel is flat and oval in shape, and there are traces of rouletting around the lip. This piece is an earlier style, similar to Type 13 (Grove 1984) and probably dates to c.1660–c.1680.

The dateable clay pipes recovered from this site came from grave fills, and could feasibly represent the period during which each grave was excavated and infilled.

## **6.7 The Glass**

by Rebecca Sillwood

Twenty-three fragments of glass were recovered from the site, most of which are likely to have been introduced into the graves during their original excavation or infilling. The majority of the glass is green bottle glass, in various states of decay from severe flaking (oxidisation) to a fresh appearance. There is also curved clear and frosted glass which is also likely to be from bottles. A single small fragment of opalescent glass was found in grave fill [8] and possibly came from a fine vessel of post-medieval date.

One complete bottle was recovered from mixed graveyard fill [2], and is a small brown glass bottle, measuring 165mm in height. The piece has no definitive markings, except on the base, where it gives the volume of the bottle as 100ml, and has other initials probably relating to its manufacturer.

The glass is all of a post-medieval or possibly modern date.

## **6.8 Flint**

by Rebecca Sillwood

A total of six fragments of worked flint weighing 81g were recovered from four contexts. The pieces all appear to be debitage, and are likely to be re-deposited in this context.

## **6.9 Stone**

by Rebecca Sillwood

Nine fragments of stone weighing 700g were recovered from six contexts. Almost all of the pieces have subsequently been discarded, due to the lack of any evidence of working, distinctive features or intrinsic interest. A single piece of possible limestone, from grave fill [43] (grave [39]), was retained, due to the presence of one worked surface.

The remainder of the stone finds include slate and quartz, possibly used in buildings nearby.

## **6.10 Human Skeletal Remains**

by Rebecca Sillwood

The site is within the graveyard of a medieval church hence human remains were anticipated. For the purposes of this evaluation report, it was not deemed appropriate to report on the human remains, due to the partial nature of their recovery and the ultimate aim to recover the remainder of the skeletons during excavation at a later date.

A total of nine articulated skeletons were recorded, with the remainder of the assemblage made up of redeposited fragments, including one grave ([36]) which contained two skulls in its fill ([40]). Most of the articulated remains comprised bones from the arms, legs and torsos.

It is planned that analysis of all of the human remains will be undertaken after full excavation of the site is complete and the assemblage is complete.

## **6.11 Faunal Remains**

by Julie Curl

### **6.11.1 Introduction**

A total of 9,792g of faunal remains were recovered from the evaluation excavations (Appendix 7a). The assemblage has produced at least eleven species, with the remains dominated by the butchering and food waste from domestic stock. Some hunting is also indicated with the presence of wild mammals and birds.

### **6.11.2 Methodology**

The bone in this assemblage consisted of hand-collected pieces only; whole earth samples had been taken for environmental purposes which may contain bone, but this material was not available at the time of writing. All of the bone was identified to species wherever possible using a variety of comparative reference material. Where a complete identification to species was not possible, bone was assigned to a group, such as 'small mammal' or 'bird' whenever possible. The bones were recorded using a modified version of guidelines described in Davis (1992). Measurements (listed in Appendix 7b) were taken where appropriate, generally following Von Den Dreisch (1976). Humerus BT and HTC and metapodial 'a' and 'b' are recorded as suggested by Davis (1992). Tooth wear was recorded following Hillson (1986).

Any butchering was recorded, noting the type of butchering, such as cut, chopped or sawn and location of butchering. A note was also made of any burnt bone. Pathologies were also recorded with the type of injury or disease, the element affected and the location on the bone. Other modifications were also recorded, such as any possible working, working waste or animal gnawing.

Weights and total number of pieces counts were also taken for each context, along with the number of pieces for each individual species present (NISP) and these appear in Appendices. All information was recorded directly into an Excel database for analysis. A catalogue is provided in the appendix giving a summary of all of the faunal remains by context with all other quantifications (Appendix 7a) along with measurements (Appendix 7b) and a tooth record (Appendix 7c). The full faunal data record is available in the digital archive and has additional counts for species groups and elements present.

### 6.11.3 The faunal assemblage

#### 6.11.3.1 Quantification, provenance and preservation

A total of 9,792g of faunal remains, consisting of 585 elements, was recovered from the evaluation excavation at this site. In terms of weight, a little under 42% of the faunal remains were produced from graves, just over 36% was yielded from make-up layers, 1.6% was found in a pit fill and the remaining bone was distributed between a chalk surface, mixed churchyard soils, unstratified and topsoil. Associated ceramics suggest a broad date range for much of the material, ranging from Middle Saxon to post-medieval. Movement and re-depositing of at least some of the faunal remains are likely, particularly with the animal and bird bone found in grave fills. Quantification of the faunal assemblage by fragment count, feature type and context is presented in Table 3 and by weight, feature type and context in Table 4.

Context	Type							Context Total
	Clay/chalk surface	Grave	Make-up	Mixed churchyard soil	Pit	Topsoil	u/s	
1						9		9
2				25				25
3				22				22
6								2
8		54						54
10		15						15
12		15						15
13	5							5
17		5						5
18		29						29
19			9					9
20					5			5

	Type							
21			19					19
33		5						5
40		30						30
41		21						21
42		12						12
43		30						30
45			11					11
47			48					48
51			48					48
52			44					44
53			10					10
54			1					1
57		19						19
63							92	92
Feature Type Total	5	237	190	47	5	9	92	585

Table 3. Quantification of the faunal assemblage by number of fragments, feature type and context

Overall, the faunal assemblage is in good condition, although the remains are heavily fragmented from a variety of butchering methods (see 6.11.3.3 General butchering), leaving few complete elements. Canid gnawing was frequently recorded throughout the assemblage, which would indicate that waste bones were given to domestic dogs or were available for scavengers. Canid activity can result in the complete destruction of some bone, particularly smaller or more fragile elements such as foot bones, so the frequent gnawing in this assemblage may mean some less robust bones have been lost. One ovicaprid bone from make-up layer [19] showed gnawing by a small dog or fox or possibly a mustelid (?ferret or polecat).

Context	Feature Type							Total Assemblage Weight
	Clay/chalk surface	Grave	Make-up	Mixed churchyard soil	Pit	Topsoil	u/s	
1						158g		
2				323g				
3				201g				
6		6g						
8		1003g						
10		128g						

	Feature Type							
12		153g						
13	103g							
17		73g						
18		471g						
19			109g					
20					195g			
21			219g					
33		125g						
40		722g						
41		192g						
42		237g						
43		725g						
45			153g					
47			484g					
51			892g					
52			1,273g					
53			430					
54			35					
57		194g						
63							1,188g	
Feature Type Total	103g	4,029g	3,532	524g	195g	158g	1,188g	9,792g

Table 4. Quantification of the faunal assemblage by weight, feature type and context

### 6.11.3.2 Species range, modifications and discussion

Eleven faunal species were identified in this assemblage, with seven of these from a variety of domestic and wild mammals and four of bird; in addition, a small amount of human bone was found in two of the contexts. Cattle, sheep/goat and pig were the most frequently recorded species and over half of the pieces in this assemblage were too heavily butchered and damaged to allow identification to species. Quantification of the faunal assemblage by species, fragment count and feature type can be seen in Table 5.

Species	Clay/chalk surface	Grave	Make-up	Mixed churchyard soil	Pit	Topsoil	u/s	Species Total
Bird								
<i>Dove sp.</i>						1		1
<i>Duck - ?Shelduck</i>							1	1

Species	Clay/chalk surface	Grave	Make-up	Mixed churchyard soil	Pit	Topsoil	u/s	Species Total
<i>Fowl</i>	1		2	2				5
<i>Goose</i>		2	1					3
Mammal								
<i>Cattle</i>	2	49	47	6	2	4	12	122
<i>Fallow Deer</i>				2				2
<i>Mammal - fragments</i>	2	128	108	24	1	3	59	327
<i>Pig/Boar</i>		25	13	4	1	1	3	47
<i>Sheep/goat</i>		27	17	8	1		9	62
<i>Small Mammal</i>			1					1
<i>Hare</i>			1					1
<i>?Rabbit</i>		2						2
<i>Rabbit</i>				1				1
Human								
<i>HSR</i>		2					8	10
Feature Type Total	5	237	190	47	5	9	92	585

Table 5. Quantification (NISP) of species by feature type

The cattle remains in this assemblage were predominately from larger individuals and include bones from a large and robust individual in [43], where the metrical data suggests a bull. A much smaller animal of the size of the smaller Celtic or Kerry type was seen in the make-up [21]. There is a small lesion on a cattle proximal metacarpal in [43] and a similar lesion on a bovine proximal metacarpal from [2] these lesions may be attributed to Osteochondritis dissecans. This condition is associated with trauma and can occur in relatively young animals and suggest a difficult time as a juvenile and it can indicate animals under strain from traction, a common use for cattle, particularly in earlier periods. Similar lesions have been seen on other cattle bones from central Ipswich (Curl 2007). The cattle metacarpal in [2] also has considerable muscle attachments and a proximal phalange from [45] showed some distortion, both would further suggest traction or ploughing animals. The cattle ages varied, with mostly adults, but also many juveniles, suggesting a range of uses from breeding and traction to provision of veal, vellum and milk. The cattle in this assemblage had been heavily butchered and there are a greater number of the main meat-bearing bones, suggesting meat waste rather than processing.

The second most commonly recorded group was sheep/goat. With the ovicaprids, elements of both sheep and goat were positively identified, although goat remains were far outnumbered by those of sheep. Goat can often be represented only by the horn and perhaps foot bones, which may only suggest the presence of hides with heads attached; however, there are also a main meat-bearing bone in this assemblage, which would suggest the keeping and processing of goats. The

sheep/goat were largely represented by adults, although several juvenile bones were seen. As with the cattle, most of the ovicaprid bones were from the main cuts of meat, with little processing evidence.

Pig/boar remains were found in lesser numbers, but in more individual contexts than the ovicaprids, perhaps suggesting pork and other pig meats were more frequently eaten. Although referred to as 'pig/boar', most, if not all, are likely to be of domestic origin, although a few were sufficiently robust enough for boar. A greater number of juvenile bones were seen with this species, including a neonatal, which might suggest on-site breeding, which is common with most assemblages of all periods as this animal has little use other than for meat and hides. As with the other domestic food mammals, the porcine remains also largely consist of meat waste.

Two upper limb bones from Fallow deer were seen in [2], butchering was particularly notable on the humerus, which showed numerous cut marks on the anterior shaft from removal of meat. These deer bones are from a young individual whose bones were not fully fused; they may be from wild deer or captive park stock. Small mammals were represented by small amounts of rabbit and hare, which had been butchered, attesting to their use for meat and perhaps fur. The rabbit bones in this assemblage were associated with ceramics of a wide date range, the bones are unlikely to be early introductions as they are notably larger than the early introduced European rabbits and they are most likely to represent re-deposited waste.

Bird bones were seen in nine contexts. Bones of fowl (chicken/pheasant) were seen in four contexts and goose in three. The goose remains included a small species such as Brent or Barnacle, in context [43], which would suggest some hunting of wild birds. A probable Shelduck was found in [63], again suggesting hunting of wild birds. A wing bone from a dove was seen in [1], belonging to either Stock or Rock Dove; the fine cut marks attest to this bird being used for food, this dove may have been from domestic stock or from a wild bird.

#### *6.11.3.3 General butchering*

Larger bones showed chopping from the dismemberment of carcasses and the preparation of cuts of meat and finer knife cuts from removal of meat from the bone. Fine skinning cuts were seen on the distal end of one cattle talus that attests to the skinning of the animal. Sawing was noted on one cattle rib from [1] and a cattle scapula from [3], which would have occurred when the carcass was divided.

Possible bone working was seen with two sheep metapodials from the make-up layer [51]. These bones have both had holes made in the proximal articular surface and some modification of the shaft of the bone and they may be unfinished handles or other tools. It is also possible that these bones had been at the end of a leg of mutton that had been roasted and these piercings could have been produced from the joint being forced onto a spit.

#### **6.11.4 Discussion and conclusions**

The majority of the bone in this assemblage is derived from the butchering and food waste from the main domestic mammals and birds. Some additional meats were provided by the probable hunting of wild species of birds, rabbit and hare.



The initial mixed dates of the associated finds make the full interpretation of this assemblage difficult.

Preservation at this site is good, with many bones showing water-logging, which aids preservation. The presence of smaller elements such as some smaller foot bones and remains of birds suggest good survival of bone and the potential of the further retrieval of additional evidence, in particular from any samples taken. Given the good preservation, the lack of fish bones and smaller species in this assemblage is surprising, especially as this assemblage is predominately food waste from a range of good cuts of meat, but this may be due to a recovery bias and such remains may be forthcoming from sample material.

The assemblage from this site is broadly similar to others of a similar date range in terms of the species range. This site appears to have a larger number of the main meat-bearing bones than some other assemblages in central Ipswich, such as at Wolsey Street where there was a larger amount of primary processing and hornworking waste (Curl 2007), suggesting the assemblage from St Mary's is of domestic origin.

## 6.12 Worked Bone Object

by Rebecca Sillwood

A single item of worked bone (1g) was recovered from the site, and came from make-up layer [19]. The piece is a slightly tapering lathe-turned bone circular shaft, which would likely have had an iron tip in the end, and which is now missing. The stylus has a spherical head with a finely turned collar beneath and three bands of three incised grooves around the circumference along the length of the shaft (Plate 15). The object measures 56mm in length and the diameter of the head is 5mm.



Plate 15. Bone Stylus

The function of these objects is debatable. They could be styli or parchment prickers, which were generally used in ecclesiastical circumstances for writing and to space out horizontal lines on manuscripts and are generally found in a monastic context. Margeson (1993, 69) also puts forward the possibility that they could have been used in a domestic setting to transfer patterns to embroidery. The location of this object in the graveyard of a parish church might support an interpretation as a writing implement or aid.

An almost identical example has been found in York (MacGregor *et al* 1999, 1974, fig. 930, no. 8037) from the College of the Bedern Vicars Choral. MacGregor

states that these objects are found exclusively in medieval contexts, which appears to fit with the general date of the Ipswich example, although the piece could also feasibly be Late Saxon, re-deposited within the layer. It seems more likely that the stylus was associated with activities relating to the church and therefore is of medieval date. These objects are more usually associated with larger religious houses such as priories and monasteries although even parish churches would need to keep records.

## **6.13 Shell**

by Rebecca Sillwood

Thirty-five fragments of oyster shell weighing 468g in total were recovered from thirteen contexts. The shell was found in various deposits, such as make-up layers, grave fills, churchyard soils and topsoil. It seems likely that the shell represents the remnants of food waste from the vicinity.

After recording, all of the shell has subsequently been discarded.

## **7.0 ENVIRONMENTAL EVIDENCE**

### **7.1 Plant Macrofossils and other remains**

#### **7.1.1 Introduction and method statement**

Evaluation excavations in Ipswich, recorded a series of dump-deposits or make-up layers of probable Middle- to Late Saxon date, which overlay a possible buried soil horizon. Samples for the evaluation of the content and preservation of the plant macrofossil assemblages were taken, and five were submitted for assessment.

The samples were processed by manual water flotation/washover and the flots were collected in a 300 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x16 and the plant macrofossils and other remains noted are listed in Table 1. Nomenclature within the table follows Stace (1997). Both charred and de-watered plant remains were recorded, with the latter being denoted in the table by a lower case 'w' suffix.

The non-floating residues were collected in a 1mm mesh sieve and will be sorted when dry. Any artefacts/ecofacts will be retained for further specialist analysis.

#### **7.1.2 Results**

Cereal grains/chaff, seeds of common weeds and wetland plants, and tree/shrub macrofossils were present at a low to moderate density within all five assemblages studied. Preservation was very variable; some of the charred grains and seeds were very well preserved, whilst others were puffed, distorted and fragmentary, probably as a result of combustion at high temperatures. The de-watered macrofossils were mostly robust, although some distortion had occurred as a result of the compaction of the deposits.

Barley (*Hordeum* sp.), rye (*Secale cereale*) and wheat (*Triticum* sp.) grains were recorded along with a small number of barley/rye type rachis nodes and a single, charred fragment of an indeterminate large pulse (Fabaceae) cotyledon. Seeds were quite scarce, with most occurring as single specimens within an assemblage. All were of common segetal and ruderal weeds including corn cockle

(*Agrostemma githago*), brome (*Bromus* sp.), goosegrass (*Galium aparine*), nipplewort (*Lapsana communis*), grasses (Poaceae) and dock (*Rumex* sp.). Wetland plant remains occurred infrequently, but did include both sedge (*Carex* sp.) and club-rush (*Bolboschoenus/Schoenoplectus* sp.) type nutlets. Charred hazel (*Corylus avellana*) nutshell fragments were noted within three assemblages, whilst other tree/shrub macrofossils included raspberry (*Rubus idaeus*) and bramble (*R.* sect. *Glandulosus*) 'pips' and elderberry (*Sambucus nigra*) seeds. Charcoal/charred wood fragments were abundant within all five assemblages. Other plant macrofossils occurred infrequently, but did include indeterminate buds, leaf fragments and thorns.

Other remains mostly occurred at a very low density. The black porous and tarry residues were probably derived from the combustion of organic remains at very high temperatures. Bone fragments were present throughout, and other possible dietary refuse included fragments of eggshell, fish bone and marine mollusc shell.

### **7.1.3 Conclusions**

In summary, the current assemblages are somewhat limited in composition, probably due largely to the secondary nature of the deposits and significant post-depositional changes in the local water table. The charred plant remains are almost certainly derived from refuse, midden waste and other detritus, which was being systematically dumped on the river foreshore in the Middle and Late Saxon periods as a means of land reclamation. Similar activity of near contemporary date has been recorded from excavations at Fishergate in Norwich (Murphy 1994), although in this instance, the plant macrofossil record is significantly more comprehensive. The few de-watered macrofossils from the current site are almost certainly relicts of plants which were growing whilst this reclamation activity was occurring. They appear to indicate that whilst the ground was damp, some areas were being disturbed on a fairly regular basis, allowing the growth of a range of annual weeds. Other areas, which were almost certainly less disturbed, were covered with colonising scrub plants including brambles and elderberry.

Although the current assemblages are a little sparse, all five clearly illustrate that reasonably well-preserved plant macrofossils are present within the archaeological horizon in this area of Ipswich.

As these deposits represent a rare chance to study what was a significant period within the development of this important Saxon town, it is strongly recommended that if further interventions are planned, additional plant macrofossil samples of approximately 30–50 litres in volume are taken from all well-sealed and dated features/deposits which are recorded during excavation.

## 8.0 CONCLUSIONS

The dumped reclamation deposits preserved in the southern portion of the evaluation trench appear to have been deposited in the 13th to 14th centuries. These deposits predate the present church and would presumably have originally extended further to the north into the area subsequently occupied by the graveyard. These deposits represent the material through which the graves are cut. The reclamation deposits contained Middle and Late Saxon pottery which would explain the presence of similarly dated pottery within obviously later interments and even in the upper deposits of the graveyard. The presence of Saxon pottery within the reclamation deposits (along with small quantities of human bone) suggests that they may have been excavated and imported from elsewhere. This programme of land reclamation in the 13th to 14th centuries mirrors the findings from the Albion Maltings site to the immediate south of the current excavation where a substantial amount of dumping and reclamation activity (principally of 13th- to 14th-century date) was recorded.

The lower dumped deposits contained material dating them to the Middle Saxon period (650-850 AD). Although Late Saxon and earlier medieval pottery was recovered during the work it appears to have been largely redeposited. This may suggest a hiatus in dumping/land reclamation between the 9th and 13th centuries at the location.

The northern end of the trench was situated approximately 2m to the south of a mature lime tree. The tree roots within the trench were generally small, most were less than 0.01m in diameter occasionally reaching up to 0.04m in diameter. No instances of roots disturbing the burials were encountered but the profusion of roots, especially down to a depth of c.1.50m, certainly hampered the excavation and cleaning of the skeletons, making the archaeological work more time-consuming. This situation will presumably be exacerbated closer to the tree where more and larger roots would be anticipated.

The lower c.0.55m of deposits within the trench were below the water table making work beneath this level impossible without the use of a pump. This also slowed the rate at which detailed work could be carried out although it could be anticipated that a more open area excavation would reduce this problem.

Recommendations for further mitigation work (if required based on the evidence presented in this report) will be made by Suffolk County Council Archaeological Service.

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The finds were processed by Lucy Talbot and recorded by Rebecca Sillwood. The pottery, CBM, mortar and fired clay were reported on by Sue Anderson of CFA Archaeology and the animal bone by Julie Curl of Sylvanus Services. The rest of the finds were reported on by Rebecca Sillwood. The environmental evidence was reported on by Val Fryer and the borehole data by Frances Green. Nigel Page was the Project Manager overseeing the project.

This report was illustrated and produced by David Dobson and edited by Jayne Bown.

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## **Appendix 1: Sedimentology and Environmental Significance**

Sedimentology and environmental significance of a sequence of deposits from two boreholes at St Marys at the Quay, Ipswich

by Dr Frances M.L. Green

### **Geological background**

Geological deposits below the site of St Mary at Quay is Upper Cretaceous chalk overlain by Palaeocene Woolwich and Reading beds – interbedded clays and sands (British Geological Survey, 1985). Above this solid Geology are Pleistocene and Holocene deposits which are recorded as River Terrace sands and gravels of Devensian, Ipswichian, or Wolstonian on the Quaternary Geology map of the British Geological Survey 1991).

### **Geographic location**

The River Orwell flows through the heart of Ipswich and was the reason for the town's importance in Middle Saxon times. The River Orwell is tidal and this allowed a great port to develop.

The site of St Mary at Quay church is approximately 100m north of the 19<sup>th</sup> century Quay of Albion Warf a site of the local malting industry for over 160years and now converted into modern flats. St Mary at Quay is on the north side of an incising bend and as such would be expected to be cutting into older sediments.

Recent evidence from excavations by Suffolk County Council Archaeological Service suggests that the north bank of the River Orwell lay further north than it does today and closer to the site of St Mary at Quay at least in the 14th century - a century prior to the construction of the church.

For example archaeological investigations on the site immediately adjacent to St Mary at Quay at Cranfields Garage to the north of Key St. revealed the remains of significant stone buildings of 14th-century date which originally stood on the waters edge.

The suggestion from these local archaeological investigations are is that the church of St Mary at Quay is also built on land that was once very close to the north bank of the River Orwell. A discussion of the early development of Ipswich (Wade 1989) illustrates the position of St Mary at Quay as being almost directly on the north bank of the much wider River Orwell being separated from the water only by what appears to be a predecessor of Key Street.

Two boreholes were drilled in the graveyard of St Mary at Quay approximately 2m to the west of the excavation trench. The location of these boreholes is shown on Figure 18.

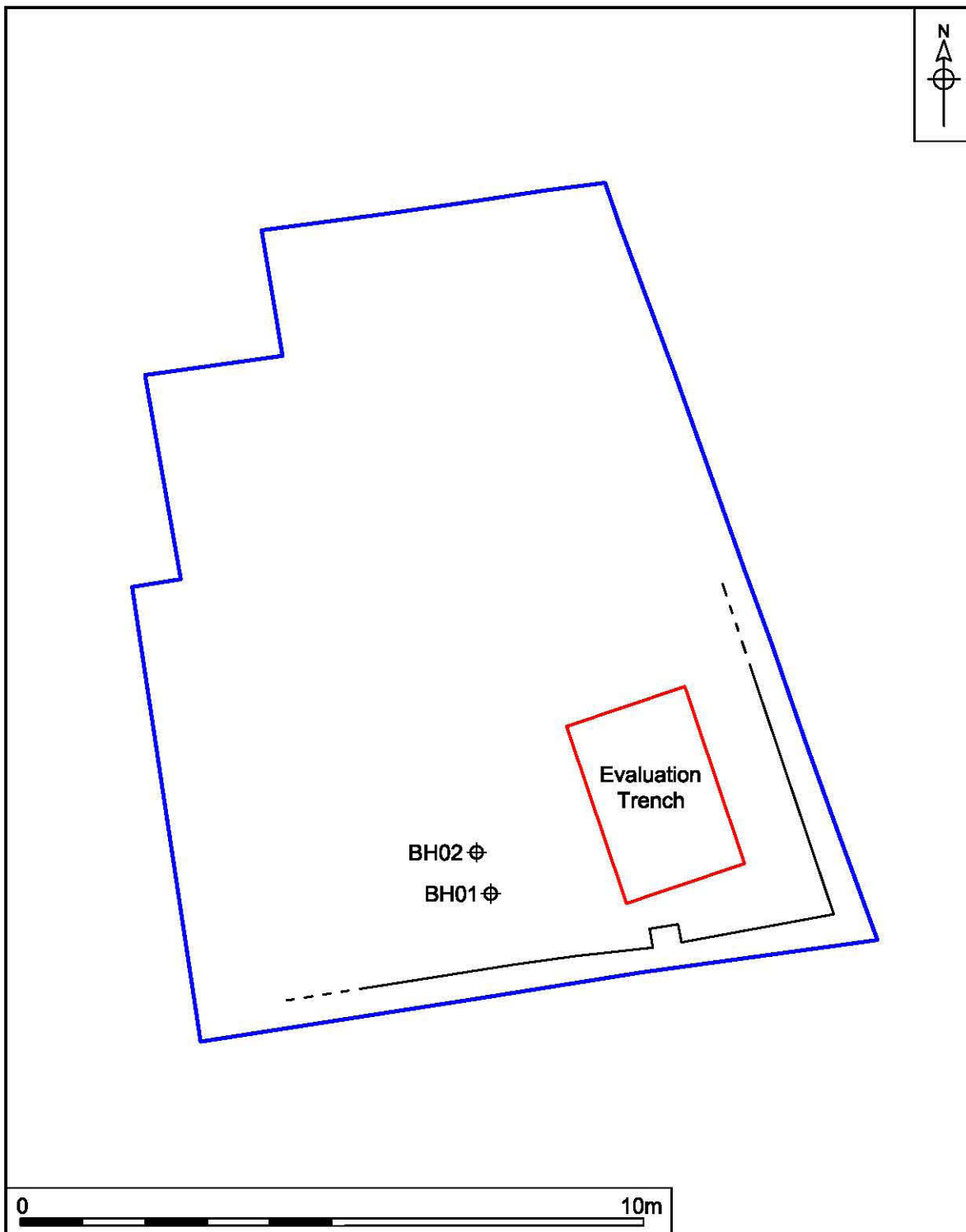


Figure 17. Location of boreholes 01 and 02. Scale 1:100





Plate 16.



Plate 17.



Plate 18.



Plate 19.

## RESULTS

### Borehole 01

The same deposits were recorded in Borehole 01 and Borehole 02 for the upper 1m and stopped on something impenetrable at 1.3m in a sandy friable humic soil with brick fragments, flint pebbles and charcoal fleck. Excavation results indicate the presence of a probable 19th-century pit filled demolition debris in the south-west corner of the excavation trench and Borehole 01 may well have drilled through the same pit and hit larger demolition rubble within this pit. Since only a shallow sequence of deposits were recovered and the upper deposits were the same as Borehole 02 the results for only one borehole (Borehole 02) have been presented.

For a description of deposits in Borehole 01 the reader should refer to the log of Borehole 02, below.

### Borehole 02

(Figure 17, Plates 16-19, Table 6)

The logs follow the nomenclature of Tröels-Smith 1955 (depth measurements refer to below surface depths)

Depth (m) from top of monolith Top of unit	Depth (m) Bottom of unit.	Description	Contact with overlying deposit	Interpretation	Summary
0.00	0.25	Void			Modern surfaces and soils
0.25	0.31	Modern vegetation and leaf litter		Modern plant growth	
0.31	0.45	Black dark brown humic soil with sand. Not compacted, friable with brick fragments and crushed mortar.		Modern soil	
0.45	0.55	Crushed flint with broken black, fine grained asphalt (1cm thick), plastic bags.		Modern broken surface or dumped crushed surface	
0.55	1.00	Mid grey brown sandy humic soil with roots. Mod. rounded flints and crushed mortar with rare shell. Fragment of stoneware pottery. Gamin1, Ag2, Sh1.		Soil with some demolition rubble containing sherd of stoneware pottery – (17 <sup>th</sup> -19 <sup>th</sup> century)	Upper soils of grave yard
1.00	1.15	Void			

Depth (m) from top of monolith Top of unit	Depth (m) Bottom of unit.	Description	Contact with overlying deposit	Interpretation	Summary
1.15	1.40	Sandy ginger brown humic soil. Full of roots with brick fragments, flint charcoal and crushed mortar. Ag1, Gamin2, Sh1.		Soils of graveyard	Grave yard soils- developed in to dumped soils and sands to make up ground levels.
1.40	1.50	Grey silty soil with occasional crushed mortar, rare shell, charcoal fragments, flint gravel (rounded to subrounded). Ag2, Gamin2, Gamag ++, Sh++, As++	Gradual boundary with above.	Soils of graveyard	
1.50	1.53	Part of human burial. Articulated foot bones.	Sharp boundary with above	Human burial	
1.53	1.63	Grey brown silty sand, friable, dry soil with humic material. Flint gravel moderate, occ small fragments of brick. Ag2, Gamin2, Gamag ++ Sh++, As++	Sharp boundary with above	Soils of graveyard	
1.63	1.73	Very gradual boundary with above. Wet/damp. Dark grey with greenish brown patches, charcoal fragments, rare flint pebbles some relatively large (up to 5cm). Organic rich sediments. Ag2, Ga1, Sh1.	Very gradual boundary with above.	Waterlogged sediments. Possibly organic accumulation in these deposits caused by leaching of organics from graveyard above. Or organic material dumped from cleaning out of domestic pits.	Base of graveyard or marginal land where domestic refuse dumped – <b>at water table.</b>
1.73	1.76	Very soft pale grey silt some rootlets and occasional small dark brown patches Ag4, Sh++, Th+	Sharp boundary with above	Intertidal muds- partly vegetated.	Intertidal muds on upper marsh

Depth (m) from top of monolith Top of unit	Depth (m) Bottom of unit.	Description	Contact with overlying deposit	Interpretation	Summary
1.76	1.87	Dark grey black with green brown patches. Silty sand with humic material, crushed mortar, oyster shell fragments, charcoal fragments and larger fragments of bone. (sample kept). Ag2, Gamin1, Sh1.	Sharp boundary with above.	Dumped domestic refuse- organic and inorganic on marginal land (Possibly Saxon/medieval)	Dumped refuse
1.87	1.97	Laminated sand with silt laminae. Increasingly silty and organic and laminae thinner towards the top. Gamin2, Ag2, Sh+	Sharp boundary with above.	Probably upper marsh Tidal flooding events with evidence of reduction in tidal flooding up sequence.	Upper Marsh Holocene-Saxon
1.97	2.00	Light brown grey sand with fine gravel and rare larger round gravel. Gamin3, Ag1, Gamin++	Moderate sharp boundary with above.	Possible soil developed into surface of earlier sand bars of fluvial sequence. .	Possible Holocene surface with soils developing on an earlier fluvial sequence of sand and gravels.
2.00	2.09	Grey medium grained, well sorted sand with some silt and rare sub-rounded flint gravel (max 1cm). Orange brown patches of oxidised sand. Gamin3, Ag1, Gamag+			
2.09	2.30	Mid brown slightly grey sand with dark orange ginger brown staining along roots or burrows (15cm long). Gamin4, Ag+	Gradual boundary with above.		
2.30	2.53	Pale brown yellow fine well sorted massive sand (no structures). Gamin4.	Gradual boundary with above.	Fluvial sands	Fluvial sand deposition on lateral bar, point bar- Holocene. Overall reduction in energy upwards probably as channel position shifts.
2.53	2.54	Light brown yellow. Gravel sub-angular (max 1.5cm). Gamag2, Gamin2	Sharp boundary with above.	Fluvial gravels	
2.54	2.80	Medium-fine grained well sorted, light orange brown sand. Occasional grit- vague horizontal bedding. Gamin4	Gradual boundary with above.	Fluvial sands	

Depth (m) from top of monolith Top of unit	Depth (m) Bottom of unit.	Description	Contact with overlying deposit	Interpretation	Summary
2.80	2.91	Mid orange medium coarse sand. Occasional grit- vague horizontal bedding. Gmin4	Gradual boundary with above.	Fluvial sands	
2.91	3.00	Yellow fine –medium sand. Well sorted with vague horizontal bedding. Gamin4	Gradual boundary with above.	Fluvial sands	
3.00	3.29	Void			
3.29	3.41	Pale orange brown laminated sand. Medium and relatively coarse sands in 1cm thick laminae. Sands very soft and wet. Gamin4		Fluvial sand possibly accumulating in lateral or point bar.	Increased energy- possibly river shifted position.
3.41	3.415	Grey silt in thin Soft silt. Ag3, Gamin1	Sharp contact with above	Overbank deposit? – ponded water?	Fining up of early River Orwell- Pre Holocene. sequence indicating channel shifting.
3.415	3.48	Yellow and dark orange laminated. Medium fine well sorted laminated sand and 0.75cm grits. Rare large angular flint Gamin4, Gamag++	Sharp contact with above	Fluvial sand accumulating in lateral or point bar.	
3.48	3.51	Orange grit with white patinated grit sized flint  Gamag2, Gamin2,	Sharp contact with above	Fluvial sand	
3.51	3.53	Pale brown, medium-fine, grey sand with some silt. Gamin2, Ag2	Sharp contact with above	Fluvial sand and silts	
3.53	3.55	Grit and medium orange sand. Gamin2, Gamag2	Sharp contact with above	Fluvial sands possibly glacial outwash.	
3.55	3.62	Fine gravel. Gamag4	Sharp contact with above	Fluvial gravel possibly glacial outwash.	
3.62	4.00	Sub-angular and sub-rounded and sub-rounded flint some 100mm Gamag4, Gamin++	Sharp contact with above	Fluvial gravel possibly glacial outwash.	

Table 6. Description of sediments in Borehole 02 from St Mary at Quay Ipswich.

### ***Pre-Holocene to Early Holocene Fluvial deposits. 4.0m– 2.3m***

(Plates 16 and 17)

The borehole was 4m deep and the lowest deposits were sands and gravels. The gravels were entirely flint, sub-angular to sub-rounded and some were quite large (up to 100mm in width). The sands were orange to pale brown and were relatively well sorted. The sands and gravels were found in distinct bedding and were consistent with fluvially deposited sediments in lateral or point bars. The lower sands and gravels are consistent with lower sea levels and are likely to be from a cold stage such as the Devensian or Wolstonian and may well be part of an early outwash gravel sequence.

There is an overall fining up sequence with gravel becoming less frequent by 3.4m. This suggests either the main channel shifted or there is an overall reduction in energy in the system perhaps in the immediate post-glacial. At 3.41m there is a soft grey silt which is either an overbank deposit or fine silts accumulating in an isolated pool. It is possible this silt may contain environmental indicators such as pollen or diatoms which would allow a fuller understanding of potentially the date and the environmental conditions under which these deposits accumulated.

There is an overall absence of humic sediments in all sediments suggesting cold rather than warm climate deposition. The upper sands between 3.41m and 2.3m are yellow to brown well sorted sands with no silt, either fine or coarse with some vague horizontal bedding. These are also fluvial sands deposited in a lower energy environment and may be early Holocene in date although they may be earlier. The sands between 3.41m and 3.29m are particularly soft and wet.

### ***'Holocene' soil developed into surface of fluvial sands 2.3m- 1.97m***

(Plates 16 and 18)

Between 2.3m and 1.97m the sediments are predominantly mid brown grey sand with silt and rare rounded flint gravel. The lowest unit 2.30m-2.09m contains 15cm long roots or burrows aligned vertically and picked out with iron staining. There is more silt in the upper few centimetres (c.25%) compared with the deposits at 2.30m. This deposit was probably a bioactive soil with roots or worms burrowing through the sediments. If it is indeed a bioactive soils as the roots suggest there must have been a lower water table than at present and is therefore likely to be Late Glacial-Early Holocene in date and may contain evidence of prehistoric activity. Soil micromorphology of this deposit would determine if it is a relict soil.

### ***Holocene Tidal foreshore deposits. 1.97m- 1.87m***

(Plate 18)

Laminated silt with sand which became increasingly silty and organic towards the top. It is likely this deposit accumulated as a result of tidal flooding in an upper marsh with evidence of reduction in tidal flooding up sequence.

### ***Possibly Saxon or Medieval dumping of domestic refuse on marginal ground 1.87-1.76m***

(Plates 16 and 18)

This deposit was damp-wet dark grey black with green brown patches. It was a silty sand with humic material, crushed mortar, oyster shell fragments, charcoal

fragments and larger fragments of bone. It has a sharp boundary with the underlying deposits and is interpreted as dumped domestic refuse – organic and inorganic – on marginal land (Possibly Saxon). It suggests the development of a urban or proto-urban environment close to the margin of the River Orwell. Diatom and pollen analysis would determine if this dumping occurred in water or in the intertidal zone. Given its location it is highly likely that possibly regular tidal events and certainly storm surges would have frequently affected this land.

***Intertidal mudflat and marsh deposits 1.76-1.73m***

This deposit was a soft pale grey silt some rootlets and occasional small dark brown patches which appear to be reworked organic deposits. These silts are typical of mud flat sediments and suggest that the marginal land where domestic refuse was being dumped was occasionally inundated either by a series of high tides or by a storm surge causing fine silts to be deposited which became colonised by marsh plants. It has a sharp boundary with the underlying deposits indicating a sudden switch in sedimentation. Pollen and diatoms analysis of these sediments may confirm this interpretation.

***Dumped soils and sediments 1.73-1.63m***

(Plate 16)

This horizon is the position of the modern water table and the sediments are waterlogged which may account for the survival of organic material in this deposit. This deposit was organic rich dark grey with greenish brown patches. It contained charcoal fragments, rare flint pebbles some relatively large (up to 5cm). It is likely to represent a continuation of domestic refuse dumping. Although possibly some organic accumulation in these deposits may be caused by leaching of organics from the graveyard above.

***Soils dumped to raise ground level into which graveyard subsequently dug 1.63-0.55m***

(Plates 16 and 19)

These soils are generally a dry/damp but not wet, homogenous grey silty soils with occasional crushed mortar, rare shell, charcoal fragments with flint gravel (rounded to sub-rounded). Human remains were found at 1.50-1.53m from a burial in the graveyard. The excavation indicated these grey graveyard soils contain many burials to a depth of at least 1.5m below the modern ground surface.

Although graveyards by their very nature always produce elevated ground levels simply from the addition of bone and organic remains to the soil it is thought that at this site soils and deposits were dumped on this site prior to the graveyard being excavated. Over time these deposits have become totally mixed. A hint of how these soils originally accumulated on the site is revealed under the possible floor surface in the evaluation excavation. Here a small survival of layers of dumped sediments was preserved (see excavation results).

The sediments were dumped to raise ground levels on the former foreshore to remove tidal affects and reduce periodic and regular flooding and also produce deeper quay side to the south. Whether this occurred immediately prior to the construction of the church or earlier is not determined. However evidence from the

adjacent site at Cranfields Garage suggests that the southern end of the site area was still part of the foreshore in the 14th century.

***Modern disturbed soils and surfaces 0.55-0.0m***

These modern broken up surfaces and dark humic soils form the upper 0.55m of deposits.



## Appendix 2a: Context Summary

Context	Category	Cut Type	Fill Of	Description	Period
1	Deposit			Top-soil	Modern
2	Deposit			Mixed churchyard soil	Med./Post-Med.
3	Deposit			Mixed churchyard soil	Med./Post-Med.
4	Deposit			Ash and cinders layer	Post-medieval
5	Deposit			Metalling/repair on surface [13]	Post-medieval
6	Skeleton			Neo-natal?	Post-medieval
7	Cut	Grave		Grave containing sk. [55]	Post-medieval
8	Deposit		7	Fill of [07]	Post-medieval
9	Cut	Grave		Grave containing sk. [30]	Post-medieval
10	Deposit		9	Fill of [09]	Post-medieval
11	Cut	Grave		Grave containing sk. [31]	Post-medieval
12	Deposit		11	Fill of [11]	Post-medieval
13	Deposit			Clay/chalk surface	Med./Post-Med.
14	Cut	Grave		Grave containing sk. [60]	Post-medieval
15	Deposit		14	Fill of [14]	Post-medieval
16	Cut	Grave		Grave cut ?	VOID
17	Deposit		16	Fill of [16]	VOID
18	Deposit			Grey brown sand silt, mixed graveyard soil	Unknown
19	Deposit			Brown sand silt make-up layer	Medieval
20	Deposit		46	Grey brown sand silt fill of [46]	Medieval
21	Deposit			Orange brown silt sand make-up	Medieval
22	Deposit			Brown silt sand make-up	Unknown
23	Cut	Grave ?		Grave cut ?	Unknown
24	Deposit		23	Mid grey clay silt fill of [23]	Unknown
25	Cut	Pit		Modern Pit	Modern
26	Deposit		25	Dark grey silt sand	Unknown
27	Cut	Pit		Late pit	Post-medieval
28	Deposit		27	Mid brown silt sand	Post-medieval
29	Deposit		27	Dark brown silt sand	Post-medieval
30	Skeleton		9	Skeleton within [09]	Post-medieval
31	Skeleton		11	Skeleton within [11]	Post-medieval
32	Cut	Grave		Grave containing sk. [34]	Post-medieval
33	Deposit		32	Brown sand silt, grave fill	Post-medieval
34	Skeleton		32	Skeleton within [32]	Post-medieval
35				VOID	
36	Cut	Grave		Grave containing sk. [48]	Post-medieval
37	Cut	Grave		Grave containing sk. [44]	Med./Post-Med.
38	Cut	Grave		Grave containing sk. [49]	Med./Post-Med.
39	Cut	Grave		Grave containing sk. [50]	Post-medieval

Context	Category	Cut Type	Fill Of	Description	Period
40	Deposit		36	Mid brown sand silt, grave fill	Post-medieval
41	Deposit		37	Pale brown sand silt, grave fill	Med./Post-Med.
42	Deposit		38	Dark grey sand silt, grave fill	Med./Post-Med.
43	Deposit		39	Grey brown sand silt, grave fill	Post-medieval
44	Skeleton		37	Skeleton within [37]	Med./Post-Med.
45	Deposit			Grey clay with charcoal make-up layer	Medieval
46	Cut	Pit		Pit	Medieval
47	Deposit			Dark grey brown sand silt make-up	Middle Saxon
48	Skeleton		36	Skeleton within [36]	Post-medieval
49	Skeleton		38	Skeleton within [38]	Med./Post-Med.
50	Skeleton		39	Skeleton within [39]	Post-medieval
51	Deposit			Dark grey brown sand silt make-up	Middle Saxon
52	Deposit			Mid-dark grey sandy silt make-up	Middle Saxon
53	Deposit			Dark grey silt make-up	Anglo-Saxon
54	Deposit			Mid grey sandy silt make-up	Prehistoric
55	Skeleton		7	Skeleton within [07]	Post-medieval
56	Skeleton		58	Skeleton within [58]	Middle Saxon
57	Deposit		58	Brownish grey silt	Middle Saxon
58	Cut	Grave		Grave containing sk. [56]	Middle Saxon
59	Deposit			Natural orange sand	Prehistoric
60	Skeleton		14	Skeleton within [14] (skull)	Post-medieval
61	Find		36	Fe object southern edge of cut [36]	Post-medieval
62	Find		36	Fe object eastern end of cut [36]	Post-medieval
63	U/S Finds			U/S Finds	Mixed
64	Finds			HSR from borehole 2, 150-153cm depth	Unknown
65	Find			Pottery from borehole 2, 0.85m depth	Post-medieval
66	Cut	Grave ?		Grave cut ?	Unknown
67	Deposit		66	Mid orange brown silt sand	Unknown

## Appendix 2b: OASIS Feature Summary

Period	Category	Total
Middle Saxon	Grave	1
Medieval	Pit	1
Med./Post-Med.	Grave	2
Post-medieval	Pit	1
	Grave	7
Modern	Pit	1
Unknown	Grave ?	2

### Appendix 3a: Finds by Context

Context	Material	Qty	Wt	Period	Notes
1	Animal Bone	9	158	Unknown	
1	Ceramic Building Material	2	48	Post-medieval	
1	Clay Pipe	6	15	Post-medieval	Stems
1	Flint – Struck	1	16	Unknown	
1	Glass	5	63	Post-medieval	Bottle fragments
1	Human Skeletal Remains			Unknown	Charnel
1	Iron	1	97	Unknown	?Coffin plate
1	Iron	1	89	Modern	Square-looped object
1	Iron	2	48	Unknown	Nails
1	Iron	1	98	Modern	Bolt - DISCARDED
1	Pottery	1	57	Middle Saxon	
1	Pottery	30	407	Post-medieval	
1	Shell	1	1	Unknown	Oyster - DISCARDED
2	Animal Bone	25	323	Unknown	
2	Clay Pipe	13	31	Post-medieval	Stems
2	Copper-Alloy	1	4	Post-medieval	Button; Great Eastern Railway
2	Glass	6	220	Post-medieval	1 complete bottle & fragments
2	Human Skeletal Remains			Unknown	Charnel
2	Iron	1	63	Post-medieval	Implement; ?Fork
2	Iron	1	103	Unknown	Object
2	Iron	1	106	Unknown	Rod fragment
2	Iron	2	27	Unknown	Nails
2	Pottery	1	25	Middle Saxon	
2	Pottery	44	631	Post-medieval	
2	Pottery	1	9	Late Saxon	
2	Shell	2	21	Unknown	Oyster - DISCARDED
3	Animal Bone	22	201g	Unknown	
3	Clay Pipe	7	16g	Post-medieval	Stems
3	Flint – Struck	2	21g	Unknown	
3	Glass	1	45g	Post-medieval	Bottle fragment
3	Human Skeletal Remains			Unknown	Charnel
3	Iron	1	76g	Unknown	Coffin handle
3	Iron	1	7g	Unknown	?Nail
3	Pottery	1	14	Middle Saxon	
3	Pottery	2	10g	Late Saxon	
3	Pottery	5	43g	Post-medieval	
4	Clay Pipe	2	5g	Post-medieval	Stems
4	Pottery	1	4g	Post-medieval	
4	Shell	1	4g	Unknown	Oyster - DISCARDED

Context	Material	Qty	Wt	Period	Notes
6	Animal Bone	2	6g	Unknown	
6	Clay Pipe	1	1g	Post-medieval	
6	Human Skeletal Remains			Unknown	Charnel
6	Iron	2	3g	Unknown	Coffin rivets
8	Animal Bone	54	1003	Unknown	
8	Ceramic Building Material	1	26	Medieval	
8	Ceramic Building Material	3	362	Med./Post-Med.	
8	Ceramic Building Material	23	1538	Post-medieval	
8	Clay Pipe	11	27	Post-medieval	Stems
8	Flint – Struck	2	43	Unknown	
8	Glass	2	7	Post-medieval	Bottle & vessel
8	Human Skeletal Remains			Unknown	Charnel
8	Iron	2	187	Unknown	Plate fragments
8	Iron	1	89	Unknown	Coffin handle
8	Iron	1	145	Unknown	Coffin fitting
8	Iron	1	74	Unknown	Coffin fitting
8	Iron	1	198	Unknown	?Coffin handle
8	Iron	1	127	Unknown	?Coffin fitting
8	Iron	3	67	Unknown	Nails
8	Iron	1	36	Unknown	Bar/Rod fragment
8	Iron	1	25	Unknown	Coffin fitting
8	Pottery	1	27g	Roman	
8	Pottery	7	222	Middle Saxon	
8	Pottery	6	69	Late Saxon	
8	Pottery	3	41	Medieval	
8	Pottery	10	55	Post-medieval	
8	Shell	4	78	Unknown	Oyster - DISCARDED
8	Stone	3	297	Unknown	Slate & sandstone; unworked; DISCARDED
10	Animal Bone	15	128g	Unknown	
10	Ceramic Building Material	1	14g	Medieval	
10	Clay Pipe	3	6g	Post-medieval	Stems
10	Glass	4	116g	Post-medieval	Bottle fragments
10	Human Skeletal Remains			Unknown	Charnel
10	Iron	11	91g	Unknown	Nails
10	Iron	1	12g	Unknown	?Staple
10	Iron	1	4g	Unknown	Plate fragment
10	Iron	1	36g	Unknown	Object

Context	Material	Qty	Wt	Period	Notes
10	Pottery	1	57g	Middle Saxon	
10	Pottery	1	5g	Medieval	
10	Pottery	1	82g	Post-medieval	
10	Shell	1	20g	Unknown	Oyster - DISCARDED
10	Stone	1	5g	Unknown	Slate fragment - DISCARDED
12	Animal Bone	15	153	Unknown	
12	Ceramic Building Material	7	505g	Post-medieval	
12	Clay Pipe	5	16	Post-medieval	Stems x 4; Bowl fragment x 1
12	Copper-Alloy	5	14g	Unknown	Plate fragments
12	Glass	3	5	Post-medieval	Vessel
12	Human Skeletal Remains			Unknown	Charnel
12	Iron	6	452g	Unknown	Coffin fittings
12	Iron	1	9	Unknown	Nail
12	Pottery	2	52	Post-medieval	
12	Stone	1	11	Unknown	Quartz; unworked; DISCARDED
13	Animal Bone	5	103g	Unknown	
13	Ceramic Building Material	3	175g	Medieval	
13	Ceramic Building Material	2	109g	Post-medieval	
13	Pottery	1	15g	Medieval	
15	Human Skeletal Remains			Unknown	Charnel
15	Pottery	1	4g	Post-medieval	
17	Animal Bone	5	73g	Unknown	
17	Ceramic Building Material	3	59g	Post-medieval	Wall tile; Delft?
17	Human Skeletal Remains			Unknown	Charnel
17	Iron	1	4g	Unknown	Nail
17	Iron	1	22g	Unknown	Plate fragment
17	Iron	1	58g	Unknown	Bar/Rod fragment
17	Mortar	1	268g	Unknown	
17	Pottery	1	10g	Post-medieval	
18	Animal Bone	29	471	Unknown	
18	Ceramic Building Material	4	142g	Medieval	
18	Ceramic Building Material	1	174g	Med./Post-Med.	
18	Ceramic Building Material	28	932	Post-medieval	
18	Clay Pipe	4	12	Post-medieval	Stems
18	Glass	2	8	Post-medieval	Bottle fragments

Context	Material	Qty	Wt	Period	Notes
18	Human Skeletal Remains			Unknown	Charnel
18	Iron	4	43	Unknown	Nails
18	Pottery	1	36g	Roman	
18	Pottery	3	79	Middle Saxon	
18	Pottery	4	67	Late Saxon	
18	Pottery	4	45	Medieval	
18	Pottery	4	18	Post-medieval	
18	Shell	6	49	Unknown	Oyster - DISCARDED
18	Stone	2	16	Unknown	Slate fragments - DISCARDED
19	Animal Bone	8	108	Unknown	
19	Animal Bone	1	1	Medieval	Stylus; L>56; D5
19	Ceramic Building Material	4	142	Medieval	
19	Ceramic Building Material	1	21	Post-medieval	
19	Pottery	1	38	Late Saxon	
19	Pottery	35	410	Medieval	
19	Shell	9	89	Unknown	Oyster - DISCARDED
20	Animal Bone	5	195g	Unknown	
20	Ceramic Building Material	2	26g	Post-medieval	
20	Shell	1	49g	Unknown	Oyster - DISCARDED
21	Animal Bone	19	219	Unknown	
21	Fired Clay	2	18	Unknown	
21	Human Skeletal Remains			Unknown	Charnel
21	Pottery	3	41	Middle Saxon	
21	Pottery	5	47	Late Saxon	
30	Human Skeletal Remains			Unknown	Arms, legs & torso
31	Human Skeletal Remains			Unknown	Right leg & arm, torso & skull
33	Animal Bone	5	125	Unknown	
33	Ceramic Building Material	1	33g	Medieval	
33	Ceramic Building Material	1	608	Post-medieval	
33	Clay Pipe	3	15	Post-medieval	Stem x 2; Bowl x 1
33	Fired Clay	1	42g	Unknown	
33	Human Skeletal Remains			Unknown	Charnel
33	Iron	1	16	Unknown	Plate fragment
33	Iron	5	30	Unknown	Nails
33	Pottery	1	32	Late Saxon	

Context	Material	Qty	Wt	Period	Notes
34	Human Skeletal Remains			Unknown	Only arms & legs
40	Animal Bone	30	722	Unknown	
40	Ceramic Building Material	2	295	Medieval	
40	Ceramic Building Material	3	108	Post-medieval	
40	Clay Pipe	1	4	Post-medieval	Stem
40	Flint – Struck	1	1g	Unknown	
40	Human Skeletal Remains			Unknown	Charnel; including 2 skulls
40	Iron	1	139	Unknown	Coffin handle
40	Iron	1	98	Unknown	Coffin handle
40	Iron	3	124	Unknown	Coffin fittings
40	Iron	5	79	Unknown	Nails
40	Iron	2	3g	Unknown	Coffin fittings; wood adhering
40	Iron	1	101	Unknown	Coffin fitting
40	Pottery	2	24	Post-medieval	
40	Pottery	2	12g	Late Saxon	
40	Shell	1	38	Unknown	Oyster - DISCARDED
41	Animal Bone	21	192g	Unknown	
41	Ceramic Building Material	1	63g	Medieval	
41	Copper-Alloy	7	1g	Unknown	Shroud pin fragments
41	Human Skeletal Remains			Unknown	Charnel
41	Iron	4	15g	Unknown	Nails
41	Pottery	1	15g	Med./Post-Med.	
42	Animal Bone	12	237g	Unknown	
42	Ceramic Building Material	1	71g	Med./Post-Med.	
42	Clay Pipe	1	4g	Post-medieval	Stem
42	Human Skeletal Remains			Unknown	Charnel
42	Pottery	1	25g	Late Saxon	
42	Shell	1	18g	Unknown	Oyster - DISCARDED
43	Animal Bone	30	725g	Unknown	
43	Ceramic Building Material	1	9g	Medieval	
43	Ceramic Building Material	3	82g	Post-medieval	
43	Clay Pipe	1	2g	Post-medieval	Stem
43	Human Skeletal Remains			Unknown	Charnel
43	Iron	1	157g	Unknown	Coffin fitting; wood adhering
43	Iron	1	20g	Unknown	Nail; coffin fitting; wood adhering

Context	Material	Qty	Wt	Period	Notes
43	Iron	1	5	Unknown	Coffin fitting
43	Stone	1	295g	Unknown	?Limestone; smoothed surfaces
44	Human Skeletal Remains			Unknown	Arms, legs & torso
45	Animal Bone	11	153g	Unknown	
45	Ceramic Building Material	2	65g	Post-medieval	
45	Human Skeletal Remains			Unknown	Charnel
45	Iron	1	5g	Unknown	Nail
45	Pottery	1	39g	Middle Saxon	
45	Pottery	3	14g	Late Saxon	
45	Pottery	2	10g	Medieval	
45	Shell	1	1g	Unknown	Oyster - DISCARDED
47	Animal Bone	48	484g	Unknown	
47	Human Skeletal Remains			Unknown	Charnel
47	Pottery	2	70g	Middle Saxon	
47	Shell	6	89g	Unknown	Oyster - DISCARDED
47	Stone	1	76g	Unknown	Quartz; unworked; DISCARDED
48	Human Skeletal Remains			Unknown	Arms, legs & torso
49	Human Skeletal Remains			Unknown	Legs only
50	Human Skeletal Remains			Unknown	Left arm, legs, torso
51	Animal Bone	48	892	Unknown	
51	Ceramic Building Material	3	175g	Roman	
51	Ceramic Building Material	1	36	Post-medieval	
51	Fired Clay	1	36g	Unknown	
51	Pottery	3	46	Middle Saxon	
51	Shell	1	11	Unknown	Oyster - DISCARDED
52	Animal Bone	44	1273	Unknown	
52	Pottery	6	164	Middle Saxon	
52	Pottery	1	23	Medieval	
53	Animal Bone	10	430	Unknown	
53	Human Skeletal Remains			Unknown	Charnel
53	Pottery	1	16	Middle Saxon	
54	Animal Bone	1	35	Unknown	
55	Human Skeletal Remains			Unknown	Legs, arms & torso
56	Human Skeletal Remains			Unknown	Legs, arms & torso
57	Animal Bone	19	194	Unknown	



Context	Material	Qty	Wt	Period	Notes
57	Fired Clay	1	37	Unknown	
57	Pottery	3	34	Middle Saxon	
61	Iron	1	506	Unknown	Coffin handle
62	Iron	1	638	Unknown	Coffin handle
63	Animal Bone	92	1188	Unknown	
63	Clay Pipe	4	7	Post-medieval	Stems
63	Human Skeletal Remains			Unknown	Charnel
63	Iron	1	14	Unknown	Nail
63	Iron	1	96	Unknown	Coffin handle
63	Pottery	1	5	Late Saxon	
63	Pottery	1	5	Medieval	
63	Pottery	3	56	Post-medieval	
64	Human Skeletal Remains			Unknown	Charnel
65	Pottery	1	2	Post-medieval	

### Appendix 3b: OASIS Finds Summary

Period	Material	Total
Roman	Ceramic Building Material	3
	Pottery	2
Middle Saxon	Pottery	33
Late Saxon	Pottery	27
Medieval	Animal Bone	1
	Ceramic Building Material	18
	Pottery	48
Med./Post-Med.	Ceramic Building Material	5
Med./Post-Med.	Pottery	1
Post-medieval	Ceramic Building Material	78
	Clay Pipe	62
	Copper-Alloy	1
	Glass	23
	Iron	1
	Pottery	105
Modern	Iron	2
Unknown	Animal Bone	584
	Copper-Alloy	12
	Fired Clay	5
	Flint – Struck	6
	Human Skeletal Remains	
	Iron	82
	Mortar	1
	Shell	35
	Stone	9

#### Appendix 4: Pottery

Context	Fabric	Form	Rim	No	Wt/g	MNV	Fabric date range
1	SIPS	jar	E	1	57	1	650-850
1	GRE			1	34	1	16th-18th c.
1	GRE	jar	COLL	1	21	1	16th-18th c.
1	GRE	jar	EV	2	18	1	16th-18th c.
1	TGE	dish	PL	1	2	1	16th-18th c.
1	CRW			4	17	4	1730-1760
1	ESW	bottle?		4	143	1	17th-19th c.
1	ESWS			1	2	1	L.17th-M.18th c.
1	GSW5			2	22	2	E.17th-19th c.
1	LPME	plantpot	BD	1	46	1	18th-20th c.
1	PEW			2	5	1	L.18th-M.19th c.
1	PORC			1	11	1	18th-20th c.
1	REFW			6	42	1	L.18th-20th c.
1	REFW	mug	UPPL	1	20	1	L.18th-20th c.
1	REFW	ointment pot	UPLS	1	3	1	L.18th-20th c.
1	REFW	plate?	EV	2	21	1	L.18th-20th c.
2	SIPS			1	25	1	650-850
2	THET			1	9	1	10th-11th c.
2	GSW3			1	48	1	L.15th-16th c.
2	GRE			4	174	1	16th-18th c.
2	GRE	bowl	EV	1	32	1	16th-18th c.
2	GRE	handled bowl	UPPL	1	37	1	16th-18th c.
2	GSW4			3	29	1	16th-17th c.
2	NLPM	bowl?	EV	1	55	1	16th-17th c.
2	SPEC			2	16	2	L.17th-18th c.
2	TGE			1	2	1	16th-18th c.
2	TGE	dish/bowl	EV	1	3	1	16th-18th c.
2	CRW			2	12	2	1730-1760
2	CRW			5	24	5	1730-1760
2	CRW	chamber pot?	FTEV	1	21	1	1730-1760
2	CRW	plate	EV	1	8	1	1730-1760
2	GSW5			1	7	1	E.17th-19th c.
2	GSW5			4	15	4	E.17th-19th c.
2	LBW			1	11	1	18th-E.20th c.
2	LGRE			2	20	2	18th-19th c.
2	LSRW	bowl	FLAR	1	24	1	18th-19th c.
2	PEW			2	8	2	L.18th-M.19th c.
2	PORC	bowl	FLAR	1	24	1	18th-20th c.
2	REFW			3	23	1	L.18th-20th c.

Context	Fabric	Form	Rim	No	Wt/g	MNV	Fabric date range
2	REFW	bowl		1	6	1	L.18th-20th c.
2	REFW	jug?	UPL	1	13	1	L.18th-20th c.
2	REFW	plate	EV	1	3	1	L.18th-20th c.
2	SWS W			2	16	1	18th c.
3	SIPS			1	14	1	650-850
3	THET			2	10	1	10th-11th c.
3	GRE			1	12	1	16th-18th c.
3	CRW			1	4	1	1730-1760
3	GSW5			1	9	1	E.17th-19th c.
3	LPME			1	15	1	18th-20th c.
3	PEW			1	3	1	L.18th-M.19th c.
4	MART 3			1	4	1	17th c.
8	RBGM			1	27	1	RB
8	GIPS			3	65	3	650-850
8	SIPS			4	157	2	650-850
8	THET			1	14	1	10th-11th c.
8	THET			5	55	5	10th-11th c.
8	IPSG			2	35	1	L.13th-E.14th c.
8	MCW			1	6	1	L.12th-14th c.
8	BORD			1	8	1	16th-18th c.
8	BORD	skillet?	EV	1	23	1	16th-18th c.
8	CRW			1	10	1	1730-1760
8	CRW			2	5	2	1730-1760
8	GSW5			1	2	1	E.17th-19th c.
8	LSRW			1	13	1	18th-19th c.
8	PORC			1	1	1	18th-20th c.
8	REFW	cup	UPPL	2	1	1	L.18th-20th c.
10	SIPS			1	57	1	650-850
10	MCW			1	5	1	L.12th-14th c.
10	GRE	dripping dish	UPPL	1	82	1	16th-18th c.
12	NLPM	pipkin?	UPPL	1	49	1	16th-17th c.
12	GSW5			1	3	1	E.17th-19th c.
13	IPSG			1	15	1	L.13th-E.14th c.
15	TGE			1	4	1	16th-18th c.
17	GSW3			1	10	1	L.15th-16th c.
18	RBCG	storage jar		1	36	1	RB
18	GIPS	jar	C?	1	19	1	650-850
18	GIPS	jar	E	1	39	1	650-850
18	SIPS			1	21	1	650-850

Context	Fabric	Form	Rim	No	Wt/g	MNV	Fabric date range
18	THET			2	21	1	10th-11th c.
18	THET	AA small jar	4	1	36	1	10th-11th c.
18	THET	AB medium jar	4	1	10	1	10th-11th c.
18	SCAR 1			1	8	1	M./L.12th-E.13th c.
18	STAM B			1	18	1	M.11th-M.13th c.
18	STAM B			2	19	2	M.11th-M.13th c.
18	IGBW			1	2	1	16th-18th c.
18	TGE	plate?	EV	1	7	1	16th-18th c.
18	REFW			1	1	1	L.18th-20th c.
18	SWS W	jar/jug?	BD	1	8	1	18th c.
19	SIPS			1	38	1	650-850
19	IPSG			7	72	1	L.13th-E.14th c.
19	IPSG	jug		21	253		L.13th-E.14th c.
19	IPSG	jug		3	30	1	L.13th-E.14th c.
19	LOND			1	12	1	L.12th-E.14th c.
19	SCAR 1			3	43		M./L.12th-E.13th c.
21	GIPS			1	20	1	650-850
21	SIPS	jar	A	2	21	1	650-850
21	STAM A			1	6	1	M.10th-L.11th c.
21	THET			1	8	1	10th-11th c.
21	THET	AB medium jar	5	3	33	1	10th-11th c.
33	THET			1	32	1	10th-11th c.
40	THET			2	12	1	10th-11th c.
40	STAF	press-moulded plate		1	20	1	L.17th-18th c.
40	TGE			1	4	1	16th-18th c.
41	LMT			1	15	1	15th-16th c.
42	THET			1	25	1	10th-11th c.
45	GIPS			1	39	1	650-850
45	THET			3	14	3	10th-11th c.
45	IPSG			2	10	1	L.13th-E.14th c.
47	GIPS			1	24	1	650-850
47	SIPS			1	46	1	650-850
51	GIPS			2	22	2	650-850
51	SIPS			1	24	1	650-850
52	GIPS			1	58	1	650-850
52	GIPS			3	99	3	650-850

<b>Context</b>	<b>Fabric</b>	<b>Form</b>	<b>Rim</b>	<b>No</b>	<b>Wt/g</b>	<b>MNV</b>	<b>Fabric date range</b>
52	SIPS			2	7	1	650-850
52	IPSG			1	23	1	L.13th-E.14th c.
53	GIPS			1	16	1	650-850
57	GIPS			2	26	2	650-850
57	SIPS			1	8	1	650-850
63	THET			1	5	1	10th-11th c.
63	IPSG			1	5	1	L.13th-E.14th c.
63	GRE	bowl	EV?	1	29	1	16th-18th c.
63	GSW5			1	18	1	E.17th-19th c.
63	LSRW	bowl	CAV	1	9	1	18th-19th c.
65	GSW4			1	2	1	16th-17th c.

## Appendix 5: Ceramic Building Material

Context	Fabric	Form	No.	Wt/g	Abr	Length	Width	Height	Peg	Mortar	Glaze	Comments	Date
1	fscp	MALT?	1	34				20+				worn	18/19
1	wfs	MALT?	1	14								flake - could just be FB/FT	18/19
8	msgfe	LB	3	362						ms			15/16?
8	fs	RTP	5	191									pmed
8	fsfe	RTP	2	53									pmed
8	ms	RTP	4	94									pmed
8	ms	RTM	4	218					1 x S, 1 x R(2)	1 covered thick			med
8	fs	RTM	1	25							SPOTS		med
8	fscp	LB	2	80	+							1 worn?	pmed
8	msg	LB	1	104						thin ms			pmed
8	wfs	LB	1	709			96	48		msf			18/19
8	wcp	LB	2	64								1 pinkish	18/19
8	fsc	RTM	1	26								v fine calc	med
10	fs	RTM	1	14									med
12	fsgfe	RTP	1	246					1 x R				pmed
12	ms	RTP	2	105					1 x S	thin			pmed?
12	fscp	RTP	1	54					1 x S	ms			pmed?
12	fsgfe	LB	2	36									pmed
12	est	EB	1	64								sanded	med
13	fs	RTP	2	109									pmed
13	fs	RTM	2	62					1 x R				med

Context	Fabric	Form	No.	Wt/g	Abr	Length	Width	Height	Peg	Mortar	Glaze	Comments	Date
13	est	EB	1	113								sanded	med
17	tge	WT	3	59				7				poss 1 tile, but none joining. At least one has a scene in an octagonal border, quarter rosette corners	M.18th c.
18	fs	RTP	5	183									pmed
18	fsx	FT	1	174				31				worn, poss FFT or QFT	lmed/pmed
18	est	EB	1	54	+								med
18	fscp	LB	2	90						1 thick			pmed
18	fsg	RTP	4	47									pmed
18	fscp	RTP	9	165									pmed
18	ms	RTM	2	22									med
18	fscq	RTM	1	66									med
18	msgfe	LB	8	447				60				only 1 piece measurable	pmed
19	fs	RTM	2	35						1 thick cs			med
19	msf	RTM	1	90									med
19	fsg	RTM	1	17					1 x R				med
19	fscp	RTP	1	21									pmed
20	ms	RTM	1	19									med
20	fs	RTM	1	7									med
33	msg	RTM	1	33						thick ms			med
33	wfs	FB	1	608			115	34+				worn	18/19
40	fsfe	FFT	1	110				29			C		14-15
40	msgfe	LB	1	185				58					15/16?



Context	Fabric	Form	No.	Wt/g	Abr	Length	Width	Height	Peg	Mortar	Glaze	Comments	Date
40	fscp	RTP	2	76									pmed
40	fs	RTP	1	32									pmed
41	ms	RTM	1	63									med
42	fscp	LB	1	71									15/16?
43	ms	RTM	1	9									med
43	fsg	RTP	2	21									pmed
43	fs	PAN	1	61									pmed
45	fs	RTP	2	65									pmed
51	fs	RTP	1	36									pmed
51	fs	BOX	3	175								poss 1 tile, combed vert & diag	Rom

### Appendix 6: Fired Clay

Context	Fabric	Type	No	Wt/g	Colour	Surface	Impressions	Abrasion	Notes
21	fso		2	18	grey-orange	flattish	straw?		surface frag, daub or oven dome?
33	fs	daub?	1	42	grey-orange		poss wattle?	+	thick & dense
51	ms	lw	1	36	grey	convex			hole diam c.40mm
57	fs		1	37	orange	convex			surface v slightly reduced, amorphous lump

### Appendix 7a: Animal Bone

Context	Ctxt Qty	Wt (g)	Species	NISP	Adult	Juv	Range	Element range	Butchering	Working	Gnaw	R/C/F	Path	Comments
1			Bird - Dove	1	1			ul	c					humerus, fine cuts mid-shaft
1	9	158	Cattle	4	4			mand, ul, f, r	c, ch, s		2	c		sawn rib, heavily ch mand, gnawed hu and mand
1			Mammal	3										
1			Pig/Boar	1				ul	c, ch					c and ch tib
2			Bird - Fowl	2	1	1		ll	c, ch					adult fe, juv tib
2	25	323	Cattle	3		3		mand, scap, ll	c, ch		1	c	1	small oval lesion on prox. MC
2			Deer - Fallow	2		2		ul	c, ch					fe and hu, numerous cuts on anterior hu shaft
2			Mammal	11					ch, c					
2			Pig/Boar	2	2			f, ul	c, ch					
2			Sheep/goat	5	5			ll, ul, pel	c, ch					
3	22	201	Cattle	3	3			scap, pel	c, ch, s					Massive articular scap - sawn
3			Mammal	13										
3			Pig/Boar	2		2		f, ul	c					juv mp, neo fe
3			Sheep/goat	3	2	1		ul	c, ch		1	c		gnawed hu
3			SM - Rabbit	1	1			ul	c					large femur
6	2	6	Mammal	2				v						
8	54	1003	Cattle	10	6	4		ll, ul, f, pel, scap	c, ch		1	c		
8			Mammal	33				r, v + shaft frags	ch, c, s					inc sawn vertebrae - sagittal saw

Context	Ctxt Qty	Wt (g)	Species	NISP	Adult	Juv	Range	Element range	Butchering	Working	Gnaw	R/C/F	Path	Comments
8			Pig/Boar	5	2	3		ul, mand	c, ch					mand with Dp4 in full wear and M1 @C, robust limbs
8			Sheep/goat	4	4			ll, ul	c, ch					metacarpals of both sheep and goat
8			SM - ?Rabbit	2				shaft frags, ul	c					
10	15	128	Cattle	1	1			ll	ch					
10			Mammal	8					c, ch					
10			Pig/Boar	2		2		ul, scap	c, ch					
10			Sheep/goat	4	4			ll, mand, ul	c, ch					
12	15	153	Cattle	2	2			mand, scap	c, ch					many cuts and chop marks on the mandibular condyle
12			Mammal	10										
12			Pig/Boar	1		1		f			1	c		pph - light gnawing, small canid
12			Sheep/goat	2	2			ul	c, ch					
13			Bird - Fowl	1	1			ul						coracoid
13	5	103	Cattle	2	2			ll, f	c, ch					pph and mt
13			Mammal	2										
17	5	73	Cattle	1	1			f						
17			Mammal	3					ch					
17			Pig/Boar	1	1			scap	c, ch					small ind
18			Bird - Goose	1				v						cervical vertebrae
18	29	471	Cattle	7	6	1		f, ll, ul, pel, mand	c, ch		2	c		cut talus, robust MT,

Context	Ctxt Qty	Wt (g)	Species	NISP	Adult	Juv	Range	Element range	Butchering	Working	Gnaw	R/C/F	Path	Comments
18			Mammal	16				many rib sections	c, ch					
18			Pig/Boar	2		2		ll, ul	c, ch		1	c		gnawed calc
18			Sheep/goat	3	3			f, ul	c, ch					
19			Bird - Goose	1	1			ul	c					coracoid
19	9	109	Cattle	3		3		mand, pel, r	c, ch					
19			Mammal	3										
19			Sheep/goat	1		1		ul	c, ch		1	c/f		small humerus gnawed by small canid (toy breed or fox) or ?cat/mustelid
19			SM - Hare	1	1			ul	ch					tibia shaft
20	5	195	Cattle	2	2			ul, f	c, ch					heavily chopped humerus
20			Mammal	1										
20			Pig/Boar	1	1			t						ins
20			Sheep/goat	1		1		ll	ch					uf MC
21			Bird - Fowl	1	1			ul	c					
21	19	219	Cattle	3		3		ll, f, pel	c, ch		1	c		short gnawed metacarpal - Celtic or Kerry -type
21			Mammal	13										
21			Pig/Boar	2		2		ul, f	c, ch					
33	5	125	Cattle	2	2			ul, ll	c, ch		2	c		both metatarsal and humerus gnawed
33			Mammal	2										
33			Sheep/goat	1				ul, ll	ch					
40	30	722	Cattle	7		7		ul, v, r	c, ch		1	c		robust, but short humerus, gnawed at proximal end in particular

Context	Ctxt Qty	Wt (g)	Species	NISP	Adult	Juv	Range	Element range	Butchering	Working	Gnaw	R/C/F	Path	Comments
40			Human	2		2		femur (2 pieces)						removed for inclusion with other HSR
40			Mammal	13			13	v, r, other frags	c, ch					inc chopped and cut sections of rib
40			Pig/Boar	3		3		mand, pel, v	ch					c.10mths
40			Sheep/goat	5	3	2		ul, t	c, ch					inc well worn M3, 3 humeri, 1 femur
41	21	192	Cattle	3		3		scap, mand, pel	c, ch					
41			Mammal	16			16	r, scap	ch, c					
41			Pig/Boar	2		2		scap, pel	c, ch		1	c		scapula gnawed around neck
42	12	237	Cattle	5		5		ul, v, pel	ch, c		2	c		gnawed femur head + pel, heavily cut hu and pelvis
42			Mammal	5										
42			Pig/Boar	2	2			pel, ul	c, ch					cut pel and rad
43			Bird - Goose	1	1			ll, ul, v, pel						TMT - small species of goose such as Brent or Barnacle
43	30	725	Cattle	8	8			ll, ul, v, pel	c, ch		3	c	2	gnawed calcs and mt, large and robust MC + MT, lesion on prox MC
43			Mammal	10			10							
43			Pig/Boar	6		6		pel, mand, t, ul	c, ch					small tusk in 2 pieces, Dp4 in mid wear
43			Sheep/goat	5	5			ul, ll, pel, t	c, ch					

Context	Ctxt Qty	Wt (g)	Species	NISP	Adult	Juv	Range	Element range	Butchering	Working	Gnaw	R/C/F	Path	Comments
45	11	153	Cattle	2	2			ul, f	c, ch				1	ch/c hu, pph - distorted - ploughing?
45			Mammal	7					c, ch					
45			Pig/Boar	2	2			t, ul	ch					small adult tusk, fibula
47			Bird - Fowl	1	1			fercula						fercula
47	48	484	Cattle	6	6			ul, ll, pel, r, v	c, ch					
47			Mammal	34				many rib frags	c, ch					
47			Pig/Boar	4	4			scap, pel, f	c, ch					
47			Sheep/goat	3	3			scap, ul, ll	c, ch					
51	48	892	Cattle	8	8			ll, f, ul, pel	c, ch					large, robust elements
51			Mammal	27					ch, c					
51			Pig/Boar	4		4		ul	c, ch					
51			Sheep/goat	9		9		ll, ul, pel, mand	c, ch, w	2?				possible unfinished worked bones - 2 x metapodials
52	44	1273	Cattle	14	14			f, ll, ul, pel, v, t, hc	c, ch					large robust individual
52			Mammal	24										
52			Pig/Boar	1		1		skull						rear of skull
52			Sheep/goat	4		4		ul	c, ch					
52			SM	1										
53	10	430	Cattle	10	10			pel, jaw, ul, v, sac	c, ch					dark stained - waterlogging

Context	Ctxt Qty	Wt (g)	Species	NISP	Adult	Juv	Range	Element range	Butchering	Working	Gnaw	R/C/F	Path	Comments
54	1	35	Cattle	1	1			v						dark stained - waterlogging
57	19	194	Cattle	3		3		ul, v	c, ch					
57			Mammal	12										
57			Pig/Boar	1		1		ul	ch					
57			Sheep/goat	3	3			ll, ul	c, ch					
63			Bird - Duck	1	1			ul	c					humerus, ?Shelduck
63	92	1188	Cattle	12	12			ll, ul, f, pel, t, r	c, ch					inc robust ind
63			HSR	8				scap, skull, ul, ll						removed for inclusion with other HSR
63			Mammal	59										
63			Pig/Boar	3		3		ul, scap	c, ch					robust animal
63			Sheep/goat	9	5	4		ul, v, ll	c, ch					

### Appendix 7b: Animal Bone Measurements

Context	Species	Element	Fusion	Gl	Bd	Dd	BT	HTC	BatF	Bfd	A	B	SD	Bp	BWmin	Bwmax	Acet.	Art. end	Comments
18	Cattle	talus	f	56.9	38														
18	Cattle	Tib	uf		45	27.8							28						
20	Cattle	talus	f	59															
3	Cattle	tib	f		59.8	39							36.8						
17	Cattle	talus	f	62.2	40.9														
52	Cattle	hu	f				62.5	26.9					25						
52	Cattle	hc	n/a												28.5	44.6			
52	Cattle	pel	f														51.2		
51	Cattle	calc	f	143															
53	Cattle	rad	f		62	38.3													
2	Deer - Fallow	hu	f				31.5	15.6					16.8						
1	Dove sp.	hu	f	41.6	9.8								5.7	15.9					
13	Fowl	cor	f	49.8															
2	Fowl	tib	f		9.8	10.2							5.1						juv
40	Sheep/goat	hu	f				32.3	15.9					18						
40	Sheep/goat	hu	f				27.6	12.4					14.9						
20	Sheep/goat	mc	uf						17.5				9.2						
47	Sheep/goat	Scap	f																21
10	Sheep/goat	tib	f		25	19.1													
12	Sheep/goat	hu	f				29.7	15.2											
51	Sheep/goat	mt	uf	107					20.5				10.2						



Context	Species	Element	Fusion	GI	Bd	Dd	BT	HTC	BatF	Bfd	A	B	SD	Bp	BWmin	Bwmax	Acet.	Art. end	Comments
51	Sheep/goat	mt	uf	118					24				12.1						
43	Pig	pel	f														29.5		
47	Pig	Scap	f															26.1	
47	Pig	Pel	f														31.3		
3	Pig	tib	f		31.2	27.9													
3	Pig	calc	uf	64															

### Appendix 7c: Animal Bone – Tooth Record

Ctxt	Taxa	Tooth No	Eruption	TWS
43	Sus	Dp4	e	f
43	Sus	M1	e	b-c

## Appendix:8 The Plant Macrofossils and Other Remains

Sample No.	1	2	3	4	5
<b>Context No.</b>	<b>47</b>	<b>53</b>	<b>51</b>	<b>52</b>	<b>54</b>
<b>Cereals and other food plants</b>					
<i>Hordeum</i> sp. (grains)	x				
<i>Hordeum/Secale cereale</i> type (rachis nodes)			x		
<i>Secale cereale</i> L. (grains)			x	xcf	
<i>Triticum</i> sp. (grains)	xx	xcf	x		
Cereal indet. (grains)	x	xcffg	x	x	x
Large Fabaceae indet/					xcotyfg
<b>Herbs</b>					
<i>Agrostemma githago</i> L.			x		
<i>Atriplex</i> sp.		xw			
<i>Bromus</i> sp.	x				
Chenopodiaceae indet.		xw			
Fabaceae indet.				xcf	
<i>Galium aparine</i> L.	x				
<i>Lapsana communis</i> L.		xw			
Large Poaceae indet.		x			x
<i>Reseda</i> sp.		xw			
<i>Rumex</i> sp.			x		
<b>Wetland plants</b>					
<i>Bolboschoenus/Schoenoplectus</i> sp.		xw			
<i>Carex</i> sp.		xw	x		xw
<b>Tree/shrub macrofossils</b>					
<i>Corylus avellana</i> L.	x		x	x	
<i>Rubus idaeus</i> L.		xcfw			
<i>R.</i> sect. <i>Glandulosus</i> Wimmer & Grab		xw			xw
<i>Sambucus nigra</i> L.		xw	xw		xw
<b>Other plant macrofossils</b>					
Charcoal <2mm	xxxx	xxxx	xxxx	xxxx	xxxx
Charcoal >2mm	xxxx	xxx	xxxx	xxxx	xx
Charcoal >5mm	xx	x	xx	xx	x
Charred root/stem			x		
Waterlogged root/stem		x			
Indet.buds		xw			
Indet.leaf frags		xw			
Indet.seeds	x	x			
Indet.seed/fruit		xw			
Indet.thorns ( <i>Prunus</i> type)	x				
<b>Other remains</b>					
Black porous 'cokey' material	x		x	x	
Black tarry material	x	x			
Bone	xx	x	x	x	x
Eggshell			x		
Fish bone	x		x		
Marine mollusc shell frags.	x	x	x	x	
Mineralised faecal concretions		xcf	xcf		
Mineralised soil concretions		x		x	xxx
Small coal frags.	x	x	x		

Vivianite concretions		x			
Waterlogged arthropod remains		x			x
<b>Sample volume (litres)</b>	<b>36</b>	<b>36</b>	<b>28</b>	<b>30</b>	<b>26</b>
<b>Volume of flot (litres)</b>	<b>0.3</b>	<b>0.1</b>	<b>0.3</b>	<b>0.3</b>	<b>&lt;0.1</b>
<b>% flot sorted</b>	<b>50%</b>	<b>100%</b>	<b>50%</b>	<b>50%</b>	<b>100%</b>

**Key to Table**

x = 1–10 specimens    xx = 11–50 specimens    xxx = 51–100 specimens    xxxx = 100+ specimens  
 cf = compare    fg = fragment    coty = cotyledon    w = de-watered

**Appendix 9: OASIS Record**

# OASIS DATA COLLECTION FORM: England

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**OASIS ID: norfolka1-124208**

## Project details

Project name	St Mary's church
Short description of the project	An archaeological evaluation was conducted for Suffolk Mind ahead of a proposal to redevelop the redundant church of St Mary at the Quay, Key Street, Ipswich, Suffolk including the construction of a new extension to the east end of the church. A trench measuring 3m by 2m was excavated through the archaeological sequence to test the archaeological remains and density of burials present at the site. A total of eleven articulated burials were located within the trench which range in date from Middle Saxon to late post-medieval. Near the present street frontage a metalled deposit may represent an earlier surface of what is now Key Street. A clay and chalk deposit also located near the street frontage may represent a floor associated with a medieval building. Dumped midden deposits of Middle Saxon date were located near the base of the trench probably in a marsh environment which may have been periodically inundated with water from the tidal estuary. The deposits were probably laid down as part of an attempt at land reclamation close to the Saxon foreshore. An unconventionally aligned and positioned skeleton was found within the midden deposits. It was unclear as to whether the skeleton was associated with an earlier graveyard or whether the body was dumped or possibly washed up on the foreshore. A possible Late Glacial-Early Holocene soil was recorded sealing the natural sand.
Project dates	Start: 16-01-2012 End: 17-02-2012
Previous/future work	No / Yes
Any associated project reference codes	IPS661 - HER event no.
Any associated project reference codes	BAU2915 - Contracting Unit No.
Type of project	Field evaluation
Site status	Area of Archaeological Importance (AAI)
Current Land use	Other 4 - Churchyard
Monument type	GRAVES Early Medieval
Monument type	GRAVES Medieval
Monument type	GRAVES Post Medieval
Monument type	PIT Medieval
Significant Finds	POT Roman

Significant Finds	POT Early Medieval
Significant Finds	POT Medieval
Significant Finds	POT Post Medieval
Significant Finds	TILE Roman
Significant Finds	TILE Medieval
Significant Finds	HUMAN SKELETAL REMAINS Early Medieval
Significant Finds	HUMAN SKELETAL REMAINS Medieval
Significant Finds	HUMAN SKELETAL REMAINS Post Medieval
Methods & techniques	'Targeted Trenches'
Development type	Large/ medium scale extensions to existing structures (e.g. church, school, hospitals, law courts, etc.)
Prompt	Direction from Local Planning Authority - PPS
Position in the planning process	Between deposition of an application and determination

### Project location

Country	England
Site location	SUFFOLK IPSWICH IPSWICH St Mary at the Quay, Key Street
Study area	6.00 Square metres
Site coordinates	TM 1665 4424 52.0535812452 1.160316244630 52 03 12 N 001 09 37 E Point

### Project creators

Name of Organisation	NPS Archaeology
Project brief originator	Suffolk County Council Archaeological Services
Project design originator	NPS Archaeology
Project director/manager	Nigel Page
Project supervisor	Michael J Boyle
Type of sponsor/funding body	Charitable Organisation
Name of sponsor/funding body	Suffolk Mind

### Project archives

Physical Archive recipient	SCCAS
Physical Contents	'Animal Bones','Ceramics','Environmental','Glass','Human Bones','Metal','Worked bone','Worked stone/lithics'
Digital Archive recipient	NPS Archaeology
Digital Contents	'Animal Bones','Ceramics','Environmental','Glass','Human Bones','Metal','Stratigraphic','Survey','Worked bone','Worked stone/lithics'

Digital Media available	'Images raster / digital photography','Images vector','Spreadsheets','Survey','Text'
Paper Archive recipient	SCCAS
Paper Contents	'Animal Bones','Ceramics','Environmental','Glass','Human Bones','Metal','Stratigraphic','Survey','Worked bone','Worked stone/lithics'
Paper Media available	'Context sheet','Photograph','Plan','Report','Section'

### Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Archaeological Trial Trench Evaluation at the Church of St Mary at the Quay, Ipswich, Suffolk
Author(s)/Editor(s)	Boyle, Michael
Other bibliographic details	Report 2915
Date	2012
Issuer or publisher	NPS Archaeology
Place of issue or publication	Norwich
Description	A4 paper, double-sided, colour-printed, spiral-bound; PDF
Entered by	Jayne Bown (jayne.bown@nps.co.uk)
Entered on	26 April 2012

## OASIS:

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## **Appendix 10: Archaeological Specification**



**SUFFOLK COUNTY COUNCIL  
ARCHAEOLOGICAL SERVICE - CONSERVATION TEAM**

***Brief and Specification for an Archaeological Excavation***

***ST MARY AT THE QUAY, KEY STREET, IPSWICH***

***Although this document is fundamental to the work of the specialist archaeological contractor the developer should be aware that certain of its requirements are likely to impinge upon the working practices of a general building contractor and may have financial implications, for example see paragraphs 2.1 & 4.5. The commissioning body may also have Health & Safety and other responsibilities, see paragraphs 1.7 & 1.8***

**1. Background**

- 1.1 Consent has been granted for a two storey extension to St Mary at the Quay Church, Key Street, Ipswich (IP/10/00089/FUL) with a condition, requiring the implementation of a programme of archaeological work.
- 1.2 The site lies within the nationally important Area of Archaeological Importance defined for Anglo-Saxon and Medieval Ipswich in the Ipswich Local Plan and will involve extensive ground disturbance.
- 1.3 Evaluation and excavation of sites to the immediate east and south of this site show that the south aisle wall of St Mary's lies approximately on the original bank of the River Orwell and to the south of this line waterlogged deposits of increasing thickness occur. These deposits include possible waterfront revetments, and successive landfill as land was reclaimed on the river edge and used for occupation, including industrial activity. These Anglo-Saxon waterlogged deposits are of national or international importance. Within the churchyard, these deposits will be overlain and cut through by hundreds of years of burials. The foundation date for the church is not known. It may be one of the St Mary's listed in Domesday Book and is certainly there by 1254 (Taxation of Norwich).
- 1.4 The extension will require closely spaced piled foundations and ground beams. As it is not acceptable to pile through the human burials, and potential obstructions to piling undoubtedly exist, which would require 'grubbing', the entire footprint of the proposed extension must be subject to full archaeological excavation prior to development.
- 1.5 There is a presumption that all archaeological work specified for the whole area will be undertaken by the same body, whether the fieldwork takes place in phases or not. There is similarly a presumption that further analysis and post-excavation work to final report stage will be carried through by the excavating body. Any variation from this principle would require a justification which would show benefit to the archaeological process.

- 1.6 Detailed standards, information and advice to supplement this brief are to be found in "Standards for Field Archaeology in the East of England" Occasional Papers 14, East Anglian Archaeology, 2003.
- 1.7 All arrangements for field excavation of the site, the timing of the work, and access to the site, are to be negotiated with the commissioning body.
- 1.8 Before any archaeological site work can commence it is the responsibility of the developer to provide the archaeological contractor with either the contaminated land report for the site or a written statement that there is no contamination. The developer should be aware that investigative sampling to test for contamination is likely to have an impact on any archaeological deposit which exists; proposals for sampling should be discussed with this office before execution.
- 1.9 The responsibility for identifying any restraints on field-work (e.g. Scheduled Monument status, Listed Building status, public utilities or other services, tree preservation orders, SSSIs, wildlife sites &c.) rests with the commissioning body and its archaeological contractor. The existence and content of the archaeological brief does not over-ride such restraints or imply that the target area is freely available.

## 2. **Brief for Archaeological Project**

- 2.1 Archaeological excavation, as specified in Section 3, is to be carried out prior to development in the footprint of the proposed extension.
- 2.2 The excavation objective will be to provide a record of all archaeological deposits which would otherwise be damaged or removed by development, including services and landscaping permitted by any future detailed consent.
- 2.3 The academic objective will centre upon the high potential for this site to produce evidence for waterlogged Anglo-Saxon deposits.
- 2.4 In addition to the formal archaeological excavation there will be a programme of systematic archaeological monitoring of selected development works relating to alterations inside of the church..
- 2.5 This project will be carried through in a manner broadly consistent with English Heritage's *Management of Archaeological Projects*, 1991 (MAP2). Excavation is to be followed by the preparation of a full archive, and an assessment of potential for analysis and publication. Analysis and final report preparation will follow assessment and will be the subject of a further brief and updated project design.
- 2.6 Developers are reminded that PPS5 (*Planning for the Historic Environment*, March 2010) is quite explicit in requiring **appropriate and satisfactory provision for the excavation and recording of remains**. By its very nature, the archaeological resource is unpredictable. Evaluation will provide a guide but as the sample is rarely more than 5% it can be misleading and area excavation will reveal unexpected remains. It is not acceptable, therefore, for those commissioning archaeological work to require whole project quotations from archaeological contractors as these could potentially compromise the satisfactory recording and/or reporting required by this specification.. Archaeological contractors can reasonably provide an indication of whole

project costs based on previous experience but final costs cannot be agreed until the full extent of the archaeological resource to be recorded and reported on is known

- 2.7 In accordance with the standards and guidance produced by the Institute of Field Archaeologists this brief should not be considered sufficient to enable the total execution of the project. A Written Scheme of Investigation (WSI) based upon this brief and the accompanying outline specification of minimum requirements, is an essential requirement. This must be submitted by the developers, or their agent, to the Conservation Team of the Archaeological Service of Suffolk County Council (9-10 The Churchyard, Shire Hall, Bury St Edmunds IP33 2AR; telephone/fax: 01284 741230) for approval. The work must not commence until this office has approved both the archaeological contractor as suitable to undertake the work, and the LPA has approved the WSI as satisfactory. The WSI will *provide the basis for measurable standards* and will be used to establish whether the requirements of the planning condition will be adequately met. An important aspect of the WSI will be an assessment of the project in relation to the Regional Research Framework (*East Anglian Archaeology Occasional Papers 3, 1997, 'Research and Archaeology: A Framework for the Eastern Counties, 1. Resource Assessment'. Occasional Paper 8, 2000, 'Research and Archaeology: A Framework for the Eastern Counties, 2. Research Agenda and Strategy'*).
- 2.8 The developer or his archaeologist will give the Conservation Team of Suffolk County Council's Archaeological Service (SCCAS) five working days notice of the commencement of ground works on the site, in order that the work of the archaeological contractor may be monitored. The method and form of development will also be monitored to ensure that it conforms to previously agreed locations and techniques upon which this brief is based.
- 2.9 Failure to comply with the requirements of this brief and specification may result in enforcement action by the LPA.
3. **Specification for the Archaeological Excavation**  
The excavation methodology will form part of the Project Design and is to be agreed in detail before the project commences; defined minimum criteria in this outline are to be met or exceeded:
- 3.1 The entire footprint of the proposed extension is to be excavated by hand with all features, layers, surfaces, fully excavated and recorded..  
Any variation from this process can only be made by agreement with a member of the Conservation Team of SCCAS, and must be confirmed in writing.
- 3.2 Collect and prepare environmental samples (by sieving or flotation as appropriate). The Project Design must provide details of the sampling strategies for retrieving artefacts, biological remains (for palaeoenvironmental and palaeoeconomic investigations), and samples of sediments and/or soils (for micromorphological and other pedological/sedimentological analyses. Advice on the appropriateness of the proposed strategies will be sought from the English Heritage Regional Adviser for Archaeological Science (East of England). A guide to sampling archaeological deposits (Murphy and Wiltshire 1994) is available from the Conservation Team of SCCAS.

- 3.3 A finds recovery policy is to be agreed before the project commences. It should be addressed by the Project Design. Use of a metal detector will form an essential part of finds recovery. Sieving of occupation levels and building fills will be expected.
- 3.4 All finds will be collected and processed. No discard policy will be considered until the whole body of finds has been evaluated.
- 3.5 All ceramic, bone and stone artefacts to be cleaned and processed concurrently with the excavation to allow immediate evaluation and input into decision making.
- 3.6 Metal artefacts must be stored and managed on site in accordance with *UK Institute of Conservators Guidelines* and evaluated for significant dating and cultural implications before despatch to a conservation laboratory within 4 weeks of excavation.
- 3.7 Human remains are to be treated at all stages with care and respect, and are to be dealt with in accordance with the law. "*Guidance for best practice for treatment of human remains excavated from Christian burial grounds in England*" *English Heritage and the Church of England 2005* provides advice and defines a level of practice which should be followed whatever the likely belief of the buried individuals. They must be recorded *in situ* and subsequently lifted, packed and marked to standards compatible with those described in the Institute of Field Archaeologists' *Technical Paper 13: Excavation and post-excavation treatment of Cremated and Inhumed Human Remains*, by McKinley & Roberts. Proposals for the final deposition of remains following study and analysis will be required in the Project Design (It is The Churches Conservation Trust policy that human remains should be re-interred in consecrated ground after being studied and reported on).
- 3.8 Plans of the archaeological features on the site should normally be drawn at 1:20 or 1:50, depending on the complexity of the data to be recorded. Sections should be drawn at 1:10 or 1:20 again depending on the complexity to be recorded. Any variations from this must be agreed with the Conservation Team.
- 3.9 A photographic record of the work is to be made, consisting of both monochrome and colour photographs.
- 3.10 Excavation record keeping is to be consistent with the requirements of Suffolk County Council's Historic Environment Record and compatible with its archive. Methods must be agreed with the Conservation Team of SCCAS.

#### 4. **Brief for Archaeological Monitoring**

- 4.1 To provide a record of archaeological deposits which are not to be archaeologically excavated prior to development but which will be damaged or removed by any development permitted by the current planning consent.
- 4.2 The Design Statement accompanying the application, prepared by Mitchell-Horton (dated 29.1.2010) provides details of works within the church and which involve ground disturbance as follows:
- replacement of ground floor slab
  - new mezzanine floor in the south aisle, supported on a steel frame with

column supports resting on concrete foundations

- 4.3 To carry out the monitoring works, the developer will appoint an archaeologist (the observing archaeologist) who must be approved by the Conservation team of SCCAS.
- 4.4 The developer or his archaeologist will give the Conservation Team of SCCAS 48-hours notice of the commencement of site works.
- 4.5 A contingency allowance must be made to cover archaeological costs incurred in monitoring the development works. The size of the contingency should be estimated by the approved archaeological observer, on the basis of the work specified below and the contractor's timetable and working practices.
- 4.6 The developer shall afford access at all reasonable times to both Conservation Team of SCCAS and an 'observing archaeologist' to allow archaeological observation of building and engineering operations which disturb the ground.
- 4.7 Opportunity must be given to the 'observing archaeologist' to hand excavate any discrete archaeological features, which appear during earth moving operations, retrieve finds and make measured records as necessary.
- 4.8 All archaeological features must be planned at a minimum scale of 1:50 on a plan showing the proposed layout of the development.
- 4.9 All contexts must be numbered and finds recorded by context.
- 4.10 The data recording methods and conventions used must be consistent with, and approved by, the County Historic Environment Record.
- 4.11 **The precise monitoring works required cannot be specified until detailed designs are formulated for these works. It is assumed that a monitoring only will be sufficient but both works could involve significant ground disturbance which would require prior archaeological excavation and a revised specification of archaeological works.**
- 4.12 The results of this monitoring must be recorded in a manner consistent with the main excavated areas and incorporated into the archive record.

## 5. **General Management**

- 5.1 A timetable for all stages of the project must be agreed before the first stage of work commences.
- 5.2 Monitoring of the archaeological work will be undertaken by the Conservation Team of SCCAS. Where projects require more than a total of two man-days on site monitoring and two man-days post-excavation monitoring, a contribution may be requested to assist with the expenses of carrying out the monitoring (currently expected to be in the region of £150 per day, but to be agreed at the time that the project takes place), it would be helpful if provision could be made for this in all costings. [A decision on the monitoring required will be made by the Conservation Team on submission of the accepted Project Design.]

- 5.3 The composition of the project staff must be detailed and agreed (this is to include any subcontractors). For the site director and other staff likely to have a major responsibility for the post-excavation processing of this site there must be a statement of their responsibilities for post-excavation work on other archaeological sites.
- 5.4 A general Health and Safety Policy must be provided, with detailed risk assessment and management strategy for this particular site.
- 5.5 The Project Design must include proposed security measures to protect the site and both excavated and unexcavated finds from vandalism and theft.
- 5.6 Provision for the reinstatement of the ground and filling of dangerous holes must be detailed in the Project Design.
- 5.7 The Institute of Field Archaeologists' *Standard and Guidance for Archaeological Desk-based Assessments* and for *Field Evaluations* should be used for additional guidance in the execution of the project and in drawing up the report.
- 5.8 Provision should be included in the WSI for outreach activities, where appropriate, in the form of open days/guided tours for the general public, local schools, local councillors, local archaeological and historical societies and for local public lectures and/or activities within local schools. Provision should be included for local press releases (newspapers/radio/TV). Where appropriate, information boards should be also provided during the fieldwork stage of investigation. Archaeological Contractors should ascertain whether their clients will seek to impose restrictions on public access to the site and for what reasons and these should be detailed in the WSI.

## 6. **Archive Requirements**

- 6.1 Within four weeks of the end of field-work a timetable for post-excavation work must be produced. Following this a written statement of progress on post – excavation work whether archive, assessment, analysis or final report writing will be required at three monthly intervals.
- 6.2 The project manager must consult the County Historic Environment Record Officer (Dr Colin Pendleton) to obtain a Historic Environment Record number for the work. This number will be unique for the site and must be clearly marked on any documentation relating to the work.
- 6.3 An archive of all records and finds is to be prepared consistent with the principle of English Heritage's *Management of Archaeological Projects*, 1991 (MAP2), particularly Appendix 3. However, the detail of the archive is to be fuller than that implied in MAP2 Appendix 3.2.1. The archive is to be sufficiently detailed to allow comprehension and further interpretation of the site should the project not proceed to detailed analysis and final report preparation. It must be adequate to perform the function of a final archive for lodgement in the County HER or museum.

- 6.4 A clear statement of the form, intended content, and standards of the archive is to be submitted for approval as an essential requirement of the Project Design.
- 6.5 The site archive quoted at MAP2 Appendix 3, must satisfy the standard set by the "Guideline for the preparation of site archives and assessments of all finds other than fired clay vessels" of the Roman Finds Group and the Finds Research Group AD700-1700 (1993).
- 6.6 Pottery should be recorded and archived to a standard comparable with 6.5 above, i.e. *The Study of Later Prehistoric Pottery: General Policies and Guidelines for Analysis and Publication*, Prehistoric Ceramics Research Group Occasional Paper 1 (1991, rev 1997), the *Guidelines for the archiving of Roman Pottery*, Study Group for Roman Pottery (ed. M G Darling 1994) and the *Minimum Standards for the Processing, Recording, Analysis and Publication of Post-Roman Ceramics*, Medieval Pottery Research Group Occasional Paper 2 (2001).
- 6.7 All coins must be identified and listed as a minimum archive requirement.
- 6.8 The data recording methods and conventions used must be consistent with, and approved by, the County Historic Environment Record. All record drawings of excavated evidence are to be presented in drawn up form, with overall site plans. All records must be on an archivally stable and suitable base.
- 6.9 A complete copy of the site record archive must be deposited with the County Historic Environment Record within 12 months of the completion of fieldwork. It will then become publicly accessible.
- 6.10 Finds must be appropriately conserved and stored in accordance with UK Institute Conservators Guidelines.
- 6.11 Every effort must be made to get the agreement of the landowner/developer to the deposition of the finds with the Ipswich and Colchester Museum service, as an indissoluble part of the full site archive. If this is not achievable for all or parts of the finds archive then provision must be made for additional recording (e.g. photography, illustration, analysis) as appropriate. There will be a charge made for storage by Ipswich and Colchester Museum Service.
- 6.12 The WSI should state proposals for the deposition of the digital archive relating to this project with the Archaeology Data Service (ADS), and allowance should be made for costs incurred to ensure proper deposition (<http://ads.ahds.ac.uk/project/policy.html>).
- 6.13 Where positive conclusions are drawn from a project, a summary report in the established format, suitable for inclusion in the annual 'Archaeology in Suffolk' section of the Proceedings of the Suffolk Institute for Archaeology journal, must be prepared and included in the project report, or submitted to the Conservation Team by the end of the calendar year in which the excavation work takes place, whichever is the sooner.
- 6.14 Where appropriate, a digital vector trench plan should be included with the report, which must be compatible with MapInfo GIS software, for integration in the County Historic Environment Record. AutoCAD files should be also

exported and saved into a format that can be imported into MapInfo (for example, as a Drawing Interchange File or .dxf) or already transferred to .TAB files.

## 7. Report Requirements

- 7.1 A report on the fieldwork and archive must be provided consistent with the principle of *MAP2*, particularly Appendix 4. The report must be integrated with the archive.
- 7.2 The objective account of the archaeological evidence must be clearly distinguished from its archaeological interpretation.
- 7.3 An important element of the report will be a description of the methodology.
- 7.4 Reports on specific areas of specialist study must include sufficient detail to permit assessment of potential for analysis, including tabulation of data by context, and must include non-technical summaries.
- 7.5 Provision should be made to assess the potential of scientific dating techniques for establishing the date range of significant artefact or ecofact assemblages, features or structures.
- 7.6 The report will give an opinion as to the potential and necessity for further analysis of the excavation data beyond the archive stage, and the suggested requirement for publication; it will refer to the Regional Research Framework Further analysis will not be embarked upon until the primary fieldwork results are assessed and the need for further work is established. Analysis and publication can be neither developed in detail nor costed in detail until this brief and specification is satisfied. However, the developer should be aware that there may be a responsibility to provide a publication of the results of the programme of work.
- 7.7 The assessment report must be presented within six months of the completion of fieldwork unless other arrangements are negotiated with the project sponsor and the Conservation Team of SCCAS
- 7.8 A draft hard copy of the assessment report (clearly marked Draft) must be presented to SCCAS/CT for comment within six months of the completion of fieldwork unless other arrangements are negotiated with the project sponsor and SCCAS/CT.
- 7.9 The involvement of SCCAS/CT should be acknowledged in any report or publication generated by this project.
- 7.10 At the start of work (immediately before fieldwork commences) an OASIS online record <http://ads.ahds.ac.uk/project/oasis/> must be initiated and key fields completed on Details, Location and Creators forms.
- 7.11 All parts of the OASIS online form must be completed for submission to the HER. This should include an uploaded .pdf version of the entire report (a paper copy should also be included with the archive).



Specification by: Keith Wade

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Tel: 01284 741227

Date: 21<sup>st</sup> April 2011

Reference:/St Mary Quay (revised)

**This brief and specification remains valid for 12 months from the above date. If work is not carried out in full within that time this document will lapse; the authority should be notified and a revised brief and specification may be issued.**

**If the work defined by this brief forms a part of a programme of archaeological work required by a Planning Condition, the results must be considered by the Conservation Team of the Archaeological Service of Suffolk County Council, who have the responsibility for advising the appropriate Planning Authority.**