

**ARCHAEOLOGICAL
EVALUATION ON LAND AT
GREYFRIARS,
KING'S LYNN
NORFOLK
(5477 KLY)**

Work Undertaken For
King's Lynn and West Norfolk Borough Council

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Report Compiled by
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ARCHAEOLOGICAL PROJECT SERVICES



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CONTENTS

List of Figures

List of Plates

1. SUMMARY..... 1

2. INTRODUCTION 1

2.1 DEFINITION OF AN EVALUATION..... 1

2.2 PLANNING BACKGROUND..... 1

2.3 TOPOGRAPHY AND GEOLOGY 1

2.4 ARCHAEOLOGICAL AND HISTORICAL SETTING 2

3. AIMS 4

4. METHODS 4

5. RESULTS..... 5

6. DISCUSSION 14

7. CONCLUSIONS..... 18

8. ACKNOWLEDGEMENTS..... 18

9. PERSONNEL 19

10. BIBLIOGRAPHY 19

11. ABBREVIATIONS 20

Appendices

1 Specification for archaeological investigations

2 Context descriptions

3 The Medieval and Early Post-Medieval Pottery *by Paul Blinkhorn*

4 The Post-Medieval Pottery *by Hilary Healey and Gary Taylor*

5 The Clay Pipe *by Gary Taylor*

6 The Ceramic Building Materials *by Gary Taylor*

7 Architectural Fragments *by Paul Cope-Faulkner*

8 The Medieval Window Glass and Other Glass Catalogue *by Rachael Hall*

9 The Metal Finds *by Gary Taylor*

10 The Other Finds *by Gary Taylor*

11 Catalogue of the Animal Bone *by James Rackham*

12 The Mollusc Shell *by Gary Taylor*

13 Plant Macrofossils and Other Remains: An Assessment *by Val Fryer*

14	Glossary
15	The Archive

List of Figures

- Figure 1 General location plan
- Figure 2 Site location plan
- Figure 3 A mid 18th century view of the tower, viewed from the north
- Figure 4 Thomas Hearne's view of Greyfriars tower, late 18th century
- Figure 5 Robert Dixon's sketch of Greyfriars' tower, 1801
- Figure 6 Edward Edwards view of the gatehouse, dating prior to 1806
- Figure 7 Trench location plan with summary of the geophysical survey results
- Figure 8 List of conventions used for sections
- Figure 9 Trench 1: Plan
- Figure 10 Trench 1: Sections
- Figure 11 Trench 2: Plan
- Figure 12 Trench 2: Sections
- Figure 13 Trench 3: Plan
- Figure 14 Trench 3: Sections
- Figure 15 Trench 4: Plan and Section
- Figure 16 Trench 5: Plan
- Figure 17 Trench 5: Section
- Figure 18 Trench 6: Plan
- Figure 19 Trench 6: Sections
- Figure 20 Trench 7: Plan
- Figure 21 Trench 7: Sections
- Figure 22 Trench 8: Plan

- Figure 23 Trench 8: Sections
- Figure 24 Trench 9: Plan
- Figure 25 Trench 9: Sections
- Figure 26 Trenches 10 and 11: Plan
- Figure 27 Trenches 10 and 11: Sections
- Figure 28 Trench 11: Plan and Section
- Figure 29 Plan showing the main features and conjectured layout
- Figure 30 Walsingham friary
- Figure 31 Decorated floor tile
- Figure 32 Architectural fragments
- Figure 33 Architectural fragments
- Figure 34 The window glass and other glass items

List of Plates

- Plate 1 General view of Greyfriars tower
- Plate 2 View of Trench 1 during excavation
- Plate 3 Trench 1 post-excavation, showing the Gault Clay 'pads'
- Plate 4 Trench 1, Section 9
- Plate 5 Trench 2 after cleaning
- Plate 6 Trench 2 elevation of wall (508)
- Plate 7 Trench 2, Section 10 showing the limestone plinths
- Plate 8 View from the top of the tower showing Trenches 2 and 3
- Plate 9 Trench 3 after cleaning
- Plate 10 Trench 3 showing the limestone plinths (562) in the presbytery wall (513)

- Plate 11 Trench 3 showing the brick lining (514), probably representing the base of the choir stalls, and the presbytery wall (513)
- Plate 12 Trench 3, Section 2
- Plate 13 Trench 4 showing the east end wall (652) of the presbytery
- Plate 14 Trench 4, elevation of wall (652)
- Plate 15 Trench 5 after cleaning
- Plate 16 Trench 5, base and column restored
- Plate 17 Trench 6 after cleaning
- Plate 18 Trench 6, Section 18, showing the brick base (635) for the stalls on the south side of the presbytery
- Plate 19 Trench 6, detail showing floor level (637)
- Plate 20 Trench 7, detail of possible 'corridor' room east of the Chapter House
- Plate 21 Trench 8 after cleaning
- Plate 22 Trench 8, Section 22
- Plate 23 Trench 9 during excavation
- Plate 24 Trench 9, detail of Chapter House doorway (679) and brick bench (678)
- Plate 25 Trench 9, tile impressions on mortar surface (682)
- Plate 26 Trench 10 after cleaning
- Plate 27 Trench 10, the cloister walk showing tile impressions in mortar surface
- Plate 28 Trench 10, Wall (621)
- Plate 29 Trench 12 after cleaning
- Plate 30 Trench 12, Section 27
- Plate 31 Vaulting ribs from (505) showing the curvature of the voussoirs
- Plate 32 Incised cross on bedding joint of voussoir rib

1. SUMMARY

An archaeological evaluation was undertaken to assess the surviving remains of the former Franciscan friary, known as Greyfriars, King's Lynn, Norfolk. The archaeological work was commissioned by King's Lynn and West Norfolk Borough Council to support a Heritage Lottery bid for conservation of the tower and interpretation of the site.

Based on scant documentary references, the Franciscan friary was probably founded in King's Lynn within the twenty years following the arrival of the first Franciscan friars in 1224. However, it is not until 1264 that the friary is recorded as being founded by Thomas Feltham, possibly indicating the time when the site passed into possession of the friary.

Following the surrender of the friary in 1538, elements of the buildings were gradually robbed of its building stone apart from the Greyfriars tower which was retained as a seamark.

The evaluation of the site has assisted in the determination of the layout of the friary which, unlike many friaries in urban settings, seems to have had no hindrance from lack of space. Elements investigated included the north and east cloister alleys, the chapter house, a storeroom as well as the nave, north aisle and presbytery of the church. The structural remains identified during the evaluation are generally of a single phase dating to the mid 13th century.

A variety of finds were retrieved from the investigation. Medieval artefacts comprise a small quantity of pottery as well as worked stone, tile, brick and painted window glass. Few medieval deposits were disturbed by the evaluation so many of the finds date to the demolition of the friary and after and include post-medieval pottery and clay pipe. Other finds include

animal bone and a range of metal artefacts.

2. INTRODUCTION

2.1 Definition of an Evaluation

An archaeological evaluation is defined as, 'a limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site. If such archaeological remains are present Field Evaluation defines their character and extent, quality and preservation, and it enables an assessment of their worth in a local, regional, national or international context as appropriate' (IFA 1999).

2.2 Background to the Project

Archaeological Project Services was commissioned by King's Lynn and West Norfolk Borough Council to undertake an archaeological evaluation of Greyfriars, King's Lynn, Norfolk. The evaluation was undertaken in order to identify the layout and interpretation of the friary remains in order to assist with the application for a Heritage Lottery Grant for the restoration of the extant Greyfriars Tower.

Evaluation of the site commenced on the 19th May 2003 and continued until the 6th June. The evaluation was undertaken in accordance with a specification prepared by Archaeological Project Services (Appendix 1) and approved by the Development Control Archaeologist, Norfolk Landscape Archaeology.

2.3 Topography and Geology

King's Lynn is located 36km west of East Dereham and 17km north of Downham

Market alongside the River Great Ouse in West Norfolk (Fig. 1).

Greyfriars is located 240m east of King's Lynn town centre, as defined by St. Margaret's church. It is situated within a block of land currently used as a public garden, bounded by St. James' Street, Tower Street and London Road and centred on National Grid Reference TF 6201 1978 (Fig. 2). The land investigated comprises an area of 154 square metres. Local topography describes the setting of the site as on generally level ground

King's Lynn sits on marine and freshwater silts which overlay the Kimmeridge Clay of the Fen basin (GSGB 1978). These silts were in place by the 11th century when the earliest settlement of the town began. As the site lies within an urban area, local soils have not been mapped.

2.4 Archaeological and Historical Setting

Historical background

The Franciscans arrived in Britain in September 1224 and in the following six years are said to have founded sixteen houses (Little 1917, 5). King's Lynn is listed by Thomas de Ecclestone, reputedly writing in c. 1250-58, as one of these initial foundations along with Bristol, Cambridge, Canterbury, Gloucester, Hereford, Leicester, Lincoln, London, Northampton, Norwich, Nottingham, Oxford, Salisbury, Stamford and Worcester (*ibid.*). By 1264, John Stanford, the 8th Provincial Minister of the English Franciscans is recorded as '*having died in the convent of his order at Lynne where he was buried with his brethren*' (Dugdale 1830, 1522), thus establishing that a community with its burial ground was already in King's Lynn.

The house is recorded as being founded prior to 1264 by Thomas Feltham or de

Folsham (Page 1906a, 427; Richards 1812, 499) although one reference puts it as late as 1268 (Blomefield 1808, 326). This may indicate that prior to this date the friars held land by trustees or were operating from temporary accommodation in the town. At first, the Friars never owned property as part of their vows of poverty and often the town would hold their property as trustees (Little 1917, 6). However, the actuality is unclear as King's Lynn Franciscan friary has scant documentary references (Martin 1937, 101).

As friaries were often introduced late into towns, their houses were usually relegated to poor damp sites, sometimes outside the town walls (Greene 1992, 168). However, this view has been challenged (*ibid.*) and the siting of Greyfriars, albeit in a 'damp' location next to the Millfleet, is in fact an ideal setting for efficient water supply and drainage.

In 1287, the lands of the friary were enlarged, firstly by a grant of a Bernard le Estreet of land along St. James's Street (originally Fullers Row), followed later in the same year by a grant of Adam de St. Omer (Richards 1812, 499). Further land grants to the friary are recorded in 1295 and in 1340, when a tenement with buildings was given (Pitcher 2002). By 1314, the Franciscans may have absorbed the Friars of the Sack to whom they had been linked, including their property (Richards 1997, 89).

Greyfriars lay within the Franciscan province called the custody of Cambridge and was one of eight houses, including Cambridge, Norwich, Bury St. Edmunds, Yarmouth, Ipswich, Colchester and Dunwich (Little 1917, 236). Walsingham was added later to the province after it was founded in 1347 (*ibid.*).

As mentioned above, efficient water supply was essential for the friars and it is no surprise that grants and licenses survive for a spring at Hardwick in 1301 and later for a conduit from the same to the friary in 1318 (Pitcher 2002).

The gardens within their precincts were important resources and provided the friars with fruit, vegetables and honey, as at Gloucester and Shrewsbury (Little 1917, 18). It is not known if King's Lynn followed *en suite*, although there is mention of a small quay and a tidal mill for grinding corn, located within the precincts, next to the Millfleet (Wallace 1998, 1).

The Franciscan friary was surrendered in 1538, the surrender document being signed by Edmund Brygat and nine others (Page 1906, 427). The site, which included gardens and orchards, was then held in tenure by Humfrey Carvell in the following year before subsequently being sold to John Eyre in 1545 (Martin 1937, 103). The site then passed to a priest and then into the hands of the Corporation.

The site became a source of building stone during the later 16th and early 17th century, some of which went towards building a new prison (Pitcher 2002). The steeple was retained as it was '*found a good seamark*' and repaired at the cost of the town (*ibid.*). Although buildings are recorded at the friary throughout the 17th century it is not known which buildings within the precinct were retained.

The Friary in Prints

As a notable landmark, Greyfriars Tower has been the subject of a number of prints and paintings. Most of these are romanticized and provide no clear information as to the layout of the friary. However, a few appear to be accurate renditions or contain useful information and are discussed briefly below.

The earliest depiction dates from the early 18th century and is a view looking south towards the tower (Fig. 3). Of interest is the northern boundary wall to the friary complex which is abutted on its northern side by a stone building which juts out into the thoroughfare. Part way along the wall an infilled opening can be discerned. Apart from the tower, no other buildings of the friary can be made out and the area is planted with trees.

A watercolour by Thomas Hearne (1744-1817) appears to be an accurate representation of the tower, looking west towards St. Margaret's church, with perhaps part of the north presbytery wall (the equivalent of a chancel in a parish church) and the inner cloister wall of the eastern side (Fig. 4). This latter wall shows the infilled doorway of the chapter house and a second infilled arched opening between the chapter house and church. Of some relevance is a brick chimney on the southern side of the tower, with apparent Tudor diaper work, and the infilled presbytery arch with three storeys of mullioned windows.

A sketch by R. Dixon of the tower looking from Tower Street and dating to 1801 is informative as it shows a number of cottages built up against the tower on its northern and western sides (Fig. 5). The houses are unusual in that they appear to be roofed in thatch, a building material that would have been banned in an urban centre.

The final print pictured is a view of the gatehouse by Edward Edwards, that, although undated, must be prior to its demolition in advance of street works in 1806 (Fig. 6). This shows a simple stone building with a four centred arch within which is a statue niche or stoup. Beyond this is a second, smaller, four centred arch. The gateway has a parapet upon which is a

pyramid roof. The precinct wall is of stone with coping.

Trench 1 Investigate the nave and its north aisle along with column bases

Previous Archaeological Work

When the Tower Gardens were landscaped in 1911 a portion of the presbytery wall was exposed. This was preserved beneath steps, located to the south of Trench 4.

Trench 2 To examine the exterior, the entire width of the nave's north aisle and its relationship to the north tower,

Four trenches were excavated around the base of the tower during the investigation of structural problems. These identified that the tower was constructed on natural sands with most medieval layers removed in this vicinity following the addition of buttresses (Wallace 1998, 12).

Trench 3 Examine two buttresses of the presbytery north wall and the sequence of presbytery floors,

Trench 4 Establish the nature of the presbytery northeast corner,

Prior to the current investigation a geophysical survey was undertaken. The survey was hampered by the layout of the gardens although several structural anomalies were identified (White and Mercer 2002). The interpretation of the geophysical survey has been summarised in Figure 7.

Trench 5 Investigate the anomaly discovered during the geophysical survey to the south of the church and east of the presumed chapter house,

Trench 6 Examine the south presbytery wall and the area directly to the south of the presbytery and north of the possible chapter house

3. AIMS

The aim of the evaluation was to gather information to assist in the identification and interpretation of the friary plan and its phasing. This will also assist in the formulation of a policy for the future management of the archaeological resource at the site as well as supporting a Heritage Lottery Fund application for the regeneration of Greyfriars tower and the Tower garden.

Trench 7 Investigate the east-west wall of the potential chapter house and the interior and exterior anomalies discovered through geophysical survey,

Trench 8 Investigate the anomaly within the cloistral building south of the presumed chapter house,

4. METHODS

Excavation

Ten trenches were opened by machine in key positions (Fig. 7) to enable interpretation of the site. The questions to be addressed by the trench layout were as follows;

Trench 9 Examine the presumed chapter house entrance, the cloister walk sequence and the chapter house sequence

Trench 10 Investigate the relationship between the nave, the cloister walk and the inner cloister with particular attention given to the anomaly identified in the cloister garth.

All trenches were regularly scanned by metal detector throughout the excavation and artefacts recovered were recorded by context number. Spoil generated by the excavation was also scanned intermittently by metal detector.

Not all the questions could be addressed following the excavation of the trenches and additional trenching was asked for. These comprised small extensions to existing trenches 2, 3, 5, 9 and 10 and excavation of a further two trenches the aims of which were;

Trench 11 To investigate the northeast corner return of the cloister

Post-excavation

Following excavation, all records were checked and ordered to ensure that they constituted a complete Level II archive and a stratigraphic matrix of all identified deposits was produced. Artefacts recovered from excavated deposits were examined and a period date assigned where possible (Appendices 3 to 10). Phasing was based on artefact dating and the nature of the deposits and recognisable relationships between them.

Trench 12 To investigate the extent of the north cloister wall to the west

5. RESULTS

The positions for each of the trenches was surveyed by EDM on to the site using a grid established by East Anglian Land Surveys Ltd.

Following post-excavation analysis the following phases were identified.

Each deposit exposed during the evaluation was allocated a unique reference number (context number) with an individual written description. A list of all contexts and interpretations appears as Appendix 2. A photographic record was compiled using colour slide, monochrome and digital formats. Sections were drawn at a scale of 1:10 and plans at a scale of 1:20. Recording of deposits encountered was undertaken according to standard Archaeological Project Services' practice.

- Phase I Pre-Friary deposits
- Phase II Friary deposits
- Phase III Post-medieval deposits
- Phase IV Recent deposits

No attempt has been made to sub-phase the friary deposits at this stage though this will be addressed in the discussion.

Environmental sampling was taken at the discretion of the site supervisor using guidelines established by Murphy and Wiltshire (1994). The methodology for the subsequent processing of the samples is outlined in the environmental report (Appendix 13).

Archaeological contexts are listed and described below. The numbers in brackets are the context numbers assigned in the field.

Phase I Pre-Friary deposits

Trench 1

No pre-friary deposits were exposed in this trench.

Trench 2

No pre-friary deposits were exposed in this trench.

Trench 3

Located within the southeast corner of this trench (Fig. 14, Section 29) was a layer of firm reddish brown clayey silt (699) which exceeded 0.2m in thickness and contained 13th century pottery as well as tile. This layer was identified as a dumped deposit.

Trench 4

No pre-friary deposits were exposed in this trench.

Trench 5

No pre-friary deposits were exposed in this trench.

Trench 6

The earliest deposit encountered at the base of this trench was a layer of mid grey silty sand (638). This was over 0.2m thick (Fig. 19, Section 18) and contained 12th-13th century pottery. Environmental samples indicate that this deposit contained hearth waste and was probably dumped at the site (Appendix 13).

Trench 7

Encountered at the eastern end of Trench 7 was a small exposed area (Fig. 20) of mid greyish brown sandy silt (620). This deposit was not excavated further and no artefacts were retrieved.

Trench 8

No pre-friary deposits were exposed in this trench.

Trench 9

No pre-friary deposits were exposed in this trench.

Trenches 10 and 11

The earliest deposit identified in Trench 10 was a dumped layer of grey clayey silt (702) evident along the base (Fig. 27, Section 13). However, it is possible that it was exposed throughout the period of the friary's existence, forming the soil within the cloister garth.

Trench 12

No pre-friary deposits were exposed in this trench.

Phase II Friary deposits

Trench 1

The initial sequence of deposits encountered within this trench incorporated various consolidation layers for the subsequent building of the church (Figs. 9 and 10). These deposits ranged from light brown sandy silt with gravel (600) at the western end of the trench through brown silty sand (549 and 586), brown sand with gravel (582 and 583), mixed yellow, grey and brown sand (581), grey sandy silt (594), yellow sand (595), yellowish brown sandy clay (596) and mixed brown sand, clay and silt with gravel (597). Pottery of 12th century date was recovered from these layers along with whitewashed plaster.

Upon these consolidation layers were placed two discrete areas of greenish yellow clay (548 and 584), possibly derived from the Gault clay (Plate 3). Both these clay deposits were interpreted as foundation pads for pillar bases of the nave/north aisle, although (548) lies north of the line of the north aisle and nave junction. The clay deposit (584) contained 13th century pottery.

Above the consolidation layer (600) along the northern edge of the trench was a small area of off-white mortar (547) representing a floor surface. This lay at a height of 4.45m OD.

Trench 2

The earliest feature identified within this trench was a north-south aligned length of Carstone and mortar wall (508). This was aligned on a wall forming part of the tower and was traced for a length of 4.9m and extended northwards, at least to the boundary of the Tower Gardens (Fig. 11).

A width of 1.36m was established which narrowed to 1.05m above a limestone plinth and an interior step which survived in section (Fig. 12, Section 8; Plate 7). The wall was visible to for five course to a height of 5.25m OD, although was very poorly preserved above a height of 4.87m OD. The position of the trench precluded examination of the interior of the church at this vicinity.

Trench 3

Evident throughout the length of the trench was a random coursed Carstone wall (513), representing the north wall of the presbytery (Fig. 13; Plate 9). The wall was visible for a length of 7.16m and was 1.32m wide (stepping in to a width of 1.04m) and over 0.62m high, at 5.15m OD. Part of a poorly finished limestone string course survived on the north edge of the wall (562) adjacent to which was a brick and Carstone re-facing (563) of 1.88m length. There was no evidence of external buttresses.

North of and deposited against the presbytery wall was a layer of brown sandy silt with mortar fragments (530) from which residual 12th century pottery was recovered. This may represent the former topsoil about the church (Fig. 14, Section 7), although this lies 0.3m below the string course of the presbytery wall.

Inside the presbytery, no floor levels survived above the consolidation layer (699). Instead, a length of brick walling was recorded (514 and 515), running parallel to and against the presbytery wall (a similar arrangement was recorded in Trench 6; see below). The position of these bricks suggests they were perhaps used as the foundation for stalls. The stepped foundation of the main presbytery wall was at a height of 4.96m OD (Fig. 14, Sections 2 and 3).

Trench 4

Within this trench was a Carstone structure (652) that was over 1.76m long by 1.04m wide and over 0.38m high (Fig. 15; Plate 13). This wall was aligned north-south with a slight curving turn to the west. Identified as the east end wall of the presbytery, the apparent curve is a result of the removal of corner stones at this point. The previously identified section of presbytery wall lies immediately south of this trench.

Trench 5

The earliest deposit encountered within this trench was a layer of indurated yellowish white mortar (665), over 0.25m thick and becoming finer grained and 'polished' to form a surface. Set within this was a circular stone column base (666) upon which a pillar was placed. This pillar had been dislodged during the machine excavation of the trench although its position was clearly impressed into the section after the trench was cleaned (Plate 16 shows this restored).

Limiting the mortar surface to the east was a very compact brown clay and Carstone band (700). Although no facing stones remained, this was interpreted as the rubble and clay infill of a former wall (Fig. 17).

The mortar surface eventually eroded and layers of mortar fragments with brick or tile (664) and brown silty sand (663) were then deposited to level the area before a new mortar floor (662) was laid. This upper surface masked the moulding of the column base. Levelling deposit (664) contained two sherds of 13th century Grimston ware and part of a structural clamp for a window.

Trench 6

Although a foundation cut was not observed in the pre-friary dumped deposit (638), one must have existed for the

construction of an east-west aligned Carstone and mortar structure (639) indicating the position of the south presbytery wall. This had been extensively robbed to a height of 4.11m OD.

Located above deposit (638), within the presbytery, was a compacted grey silty sand (637) measuring 60mm thick. This may represent a make up layer for a floor surface (Fig. 19, Section 18). A single sherd of 12th century pottery was retrieved from this deposit.

Above this compacted sand a brick wall (635) had been constructed against the presbytery wall in the same manner as previously seen in Trench 3 (see above). This was visible throughout the width of the trench and survived to a height of 0.53m (4.76m OD).

Situated to the south of the presbytery wall was a deposit comprising grey sand with Carstone fragments up to 140mm in size (640). Considering its position quite low in the sequence this deposit may have derived from actual construction of the church.

Trench 7

The initial structural evidence of Phase II within this trench was the construction of a north-south aligned Carstone wall (605). This was over 2.3m long, 0.65m wide and over 0.66m high, surviving to 5.1m OD (Fig. 20). Its position (coupled with the results from Trench 9; see below) indicate that it formed the eastern wall of the Chapter house.

Surviving on both faces of this wall were thin skims of plaster retaining white paint, indicating both sides of the wall were internal. On the Chapter house side, this plaster (643) was largely concealed behind a brick structure (641). This brick wall was parallel to the stone wall and was in places bonded to it. This brick structure was

0.47m wide and 0.65m high and was identified as a bench.

Butting against the brick bench were three *in situ* floor tiles (609) indicating the floor surface of the Chapter house. Two of the tiles retained a dark green glaze, although the central tile appeared not to be glazed. This floor level was at a height of 4.47m OD.

Above the Phase I dumped deposit (620), east of wall (605) was a layer of greyish brown sand (619). This provided levelling for a brownish white sandy mortar (618) which bonded with the plaster facing (642) to wall (605). Upon the mortar (618) were two *in situ* glazed floor tiles (617) at a height of 4.52m OD.

Trench 8

Located within the east facing section was a Carstone and brick structure (658). This wall was over 2m long, wider than 0.11m and was evident to a height of 0.6m (Fig. 23, Section 22). The position of this wall would indicate that it is part of the east cloister range.

Abutting this wall was a brick structure (661) with a visible extent of 1.2m by 1.15m and a recorded height of 0.48m (Plate 21). This is perhaps a buttress associated with wall (658).

Prior to backfilling this trench, a small machine cut sondage was excavated to expose the southern wall (701) of the Chapter house (Fig. 22). Only the uppermost stones were revealed.

Trench 9

Forming one side of a post-medieval drain (see below) was a foundation course (680) of random coursed Carstone at least 0.38m high. Upon this was built a Carstone wall which incorporated a limestone doorway (679) representing the entrance to the Chapter house (the northern jamb of this

doorway was exposed in 1937). The doorway comprised a checked double chamfer moulding and on the east facing side a recess for a bench end (Fig. 24; Plate 24). The doorway was 1.5m wide and survived to a height of 0.4m. Either side of the doorway the Carstone wall was random coursed (Fig. 25, Section 25).

To the west of this wall, a possible floor surface consisting of pinkish brown silty clay with mortar (660) which was heavily truncated was identified.

To the east of the wall and doorway, within the Chapter house, was an area of brownish yellow sandy mortar (682) that retained the square impressions of floor tiles (Plate 25). A short length of brick, tile and mortar wall (678) was built upon this floor and against the Chapter house wall. This masked the bench end recess and indicates the replacement of the wooden bench by a more permanent seating arrangement.

Trenches 10 and 11

Built into the dumped deposit (702) was an east-west aligned Carstone, brick and tile wall (621) identified as the wall between the north cloister alley and cloister garth (Fig. 26). This was 0.7m wide and 0.7m high and continued westwards where it was identified in Trench 12 (698). Bonding to this wall on its northern face were roof tiles set vertically (694) and plastered over.

Located 2.5m north of, and parallel to, the cloister wall were remnants of a Carstone wall (531). This wall was 1.6m wide and over 0.15m high and identified as the south nave wall.

Between the cloister and nave walls was a sequence of levelling deposits (Fig. 27, Section 14) beginning with yellow sand (626), then greyish brown clayey silt (625), yellow sand (624), then greyish

brown clayey silt (623) and finally brown sand (622). Upon this final deposit was a bedding layer of white mortar (524) which retained tile impressions.

Trench 12

Exposed within this trench were two Carstone walls. The larger (688) was aligned east-west and was over 1.3m long by 0.51m wide and 0.2m high (Fig. 28). Bonded to this wall was a short length of north-south wall (692). Together these walls represent the north east corner of the cloister.

Phase III Post-medieval deposits

Trench 1

Cut into the consolidation layer (600) was an oval feature (601) identified as the base of a pit. This was 1.26m long by 0.6m wide and 60mm deep and contained a single fill of grey sandy silt (602). This pit was probably excavated from a higher level and was probably responsible for the truncation of the mortar surface (547) and the disarticulation of a human burial. The human bones were not lifted but included a femur, two tibias, a fibula, a humerus and a number of ribs.

Cut into the clay deposit (584) was a sub-circular posthole (598) measuring 0.32m by 0.28m and 0.24m deep (Fig. 10, Section 15). This was filled with grey silty clay (599).

The remaining deposits within this trench and of this phase appear to be general soil build up layers (Fig. 10, Sections 1 and 9). None are recorded as containing significant demolition material suggesting the main body of the church had been thoroughly cleared.

This range of deposits comprise greyish brown silty sand (546), grey silty sand with gravel (576), brown silty sand (577 and 578), yellowish brown silty sand with

gravel (579 and 580), brown silty sand with gravel (585), grey sandy silt (594) and yellowish brown sandy clay (596). The combined thickness of these deposits was c. 0.5m above the medieval layers.

Trench 2

Against the medieval wall (508) was a series of soil build-up deposits (Fig. 12, Sections 8 and 10). The earliest of these comprised greenish grey silty clay (507) from which a single sherd of 17th century pottery was recovered. This was subsequently overlain by greyish brown clayey sand (506) measuring 0.25m thick. Pottery from this deposit includes examples of 17th to 18th century types and possibly suggests the wall was visible at this time.

Towards the north of the trench was a layer of brownish grey silty sand (521) that was deeper than 0.4m. Also identified as general soil build up, this layer produced 18th century and medieval pottery as well as a significant proportion of the medieval window glass (10 fragments out of a total of 38).

Lying above these soil build up layers were recognisable demolition deposits of yellow mortar (567 and 592) and perhaps grey silty sand (591). These had subsequently been cut by a rectangular feature (565) that was 1.7m long by 1.4m wide and 0.34m deep. Within this cut was a rectangular brick structure (522) of a 19th century manhole (Fig. 11). Within the manhole was a deposit of grey silty sand (564), presumably backfilling the manhole after it had gone out of use.

Above the manhole was the remnant of a north-south aligned brick wall (593) that was identified for a length of 1.26m.

To the south of this brick wall was a sequence of dumped deposits comprising

brownish grey silty sand (572), grey silty sand (590) and greyish yellow sand (571).

Further soil build up was identified to the west of the medieval wall (508) where a deposit of yellowish brown silty sand (566) was identified.

Trench 3

Within the presbytery, overlying the brick wall (514) in the centre of the trench were two demolition deposits. The lowest was yellowish brown silty sand with Carstone and mortar fragments (512) which was overlain by greenish brown silty sand with mortar fragments (511). The latter of these demolition deposits contained 17th century pottery (as well as 13th century Grimston wares) and a green glazed medieval floor tile.

At the eastern end of the trench, the demolition sequence comprised brown clayey silt (554) which was overlain by brown sandy silt with Carstone, brick, tile and mortar (553). Above this was greyish brown silty sand (552).

Sealing both sequences of demolition deposits within the presbytery was greyish brown silty sand (510) that was 0.2m thick. This contained 17th century pottery and clay pipe.

Developed above the demolition deposits was a number of general soil layers. Immediately above the former topsoil (530), north of the presbytery wall, was a layer of greyish brown sandy silt (529) containing 17th century pottery and clay pipe and medieval roofing tile.

At the eastern end of the trench, a soil build up layer comprising a 0.33m thick mixed greyish brown and brownish yellow sandy silt with mortar (559). This was the first of the sequence of deposits that overlay the medieval wall (513).

Overlying deposits (559) and (529) was a brownish grey sandy silt with mortar (528) layer, containing 18th century pottery, that extended the length of the trench and was confined largely to the northern side of the presbytery wall. These were overlain by layers of brown silty sand with gravel (560) and greyish brown silty sand with gravel (587).

A final demolition phase is indicated by layers of yellowish brown mortar fragments with oyster shell (558) and mixed yellowish brown and greyish brown brick rubble and mortar (557). These could relate to the final demolition of the presbytery wall or the demolition of post-medieval buildings at the site.

Trench 4

At the base of this trench and built up against the presbytery wall (652) was a dumped deposit of greyish brown sandy silt with gravel (651). This deposit was clearly disturbed by recent gardening activities at the site as evidenced by fresh roots and leaves within the deposit. Pottery retrieved from this layer comprised 17th and 18th century examples.

Within the interior of the presbytery and obscuring part of the stepped foundation in (652) was a layer of dark grey silty sand, also a soil build up layer.

Trench 5

Above the mortar surface was a 0.46m thick demolition deposit (613). This comprised brownish yellow mortar fragments with bricks and contained fragments of medieval painted window glass, worked stone, mainly vaulting ribs and pottery of 17th century date (Fig. 17). Much of the unstratified materials (505) are likely to be derived from this layer and include an assemblage of clay pipes that date to between 1620 and 1670 with a minimum chronological overlap of 1640-1650.

Trench 6

Contained by the brick wall (635) inside the presbytery was a layer of greyish brown sandy silt with Carstone fragments (636) and medieval tile and brick which indicate an initial phase of demolition (Fig. 19, Section 18). This contained a medieval copper alloy bell. This demolition was further enhanced by robbing of the stone presbytery wall as indicated by a 1.6m wide trench (634) running along its course. Two deposits backfilled the trench, a lower of greyish yellow sand and gravel (633) and an upper of brownish yellow sand and gravel (632). Residual medieval pottery was recovered from these deposits as well as two 17th century types.

Sealing the robber trench was a dumped deposit of yellowish brown sand with gravel (536) that was 0.3m thick (Fig. 19). Pottery and clay pipe retrieved from this layer is of 17th century date.

Developed upon the dumped deposit was a former topsoil of reddish brown silty sand (538-40) measuring 0.54m thick. Further artefacts of 17th century date were also retrieved.

Cut into the former topsoil was a feature (630), probably a pit, recorded in section only (Fig. 19, Section 16). This was over 0.98m long and 0.36m deep and contained a single fill of reddish brown silty sand (535) from which 18th century pottery was recovered.

Overlying the former topsoil and sealing the pit (630) was another former topsoil (534). This comprised reddish brown silty sand and contained 18th century pottery and an assemblage of clay pipes closely dated to between 1700 and 1740.

Trench 7

Inside the Chapter house was a demolition deposit comprising brown sandy silt with mortar fragments (607) which appeared to

impact into the underlying medieval layers, particularly the glazed floor tiles. This exceeded 0.2m in thickness. Above this was a further demolition layer of brown sandy silt with Carstone and mortar (645).

This demolition layer had then been cut by a large linear feature (648). This was longer than 1.7m, wider than 1.6m and deeper than 0.9m (Fig. 21, Sections 19 and 20) and contained a single fill of loose yellowish brown mortar fragments (606).

Demolition layers were also identified in the room immediately east of the wall (605). Above the floor surface was a brown silty sand layer with mortar fragments (608) which lay beneath a 0.5m thick deposit composed entirely of yellowish brown mortar (606).

The demolition deposits on both sides of the wall reached the same level and may indicate that this part of the friary had been truncated (Fig. 21, Section 19).

Trench 8

Overlying the medieval walls (658) and (661) was a demolition deposit of brown mortar fragments containing brick and tile (657). This was in excess of 0.35m thick, extending below the 1.2m limit of the trench (Fig. 23, Section 23). A single sherd of 17th century earthenware was retrieved from this layer with a single fragment of painted window glass of 14th century date.

Trench 9

The sequence of deposits vary either side of the wall to the Chapter house. This wall was altered by the blocking of the doorway by brick (654) and roof tile (655) structures. The tile was reused medieval examples.

Above the mortar floor bedding within the Chapter house was a series of demolition deposits (Fig. 25, Section 26). The initial

layer was of yellowish brown sandy silt with Carstone fragments (519) and also contained medieval roof tile. Above this was loose Carstone and mortar fragments (681) that was 0.36m thick. Sealing this was a layer of reddish brown silty sand (518) from which 17th century pottery and clay pipe was retrieved.

West of the Chapter house doorway was a demolition deposit of reddish brown silty sand with brick/tile and mortar (659 and 675) measuring 0.17m thick. Cutting through this demolition layer was a brick built drain and soakaway (677). The soakaway was 0.7m long by 0.6m wide and the drain, extending north towards the tower, was over 2.3m long.

Sealing the drain and soakaway was a make-up deposit of reddish brown silty sand and gravel (523) which contained early 19th century pottery as well as medieval pottery and tile. This was overlain by a dumped layer of grey ash (673) then reddish brown silty sand (672) before being sealed by a layer of crushed cockle shells (671) perhaps representing a former path.

Trenches 10 and 11

Cut into the mortar surface was a number of features. Adjacent to the position of the south nave wall was a linear feature (551) which was over 0.9m long by 0.42m wide and 0.2m deep (Fig. 27, Section 11). Remnants of a brick wall were identified (611) which utilised medieval bricks and tile. The trench had then been backfilled with brown clayey silt (550).

To the south of this was a rectangular feature (647), possibly the base of a truncated pit. This was 0.72m long, 0.36m wide and 70mm deep and contained a single fill of grey clayey silt (646).

Located above the robbed out nave wall was an oval pit (526) measuring 0.6m long

and wide and 0.33m deep (Fig. 27, Section 12). This was filled with grey silty sand (525) from which a clay pipe bowl dated to between 1620 and 1650 was retrieved.

Above these features was a 0.2m thick demolition deposit comprising brown clayey silt with brick and tile fragments (616). This was further sealed by a second demolition deposit of grey clayey silt with tile fragments (532) evident throughout the trench and also recorded in Trench 12 (697).

Trench 12

Within the cloister walk and above the medieval walls was a layer of yellow sand and gravel (690). This was overlain by a 0.14m thick dark grey silty sand (687) perhaps indicating natural soil build up.

In the cloister garth, a grey silty sand (691) was recorded, which may have originated as the topsoil within this area.

Both these deposits were overlain by a demolition layer of brown silty sand with gravel, brick and tile (686). This measured 0.39m thick.

Along the northern edge of the trench was a former path of grey sand with cockle shells (695).

Phase IV Recent deposits

Trench 1

Above the post-medieval deposits were layers of brown silty sand (545) and grey silty sand (575) ranging between 0.64m and 0.72m thick. Identified as a former topsoil it is possible that this material was imported from elsewhere. Other minor deposits include grey silty sand (543), the same with gravel (544) and grey sandy silt (574) above which lies the current topsoil of grey silty sand (542).

Trench 2

Sealing all archaeological deposits within Trench 2 was a topsoil of dark brownish grey sand (570) that measured up to 0.62m thick. This was sealed at the southern end of the trench, adjacent to the tower, by layers of dark yellow sand and gravel (569) and grey gravel and silty sand (568), representing paths around the tower.

Trench 3

A 0.32m thick layer of brownish grey silty sand (556) identified as the topsoil was evident across this trench.

Trench 4

A topsoil of mid grey sandy silt with gravel (650), measuring 0.3m thick, sealed this trench.

Trench 5

Sealing this trench was a topsoil of grey sandy silt (612) that measured 0.5m thick.

Trench 6

Above the former topsoil (534) along the south of the trench were two dumped deposits. The lowest was greyish brown silty sand with Carstone fragments (629) and the uppermost comprised reddish brown silty sand (628). Both deposits may have been created during landscaping of the Coronation gardens.

Cut into the former topsoil (534) was a feature (631) identified as a pit. This was 1.75m wide and 1.04m deep and contained a single fill of reddish brown silty sand with gravel (537).

Topsoil comprised reddish brown silty sand (533) that measured 0.28m thick.

Trench 7

A 0.35m thick brownish grey silty sand (603) had developed above the archaeological deposits in this trench.

Trench 8

A greyish brown sandy silt topsoil (656) sealed all features within this trench and was 0.5m thick.

Trench 9

Overlying the cockle path (671) was a second path of reddish brown ash and slag (670) above which was a layer of brownish yellow sandy gravel (669) and the present tarmac surface (668).

Constructed on the tarmac and above the line of the medieval Chapter house door was a retaining wall of Carstone and limestone masonry (674). The limestone masonry includes elements taken from the doorway of the Chapter house. East of the retaining wall is a dumped or levelling deposit of reddish brown silty sand (517).

Cut into this levelling deposit was a pit (676) that was 2.05m long by 0.88m deep. This contained a single fill of reddish brown silty sand (520). Sealing the pit was a topsoil of reddish brown silty sand (516).

Trenches 10 and 11

Above the demolition layer in Trench 10 was a topsoil of brown clayey silt (614) that was 0.5m thick.

Sealing the demolition deposit (697) in Trench 11 was a topsoil of loose brown clayey silt (696) that was 0.3m thick.

Trench 12

Above the former cockle shell path (695) was a further path of brownish red gravel (685) which was sealed beneath the present tarmac path (684).

6. DISCUSSION

Pre-Friary deposits (Phase I) were only examined in three of the Trenches as it was deemed appropriate not to disturb the structural deposits of the friary. No

structural remains or features were exposed that belonged to this phase and the nature of the deposits suggest that the area was used for dumping, either in preparation for the construction of the friary or as a waste dumping ground for nearby inhabitants. Therefore, this supports the idea that the friary was established in open ground. However, documentary sources suggest that there were tenements with buildings that were granted to Queen Isabella in 1340 and which subsequently passed to the friary in 1364 (Pitcher 2002).

Features associated with the construction of the friary (Phase II) were encountered in all of the trenches. A number of dumped deposits, apparently to consolidate the ground surface, were identified in two trenches, although were absent in others. Such layers were apparent in the vicinity of the nave and presbytery where they may have been necessary to provide extra stability as the church is likely to have been the largest building at the site.

The friary church and buildings were then constructed. It was not possible to wholly identify the techniques used in their construction without damaging the buried fabric of the church. However, foundation courses of the walls were identified, although these often exceeded the depths of the trenches. Within Trench 1, two areas of Gault clay may suggest that the clay was used as foundation material or damp-proofing for the above ground arcade. Beneath these clay pads would presumably be evidence for piling.

The friary church would then appear to consist of a presbytery, the surviving tower and crossing, a nave and a north aisle (Fig. 29). No evidence for a south aisle was revealed despite a documentary reference of 1520 which states that '*the North aisle of the Grey Friars' Church to be reyved and covered and the gutter between both*

aisles to be new cast and to ransack the South aisle and to mend it where need is' (Pitcher 2002). However, 'nave' is rarely used in medieval sources and the south aisle must be seen as the nave. A document held in Lynn library depicts some foundations exposed when the Theatre Royal was demolished. Although hard to interpret, this appears to show a wider west front to the church than the results from the excavation suggest (shown in green on Fig. 29). These observations could be part of the western cloister range, although might also indicate a short south aisle set west behind the northern cloister walk. However, no comparable arrangement can be found in other Franciscan friaries.

The nave is 10.8m wide and at least 22m long. Again the sketch held by Lynn library suggests that the nave may be as long as *c.* 33m. The floor of the nave was of mortar, although is likely to have been tiled and was also used for burial as evidenced by the disturbed skeletal remains from Trench 1.

Apart from the Gault clay foundations, no evidence was found for a clear distinction between the north aisle and nave. Presumably such material was robbed. The north aisle has a minimum width of 8m as indicated by the wall in Trench 2. It is possible that this wall is the east wall of a crossing or chapel, although a surviving string course on the tower suggests otherwise. The relative levels of the floor identified in Trench 1 (4.45m OD) and the level of the stepped foundation in Trench 2 (4.85m OD) differ by 0.4m suggesting that the eastern end of the aisle was raised, perhaps for a chapel.

East of the tower lies the presbytery, the equivalent of the chancel in a parish church. This is 27.8m long and 11.13m wide (external measurements). Floor levels are at a height of 4.32m OD, lower than

those recorded in the north aisle. Remodelling of the presbytery is evident with the construction of brick lining walls which can best be interpreted as the base of the friar's stalls. There is limited evidence for repair and re-facing of the external north wall.

To the south of the church lies the claustral range. Elements of the east and south ranges were not examined during this investigation as they lay beyond the Tower Gardens. Around the cloister garth are the cloister alleys averaging 3m wide. There is sufficient evidence to indicate that these were tiled throughout.

The principal building of this range examined during the investigation is the Chapter house. This was a rectangular structure 14.6m long and, presuming the doorway lies on the central axis of the room, 10.56m wide. A suggestion of two phases of remodelling may be apparent, the final phase being the brick built bench around the interior of the Chapter house which masks an earlier painted plaster wall, although a bench would have always been a feature of this room. The floor of the Chapter house was tiled with both dark green and yellow glazed floor tiles.

There was an open area between the Chapter house and presbytery that, as suggested by surviving prints (Fig. 4), was accessed by a wide arch from the cloister alley and perhaps giving entry to identified rooms to the east.

Abutting the Chapter house to the east were further rooms. Part of a room identified at the east end of Trench 7 appeared to have a tiled floor. The tiled floor does not appear to extend into Trench 5 where only mortar surfaces and a column base were identified and, therefore, may represent a corridor between the two buildings. This interpretation is further supported by the levels of the floors; in

Trench 7 this is 4.52m OD, while the first phase of mortar floor in Trench 5 is 4.28m OD and the second phase is 4.39m OD.

Therefore, the building in Trench 5 has floor levels 0.24m below the level of the 'corridor' with a column that probably supported a rib vault ceiling, giving the overall impression of an undercroft. This would then mean a range of first floor rooms as has been observed by Martin (1937, 30). The function of these undercrofts is generally thought to be for storage, although recent reassessment of Lincoln Greyfriars points out the elaborate stonework would not be appropriate for such a storeroom and suggests habitation for an infirmary chapel above (Stocker 1984, 143). The carved base found in Trench 5 may similarly indicate more than a storeroom was present, although resurfacing of the mortar floor subsequently masked the detail on the stonework. Painted window glass was also found in the demolition material and perhaps would also suggest a non-utilitarian function for the room.

This range of buildings east of the Chapter house may also indicate the presence of a second cloister. Normally, these would be placed to the south of the main cloister as at Walsingham (Fig. 30). However, restrictions may have forced the second cloister to lie eastwards, although landscaping of the Tower Gardens appeared not to find such a range. It is likely then that the second cloister range still lies to the south, beneath the former school buildings adjacent to the library.

Abutting the Chapter house to the south was a short section of brick and Carstone wall, as revealed in Trench 8. This appears to have a buttress, or perhaps a chimney base, which indicates another building on this side. The width of this building is quite narrow and it is likely that overshot cloister alleys, where first floor rooms

extended over the cloister alley, were in existence. Similar arrangements exist at Ware, Walsingham and Dunwich with evidence also at London, Bedford and Yarmouth (Martin 1937, 30).

Dates provided by the architectural fragments and tile suggest a mid to late 13th century construction phase. Window glass, assigned a 14th century date in the catalogue (Appendix 8), could possibly be late 13th century (*pers. comm.* Rachael Hall). Previous analysis of the standing remains of the tower identified four phases of its construction, these being two stone phases of mid 13th century and c. 1300 date and two later brick phases of the 14th and 15th centuries (Cooke 1999). However, more recent analysis suggests elements of the church, principally the staircase entrance and thus part of the north elevation, date from the early 13th century (Wilson 2003, 17).

This would then suggest that the church, and by association a burial ground, was in existence before the time of John Stanford's burial of 1264. As the first foundation charter, the grant by Thomas Feltham, dates to the mid 13th century, this may indicate that the land and friary was held in trust, perhaps by the local burgesses.

Evidence for post-medieval (Phase III) use, mainly demolition, of the site is also evident within the trenches. The dates of the demolition phases are not clear for Trenches 1, 7 and 12 and are largely 17th century for the remaining trenches. Furthermore, Trenches 5 and 10 contain clay pipe of 1620-1670, perhaps as close as 1640-1650. It would be tempting to associate this with the English Civil War garrisoning of the town, firstly by Royalists in 1643 and, following a siege in the same year, then by the Parliamentarians (Richards 1997, 126). It is likely that demolition of the church,

apart from the tower, occurred soon after the surrender of the friary. Documentary references to the removal of stone '*for the use of the town except for his own building there*' start from 1563 although increase in the size of loads from 1570 (Pitcher 2002). However, these same documents indicate that habitable buildings were still present at the site.

There was no firm evidence for post-medieval structures existing at the site as depicted in early prints. As these are likely to have existed until the early 19th century it is possible they were reusing the medieval foundations. There is evidence both documentary and architecturally still apparent within the tower that buildings lay within the crossing beneath the tower until these were ordered to be removed in 1807.

It is worth noting a quantity of well preserved medieval window glass from an 18th century layer in Trench 2, and given the fragile nature of this material may suggest that the east wall of the north aisle was still standing at this date.

Medieval pottery was recovered in generally small quantities, as would be expected where few medieval features or layers were excavated. The range of medieval types is typical for King's Lynn with locally produced Grimston ware dominating the assemblage. Imported pottery includes a single sherd from Scarborough and two sherds from Rouen, amongst others.

Building materials are also evident and range from the ceramic brick and tile, through the architectural fragments and the window glass. Locally derived Carstone appears to be the main stone used in the construction with architectural details in limestone. This appears to be the form throughout the range of conventual buildings, although brick appears to have

been commonly used from the 13th century as well, particularly in buildings away from the main cloister.

Post-medieval pottery was the largest category of finds collected during the investigation. Most were made in the west Norfolk and east Cambridgeshire region, although foreign imports, from Germany, China and perhaps the low countries were also evident.

Site Overview

Lawrence Butler writing in 1984 called for the examination of King's Lynn Franciscan friary, along with Dunwich, to see if the ground plan as executed at Walsingham was a standard pattern (Butler 1984, 129). Walsingham had an advantage in that it was placed in an open area without restrictions as to the layout and was even given leave to divert a road. However, it would appear that King's Lynn friary was also without restriction, despite its urban setting, and many similarities do exist between the two. For example, the similarities include the size and shape of the presbytery, chapter house and cloister (Fig. 30). However, the nave and north aisle point to a possibly larger church in Lynn, despite the lack of a south aisle.

At present, there is insufficient evidence for a second cloister in Lynn. There lies the necessary space, between the south of the main cloister and the former course of the Millfleet, to have accommodated this range if it was comparable to Walsingham. The presence of buildings east of the chapter house suggests an important range lay in this direction, although none was identified during work on Tower Gardens in 1911.

The role of the Greyfriars site within medieval King's Lynn appears to have been an important one but the impact of the Franciscan friary upon the surrounding

area may not be determined from the results presented here. The work reported here does, however, confirm the research requirements outlined by Ayers (2000, 31).

Artefactual material from this investigation indicates regional, national and international trade and has been noted previously at sites in King's Lynn (Clarke and Carter 1977, 444; Carus-Wilson 1962-63, 182). However, there does not seem to be a close link between the Friary and merchants as was recorded at Boston, where the Hanseatic traders were always considered the founders of the Franciscan friary there (Page 1906b, 215).

Future Research

This evaluation has gone a long way to clarifying the layout of the Franciscan friary of King's Lynn. However, the full extent of buildings is still not clear and the function of all the rooms is equally unconfirmed. Therefore, future research should seek to address the following points;

- To determine the nature of the eastern end of the north aisle,
- To ascertain the function of the building east of the main cloister range,
- To ascertain the existence of a second cloister,
- To identify the range of other activities carried out within the precinct and their relation to other features in the locality.

Much of this work could be undertaken with further limited trial trenching across the site.

7. CONCLUSIONS

Archaeological investigations were carried out at Greyfriars, King's Lynn, in order to identify and interpret the layout of the Franciscan friary.

The evaluation has significantly increased the knowledge concerning the layout of the friary complex and has identified the nave, north aisle and presbytery of the church. South of this, the north and east cloister ranges, including the Chapter house, were also examined. Other structural remains were identified east of the Chapter house.

The subsequent post-medieval use of the site is also better understood and suggests that many of the conventual buildings were eventually demolished in the 17th century. Elements of the church, however, particularly the eastern end of the north aisle may have survived, perhaps incorporated into later structures, until the 18th century.

A significant range of artefacts was retrieved during the investigation. Pottery, principally of the post-medieval period, clay pipe, brick, tile, glass (including an important assemblage of painted medieval window glass) and architectural fragments were collected.

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9. PERSONNEL

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APS Archaeological Project Services

EH English Heritage

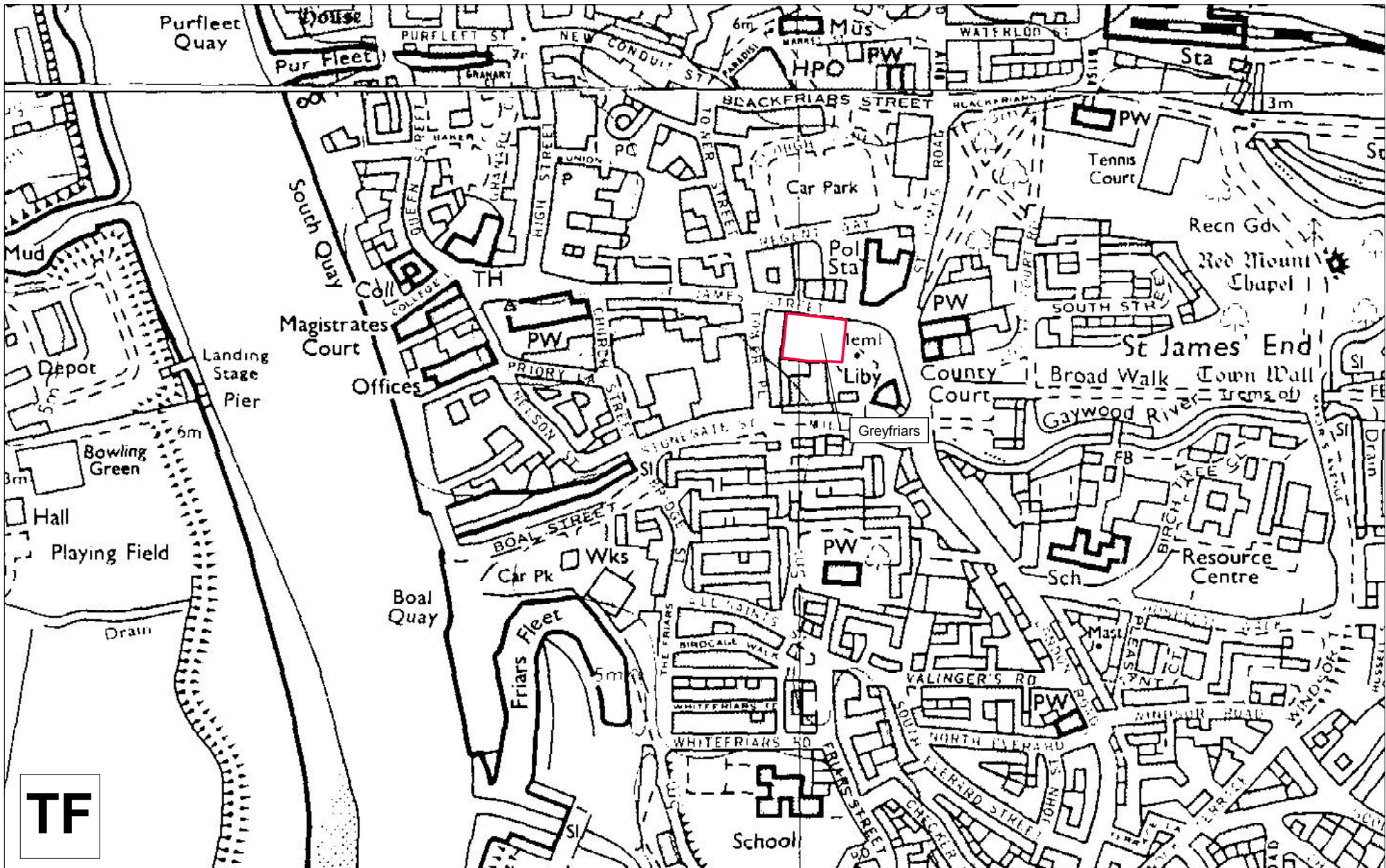
GSGB Geological Survey of Great Britain

IFA Institute of Field Archaeologists

NAU Norfolk Archaeological Unit



Figure 1 - General Location Plan



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62

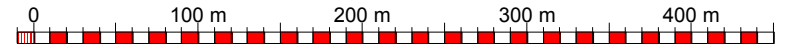


Figure 2 - Site location plan

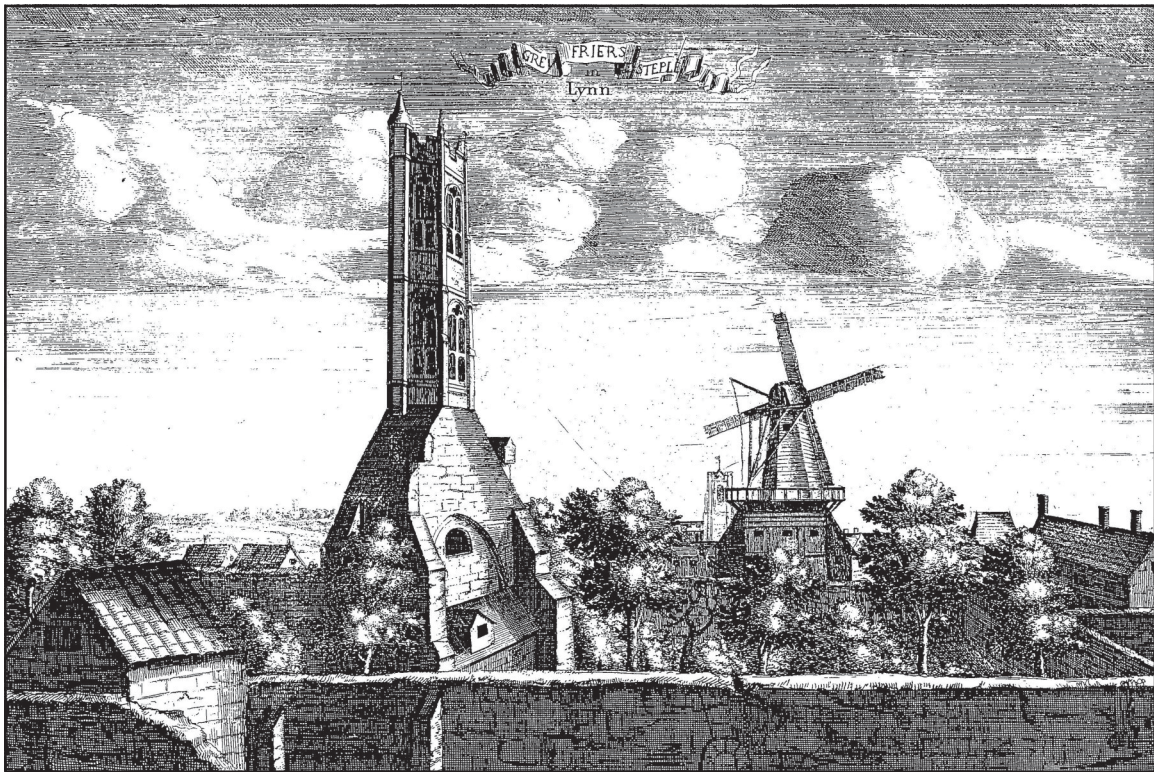


Figure 3 - A mid 18th century view of the tower, viewed from the north. Post-medieval adaption of the tower is apparent in the infilled nave arch that contains a dormer window. The wall in the foreground may be a remnant of the precinct wall and has an infilled arch (centre). There is a building abutting the wall (left) which may relate to the friary.



Figure 4 - Thomas Hearne's view of Greyfriars' tower, late 18th century. The infilled chancel arch is visible with three floors represented. A possible portion of the north chancel wall also survives (right). Also visible is the archway of the Chapter House door (centre) and a second arch to the right. Note also the Tudor diaper brickwork on the chimney stack butting the tower.

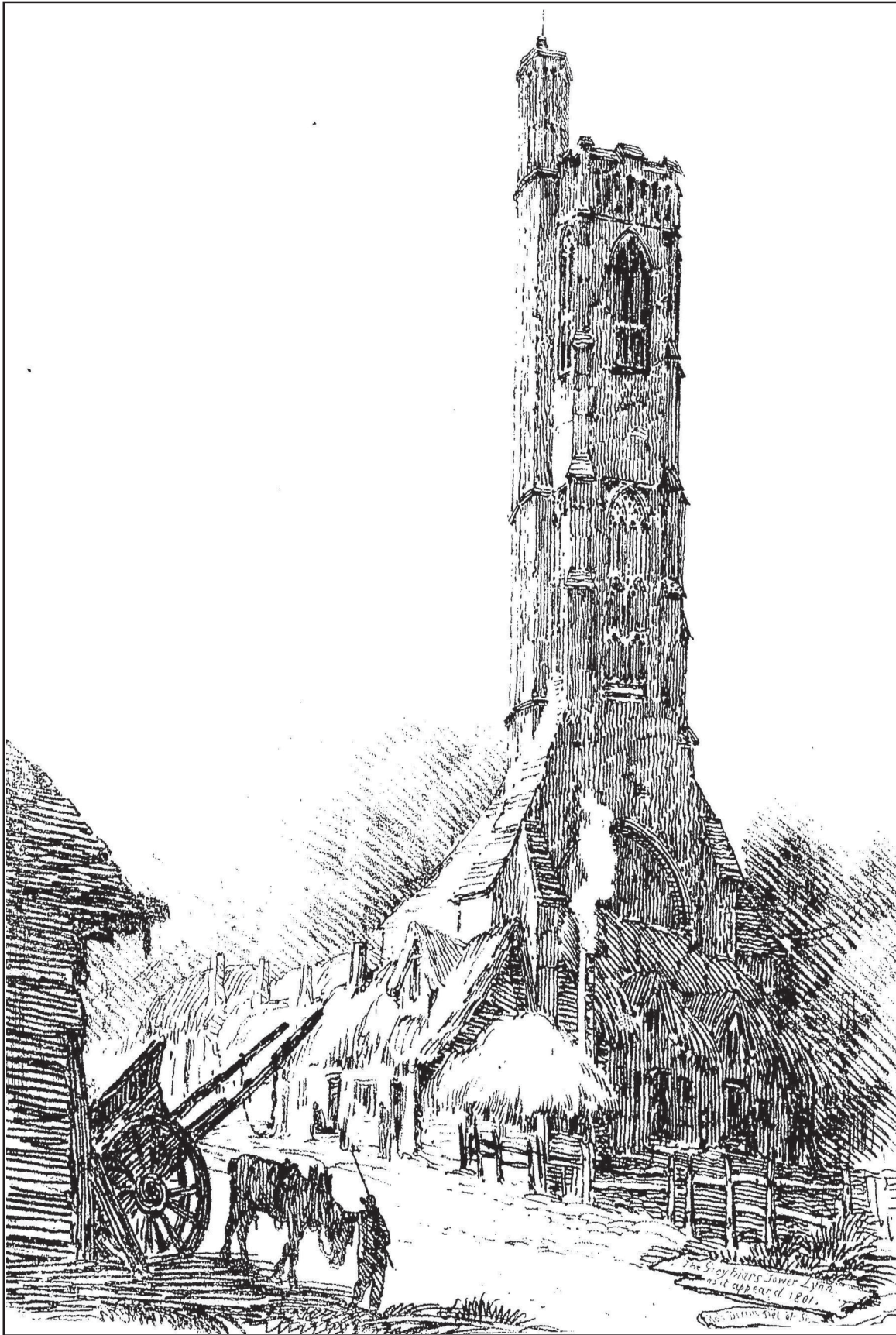


Figure 5 - Robert Dixon's sketch of Greyfriars' tower, 1801, showing the range of buildings built against the tower, many of which are thatched.



Figure 6 - Edward Edwards' view of the gatehouse, dating prior to 1806

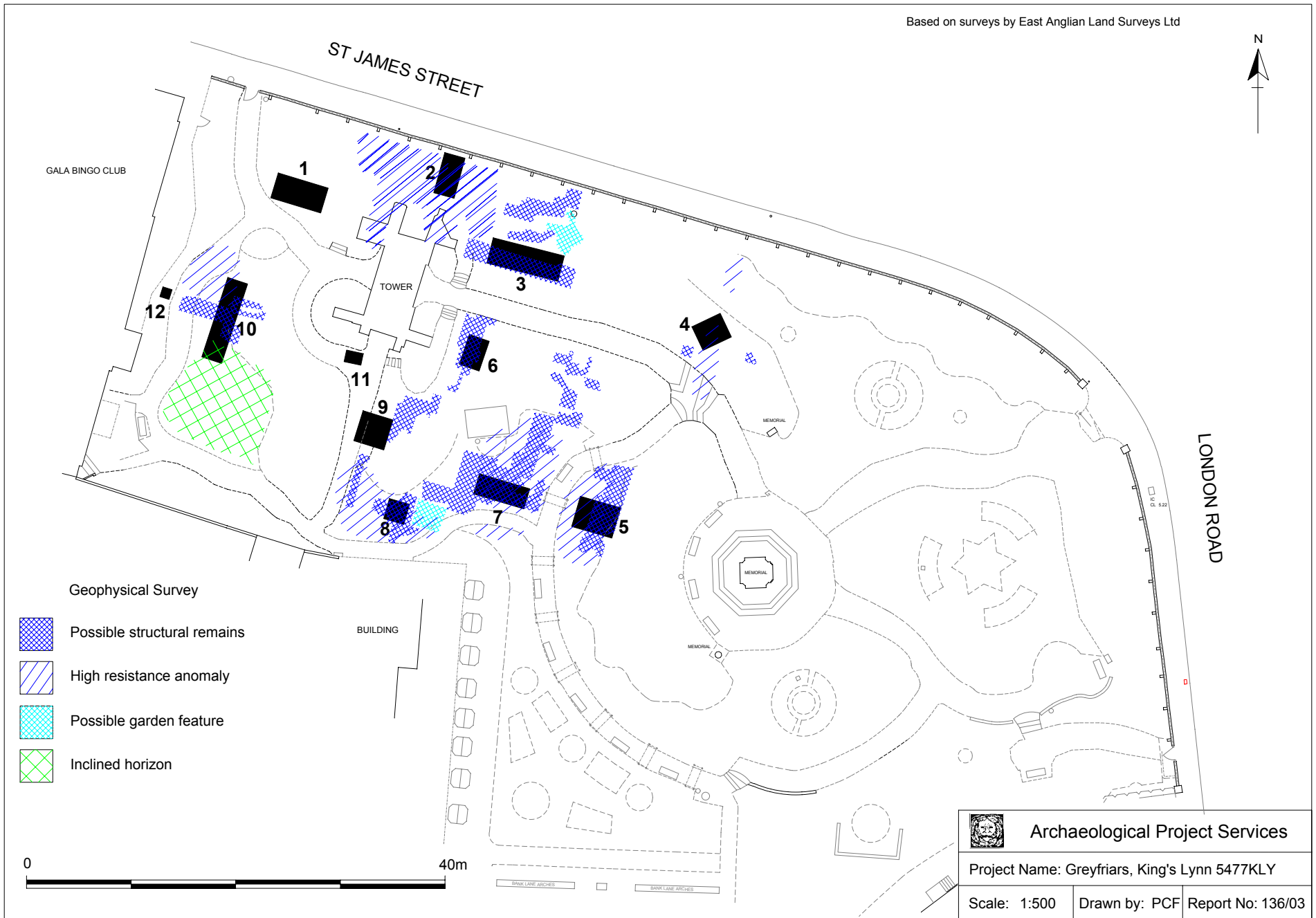























Figure 7 - Trench location plan with summary of the geophysical survey results

-  CLAY Main Component
-  CLAY Small Component
-  SAND Main Component
-  SAND Small Component
-  SILT Main Component
- 

-  Gravel
-  Random Mortar Lumps
-  Solid Mortar
- 

THEREFORE:

-  Clayey Silt
-  Silty Clay
-  Sandy Clay
-  Clayey Sand
-  Sandy Silt
- 

-  Tarmac
-  Shell
-  Iron Slag
-  Carstone
-  Limestone


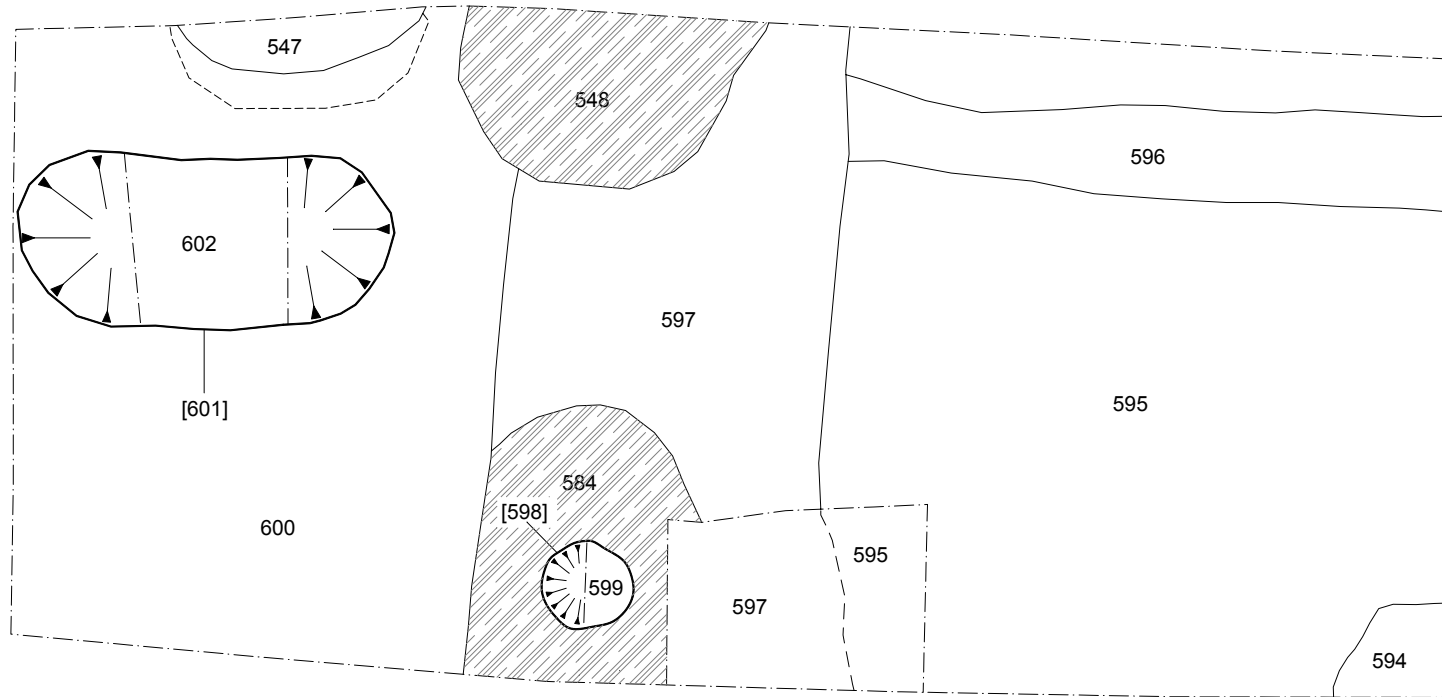
 Archaeological Project Services	
Project Name: Greyfriars, King's Lynn 5477KLY	
Drawn by: SU	Report No: 136/03

Figure 8 - List of conventions used for sections



Archaeological Project Services

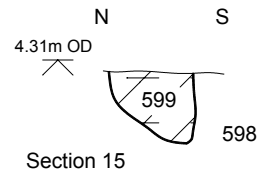
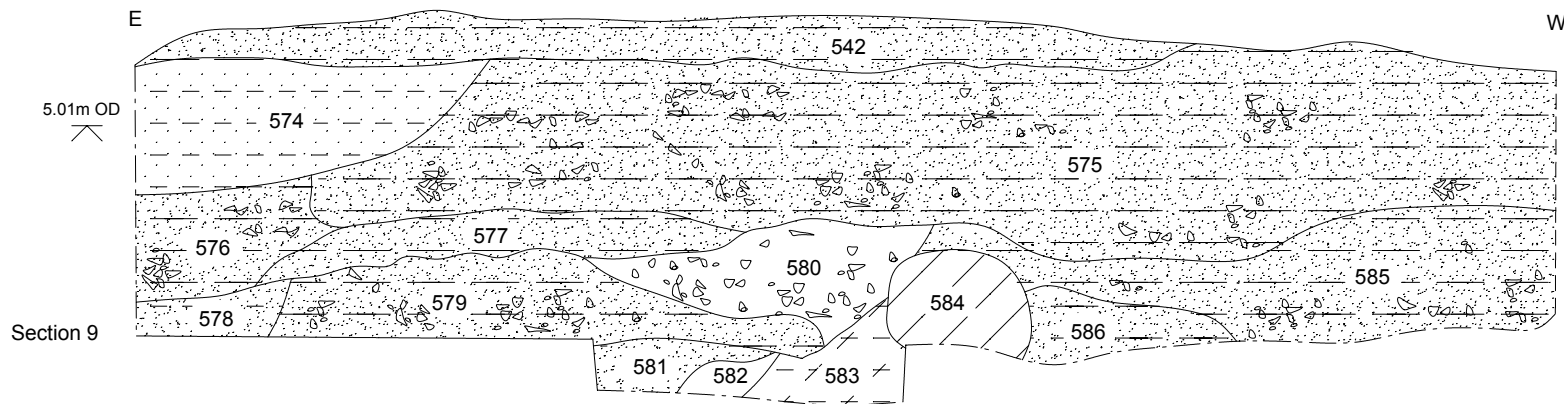
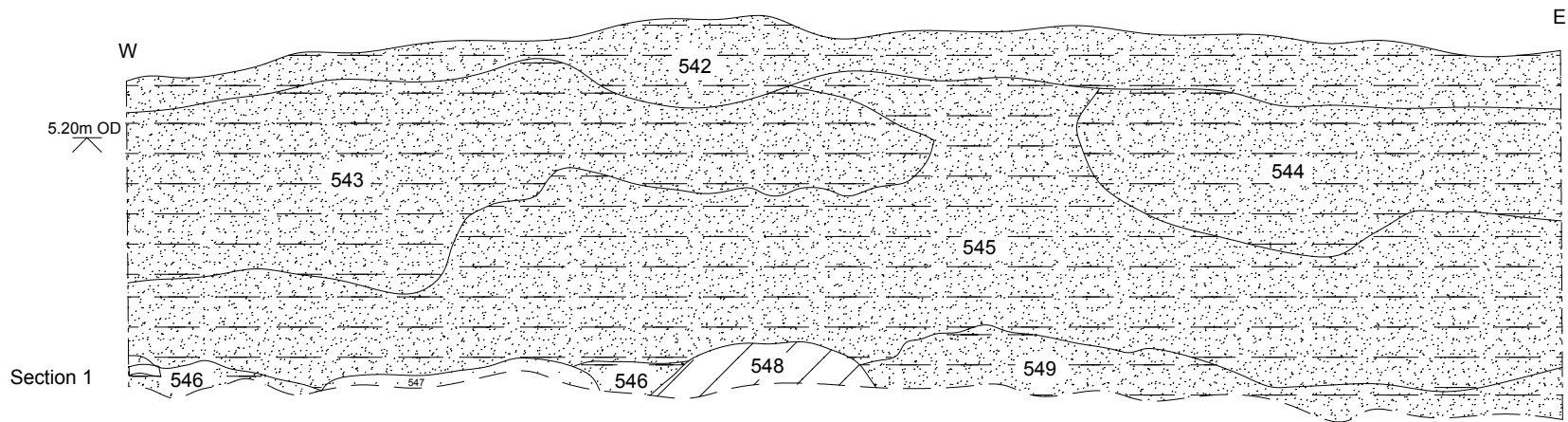
Project Name: Greyfriars, King's Lynn 5477KLY

Scale: 1:25

Drawn by: VM

Report No: 136/03

Figure 9 - Trench 1: Plan




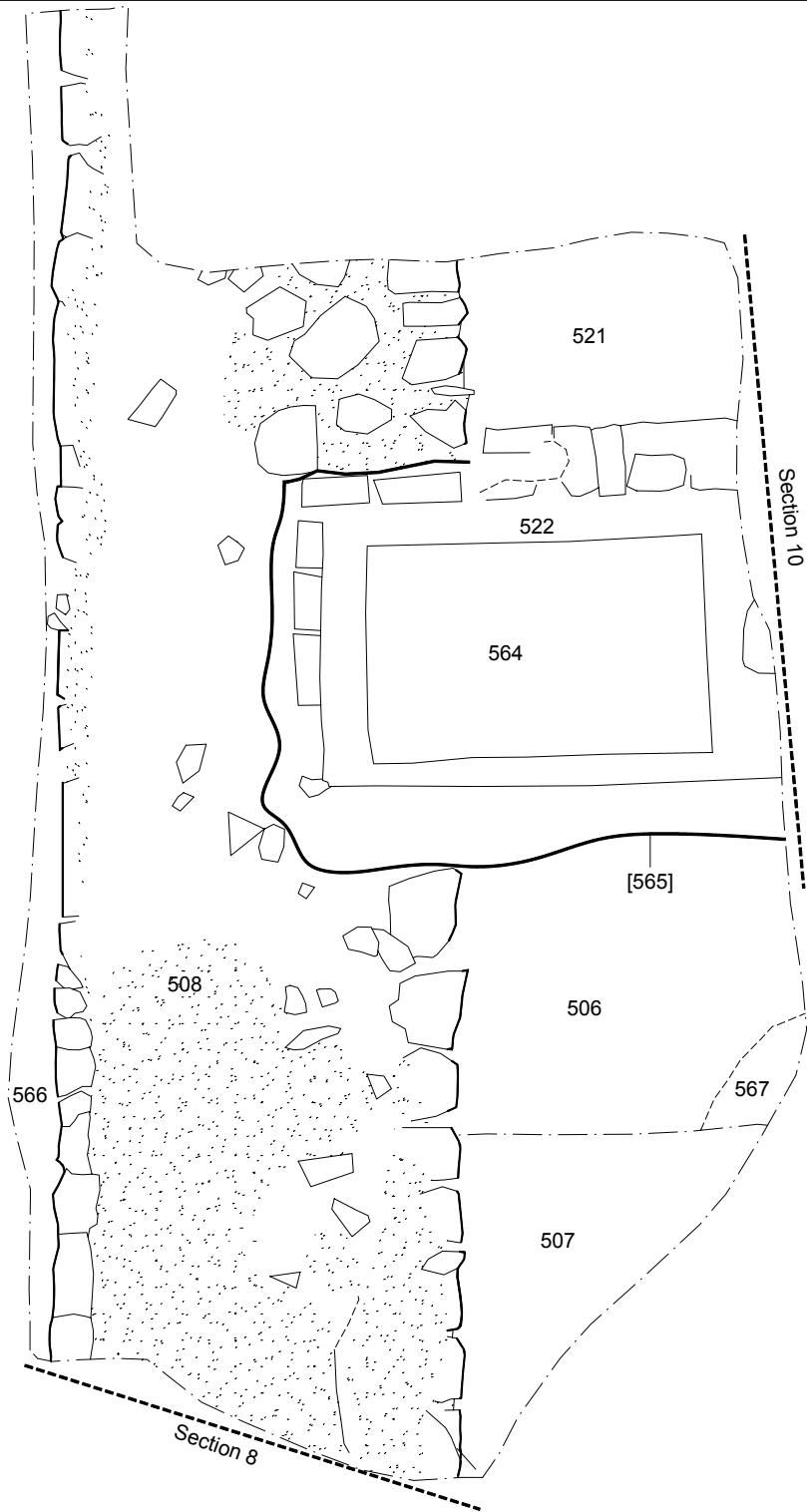
 Archaeological Project Services		
Project Name: Greyfriars, King's Lynn 5477KLY		
Scale 1:25	Drawn by: SU	Report No: 136/03

Figure 10 - Trench 1: Sections

Boundary wall to Coronation Gardens




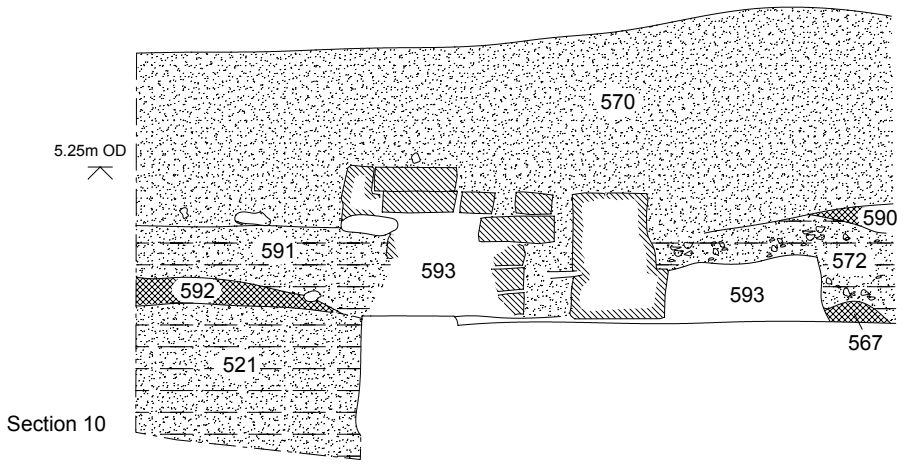
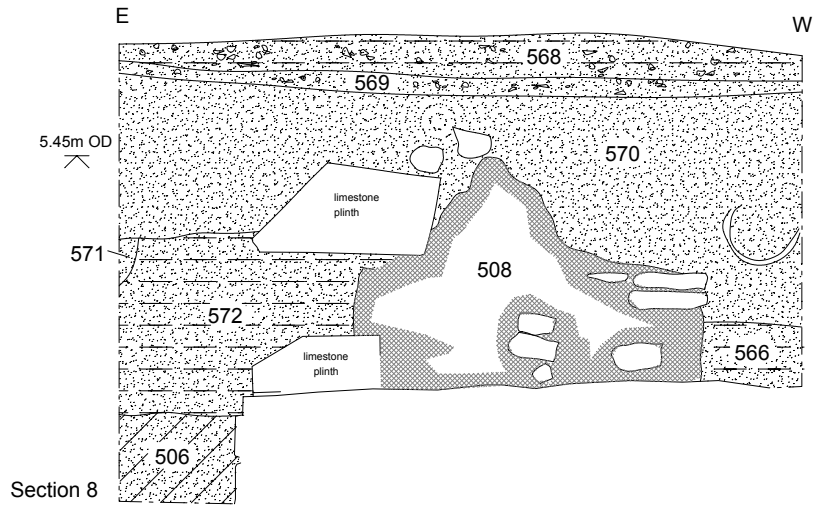
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Project Name: Greyfriars, King's Lynn 5477KLY			
Scale: 1:25	Drawn by: VM	Report No: 136/03	

Figure 11 - Trench 2: Plan




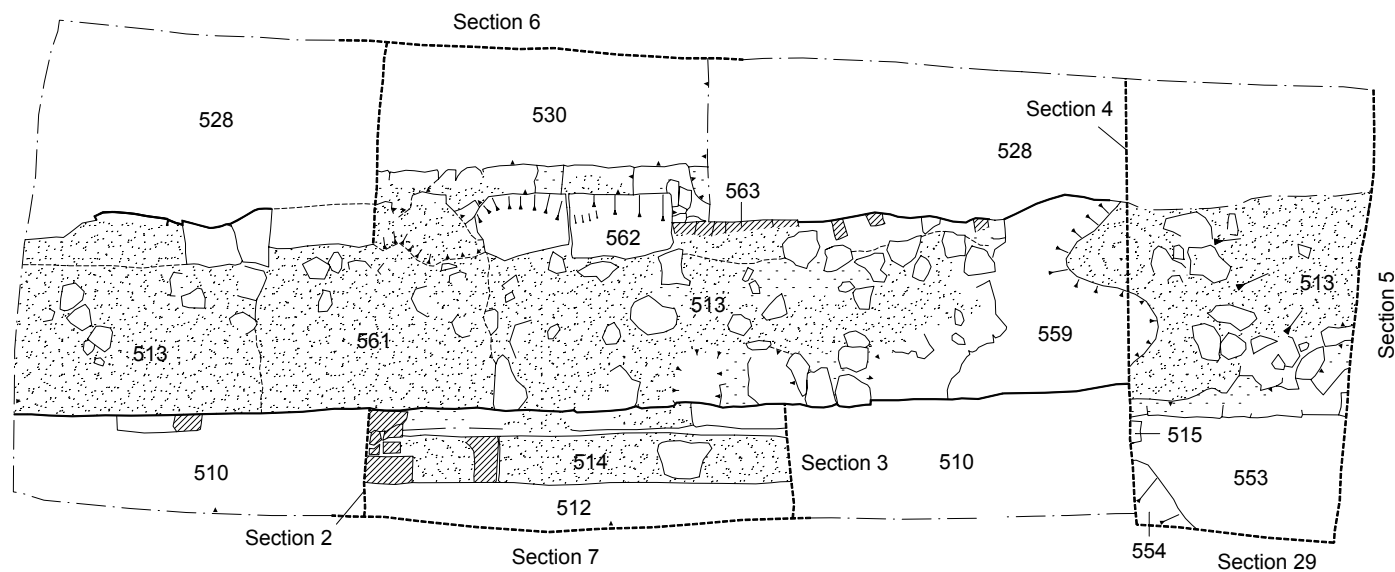
 Archaeological Project Services		
Project Name: Greyfriars, King's Lynn 5477KLY		
Scale 1:20	Drawn by: SU	Report No:136/03

Figure 12 - Trench 2: Sections




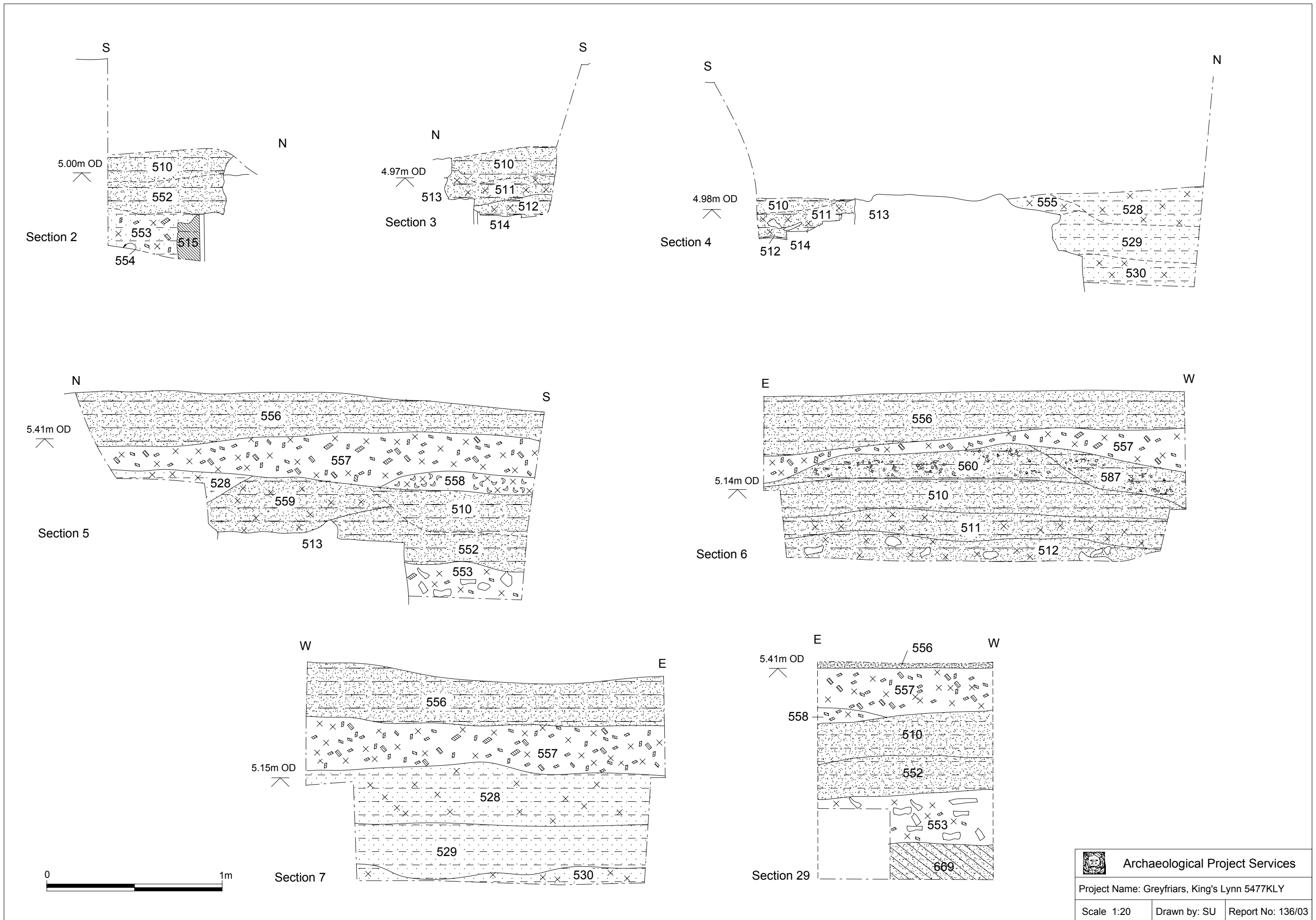
	Archaeological Project Services	
Project Name: Greyfriars, King's Lynn 5477KLY		
Scale 1:40	Drawn by: VM	Report No: 136/03

Figure 13 - Trench 3: Plan




 Archaeological Project Services		
Project Name: Greyfriars, King's Lynn 5477KLY		
Scale 1:20	Drawn by: SU	Report No: 136/03

Figure 14 - Trench 3: Sections

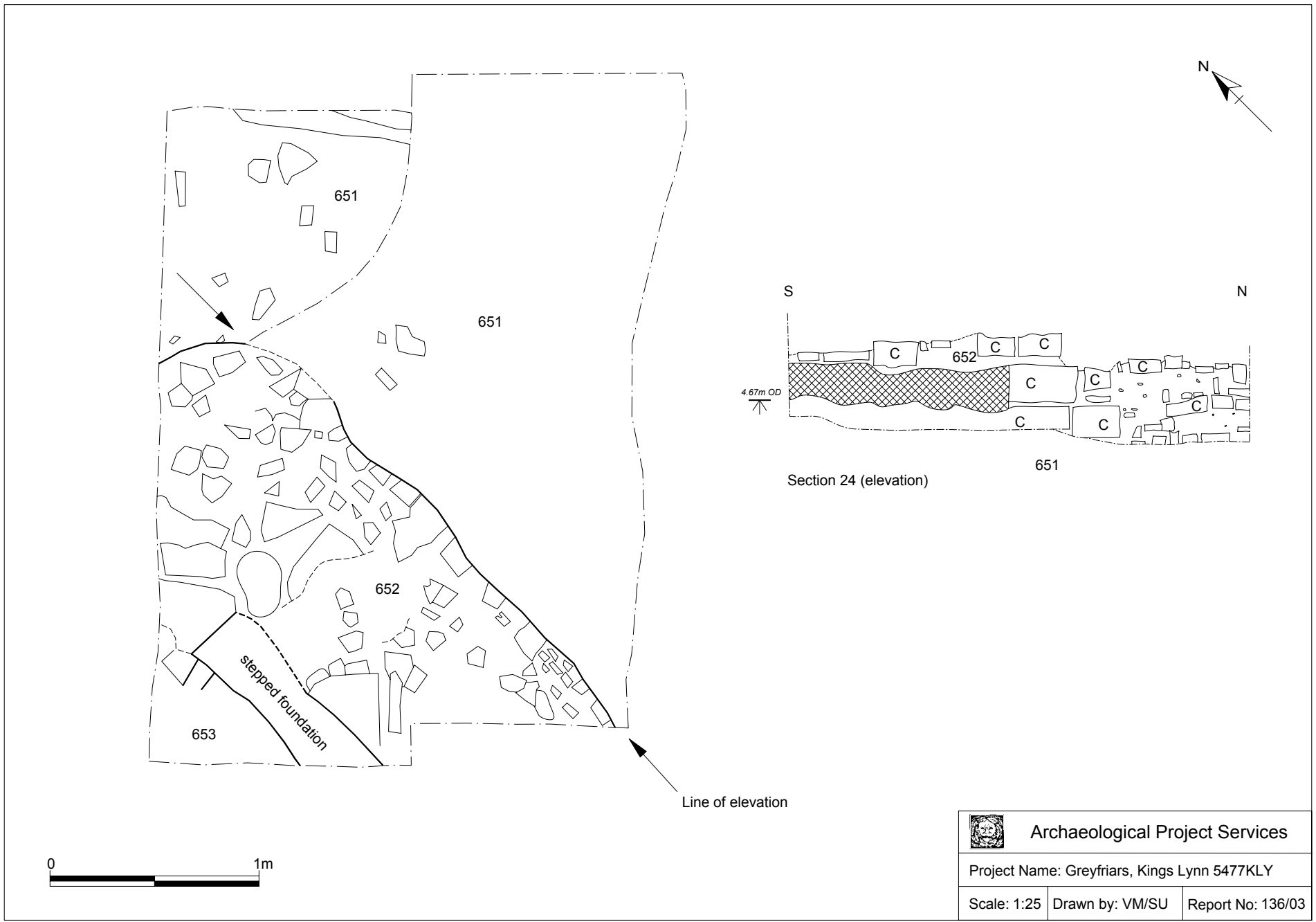



Figure 15 - Trench 4: Plan and Section

 Archaeological Project Services		
Project Name: Greyfriars, Kings Lynn 5477KLY		
Scale: 1:25	Drawn by: VM/SU	Report No: 136/03

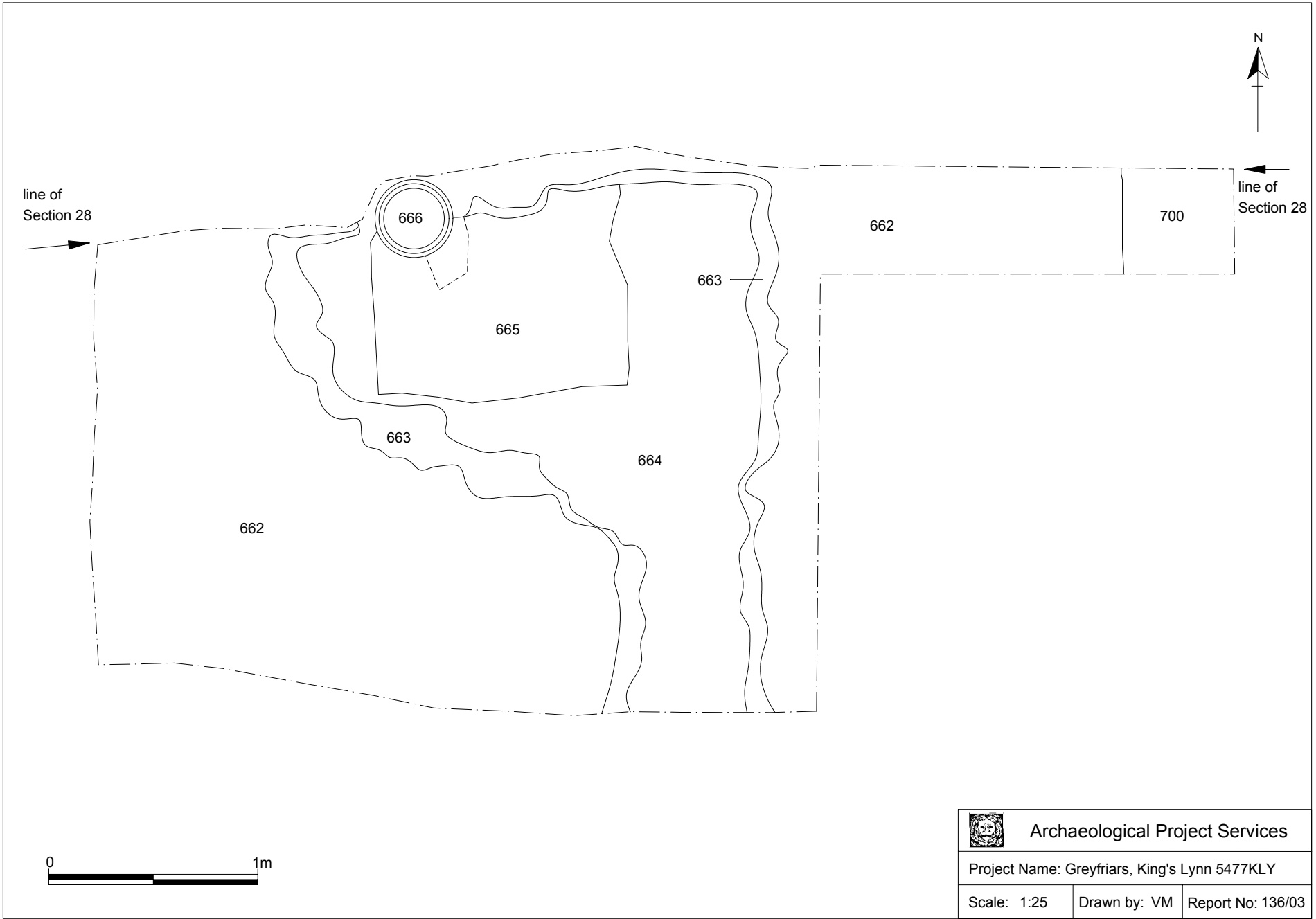


Figure 16 - Trench 5: Plan

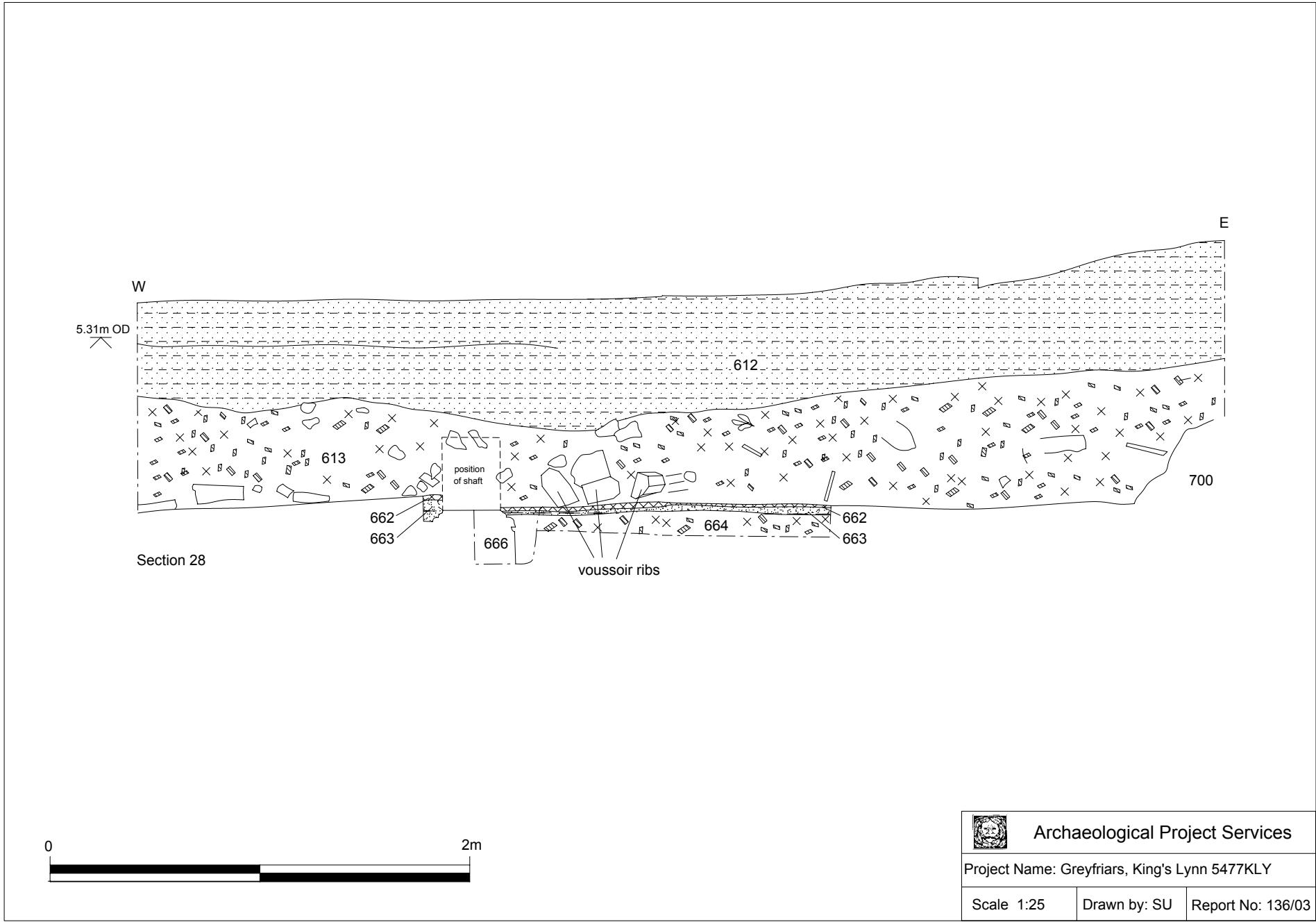
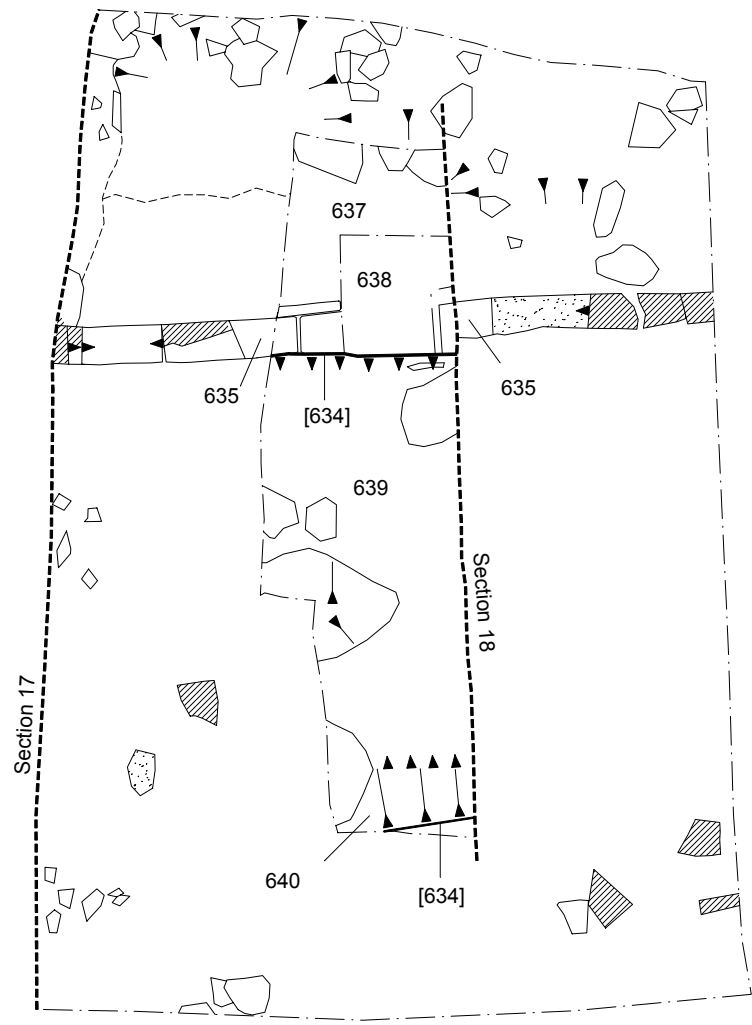


Figure 17 - Trench 5: Section




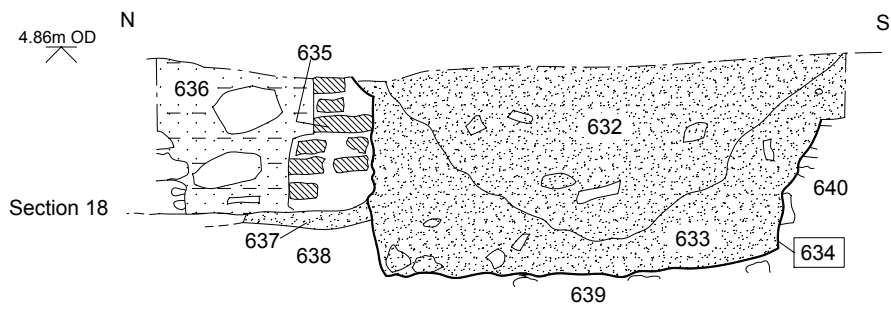
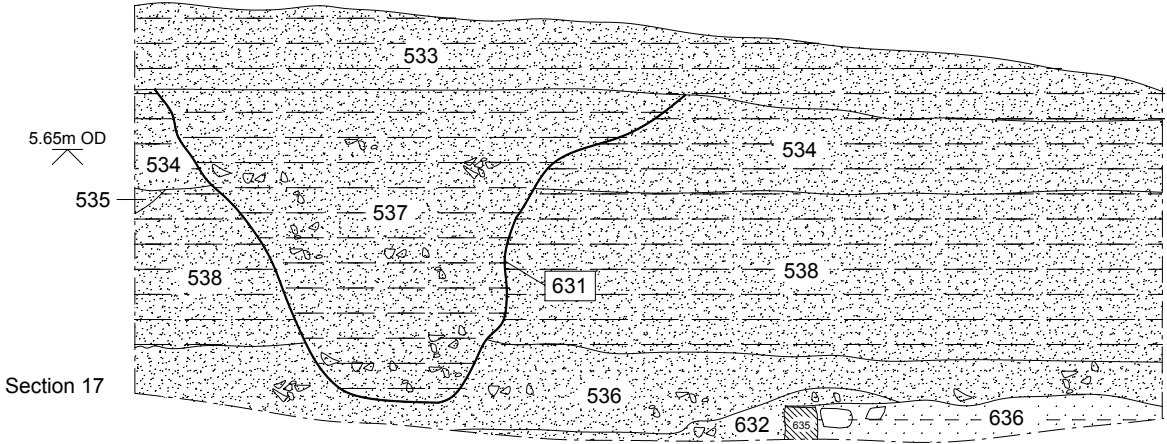
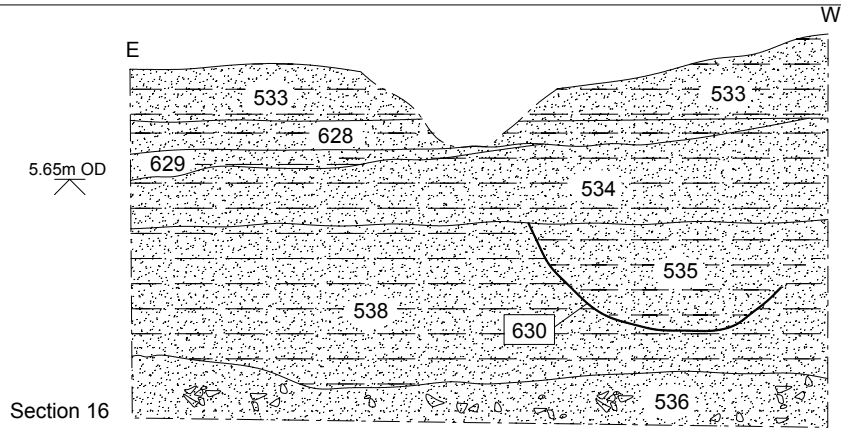
	Archaeological Project Services		
Project Name: Greyfriars, King's Lynn 5477KLY			
Scale: 1:25	Drawn by: VM	Report No: 136/03	

Figure 18 - Trench 6: Plan




 Archaeological Project Services		
Project Name: Greyfriars, King's Lynn 5477KLY		
Scale 1:25	Drawn by: SU	Report No: 136/03

Figure 19 - Trench 6: Sections

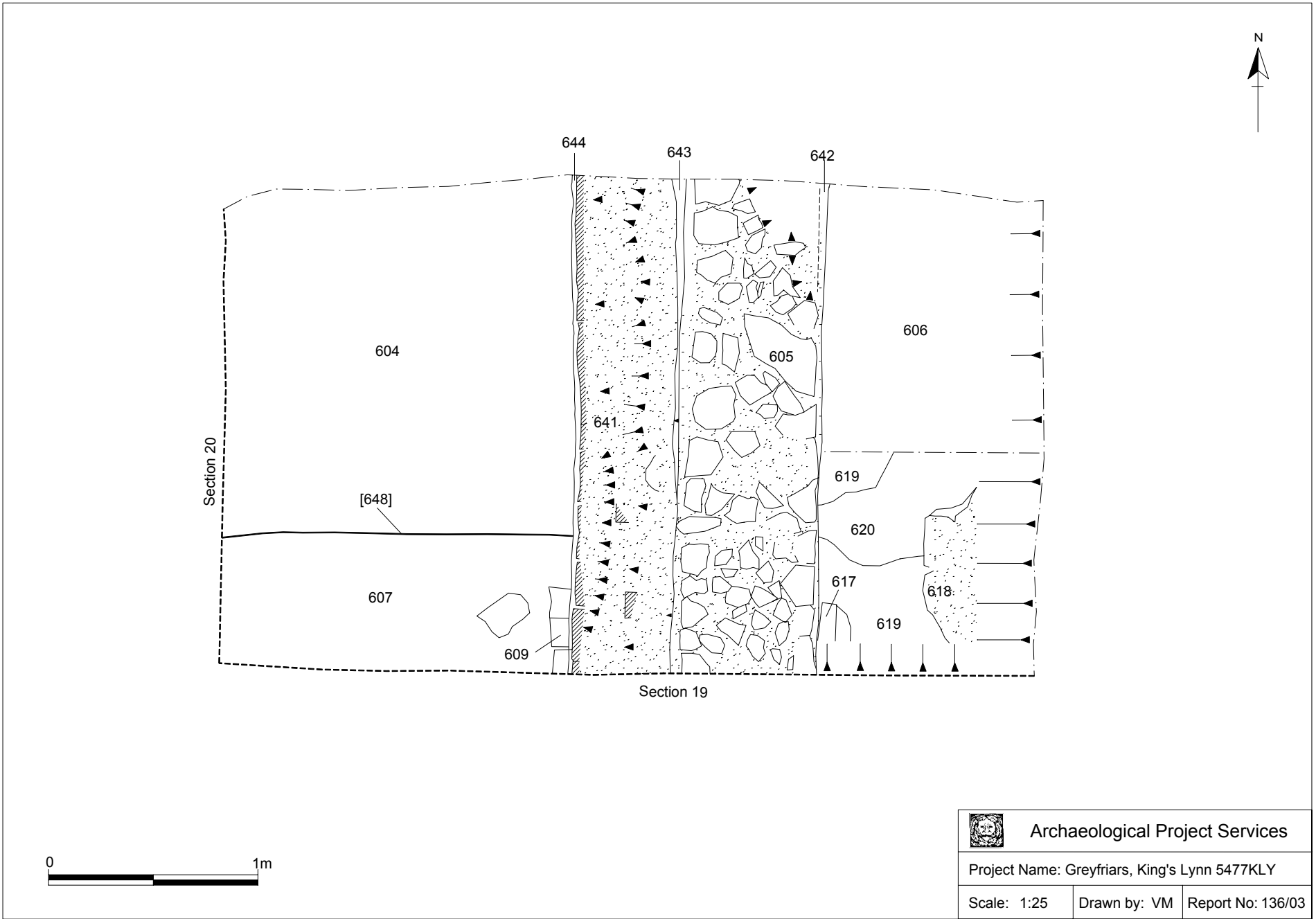


Figure 20 - Trench 7: Plan

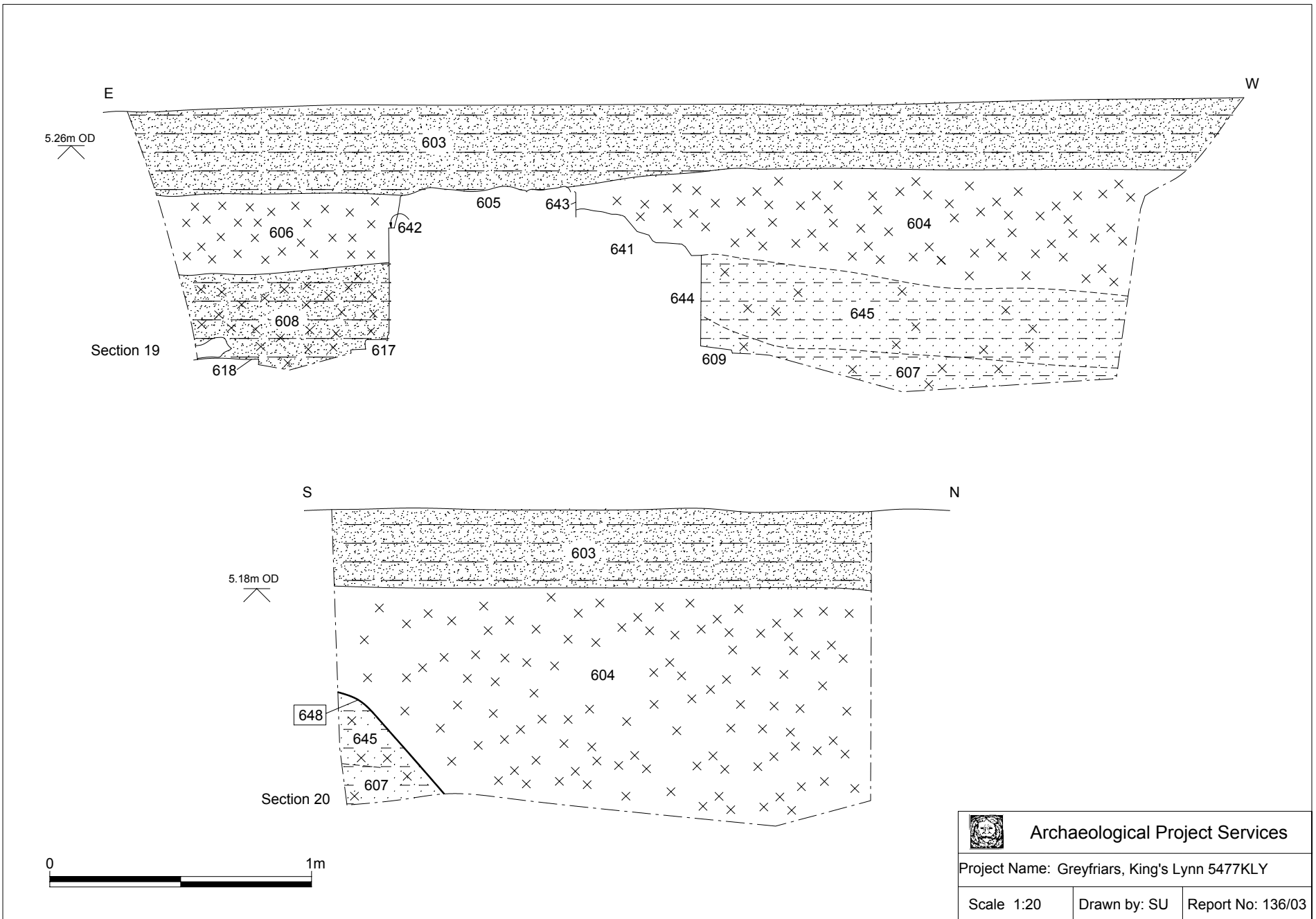
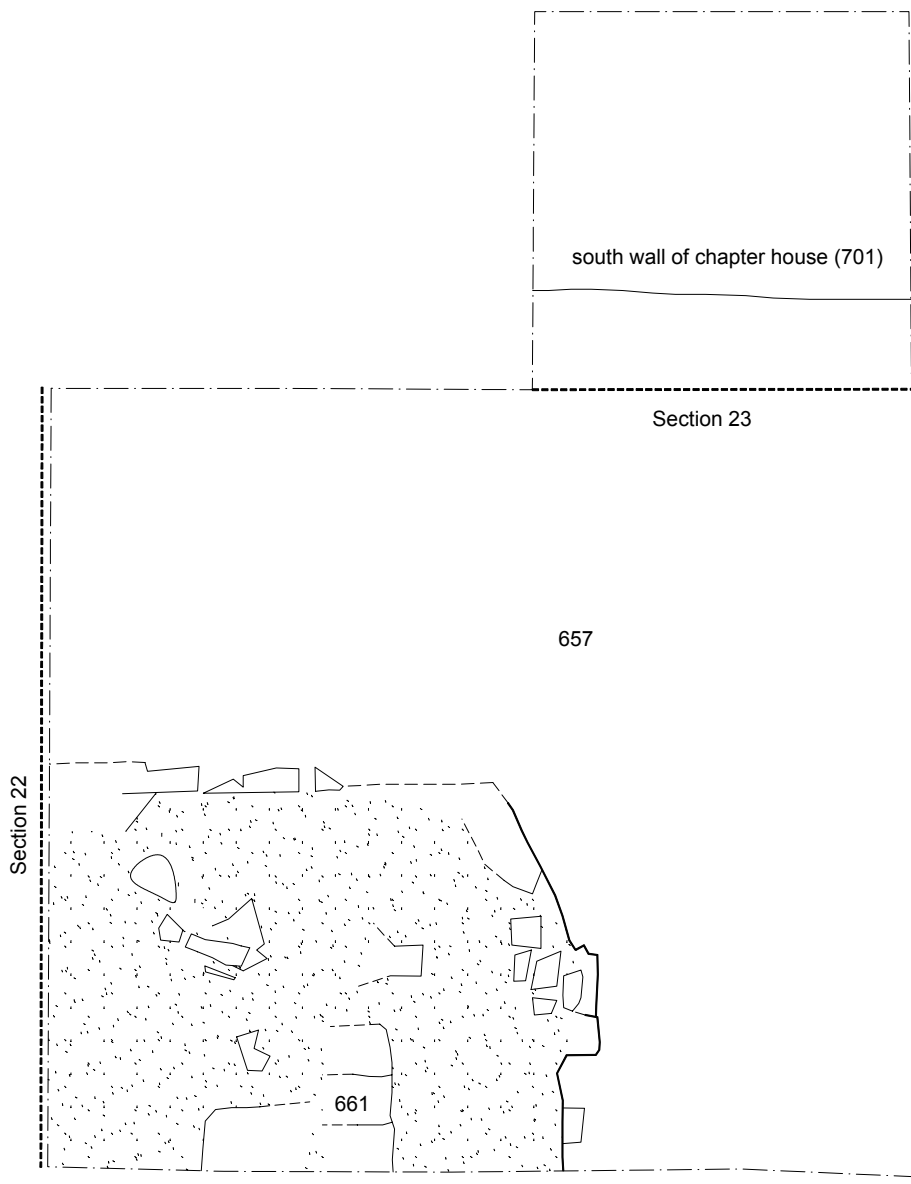


Figure 21 - Trench 7: Sections




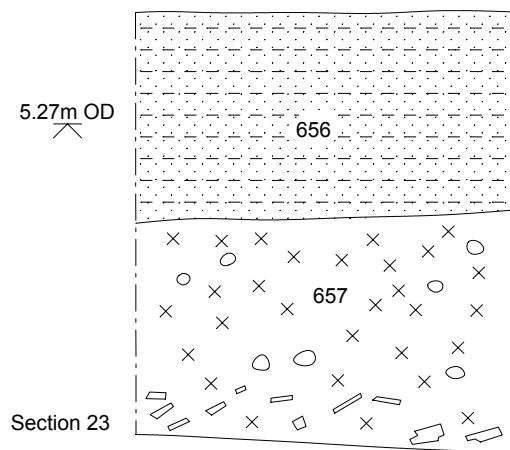
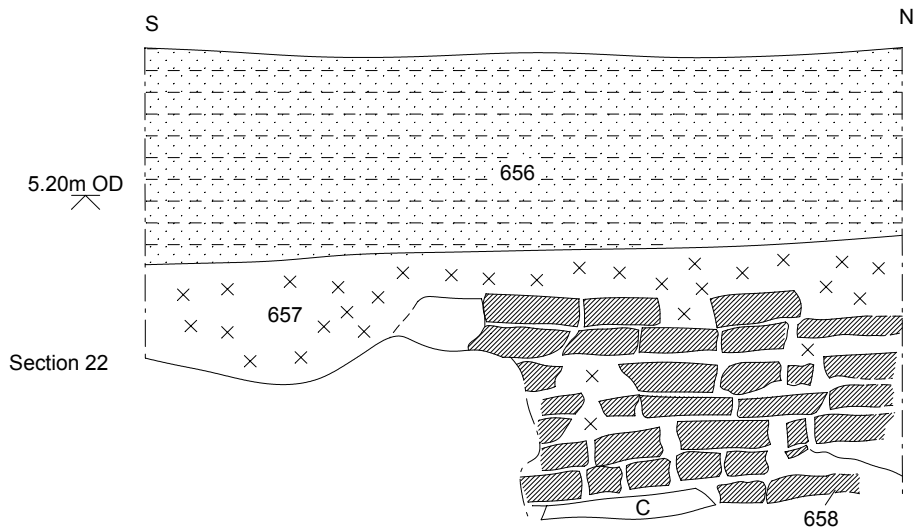
	Archaeological Project Services		
Project Name: Greyfriars, King's Lynn 5477KLY			
Scale: 1:20	Drawn by: VM	Report No: 136/03	

Figure 22 - Trench 8: Plans



Archaeological Project Services

Project Name: Greyfriars, King's Lynn 5477KLY

Scale 1:20

Drawn by: SU

Report No: 136/03

Figure 23 - Trench 8: Sections

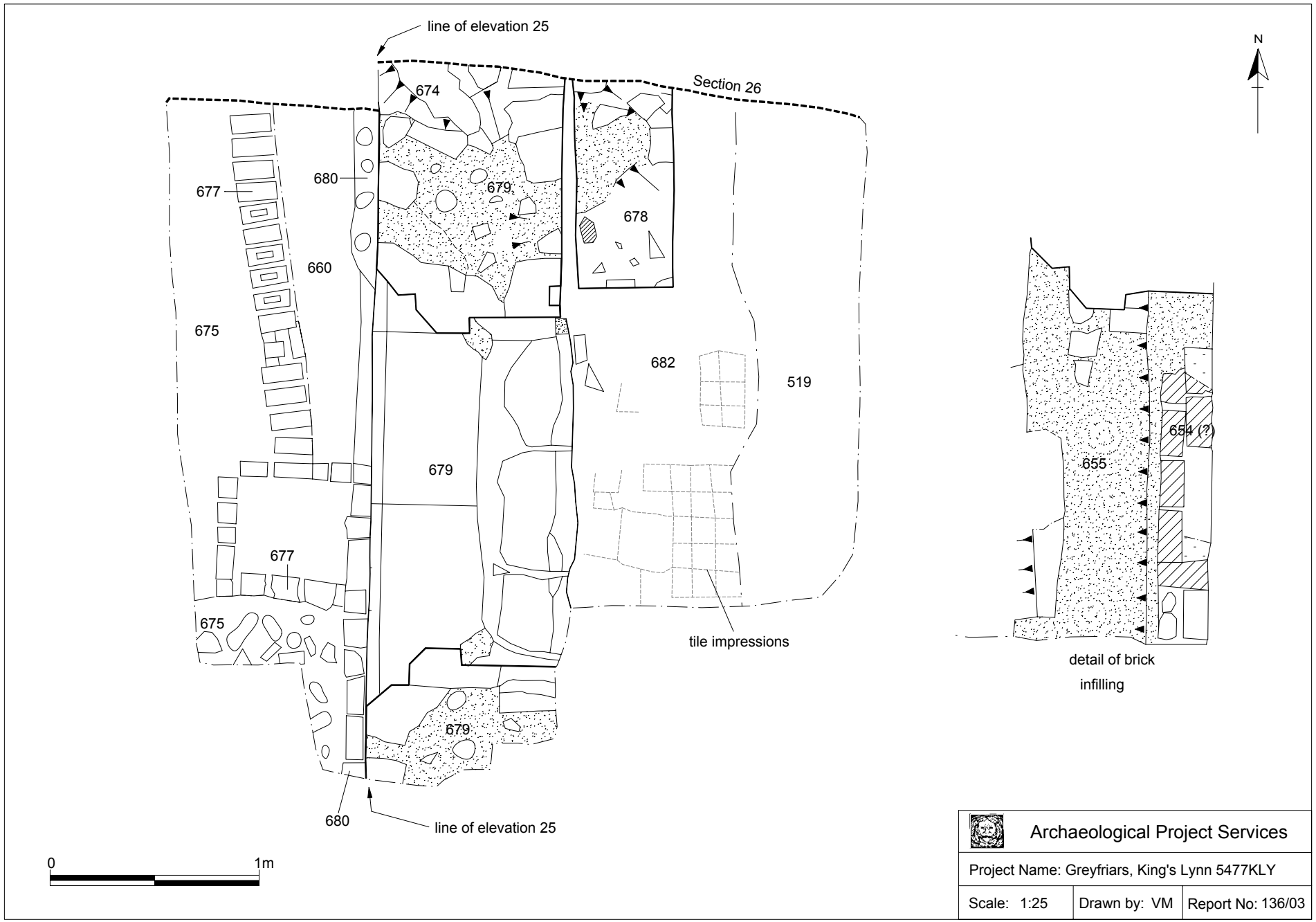

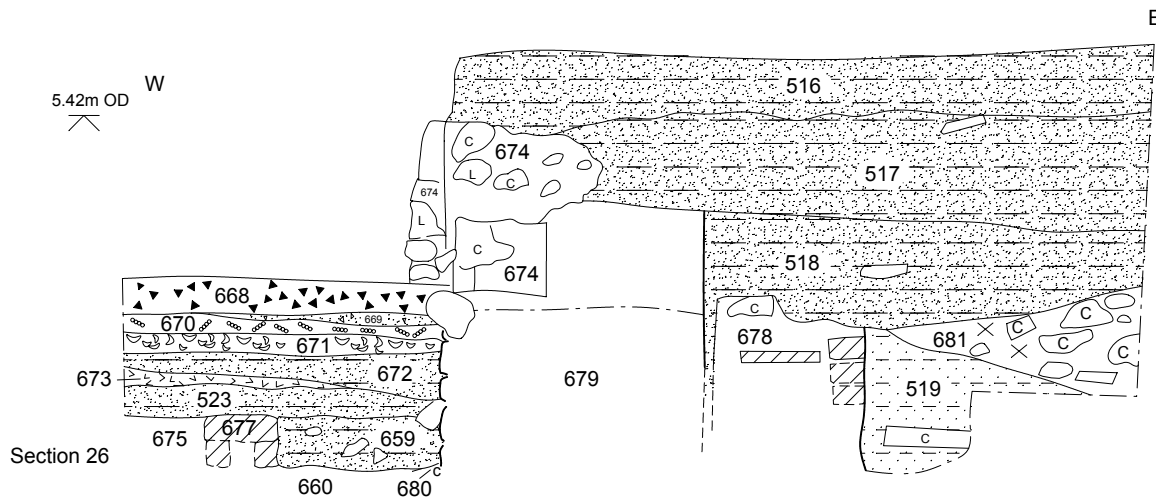
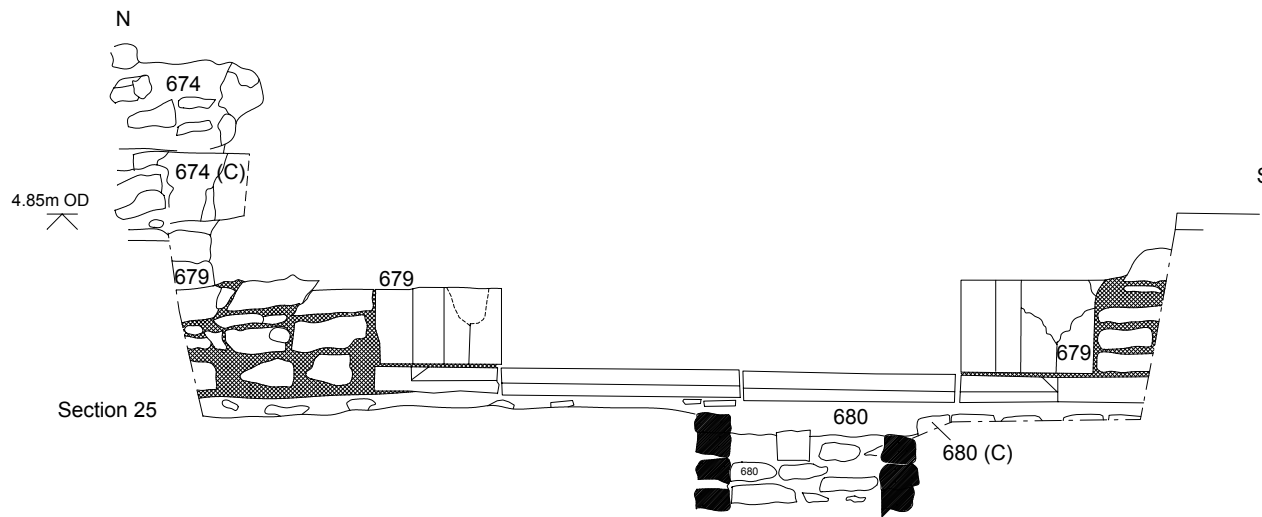


Figure 24 - Trench 9: Plan

 Archaeological Project Services		
Project Name: Greyfriars, King's Lynn 5477KLY		
Scale: 1:25	Drawn by: VM	Report No: 136/03




 Archaeological Project Services		
Project Name: King's Lynn, Greyfriars Tower 5477KLY		
Scale 1:25	Drawn by: SU	Report No: 136/03

Figure 25 - Trench 9: Sections

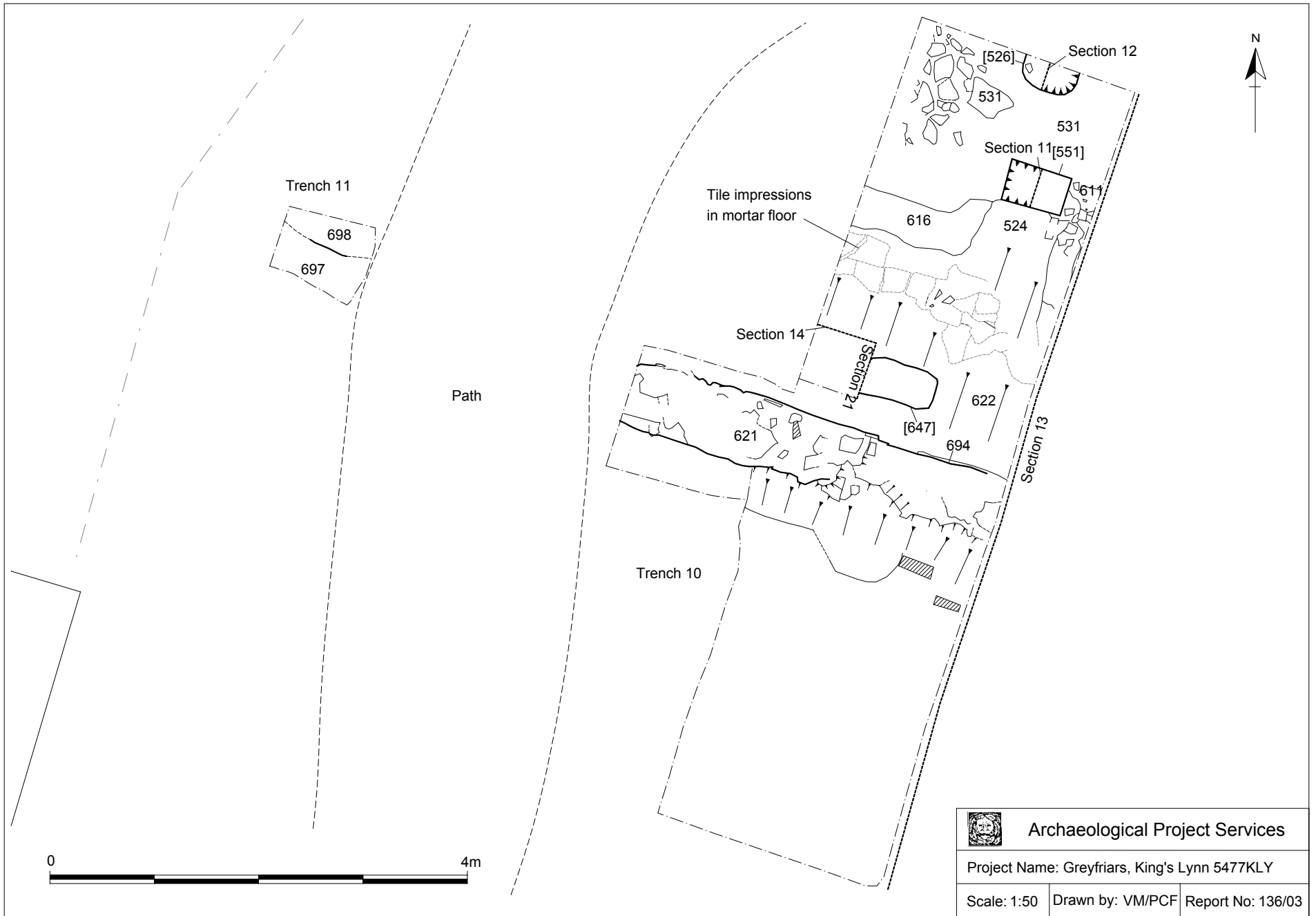
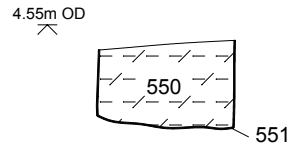
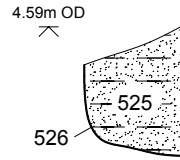


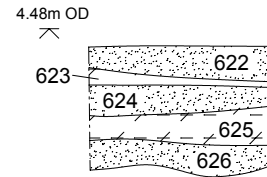
Figure 26 - Trenches 10 and 11: Plan



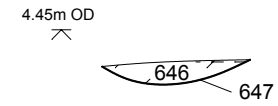
Section 11



Section 12

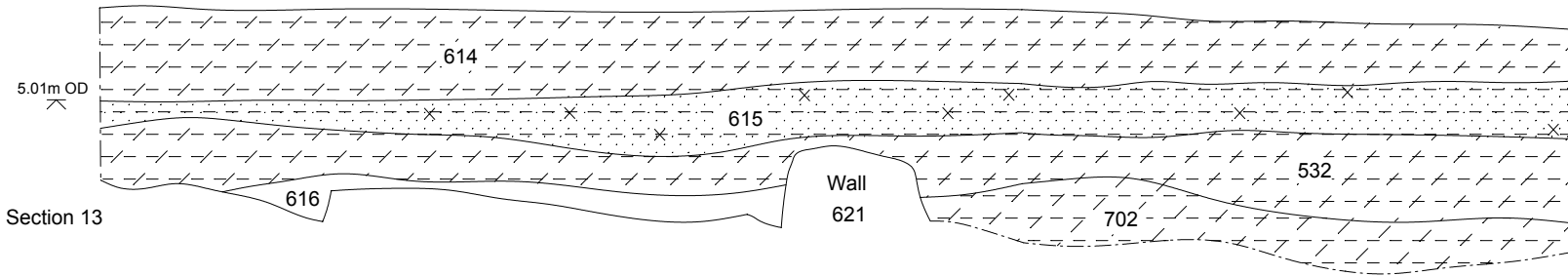


Section 14



Section 21

Scale 1:20



Section 13

Scale 1:40




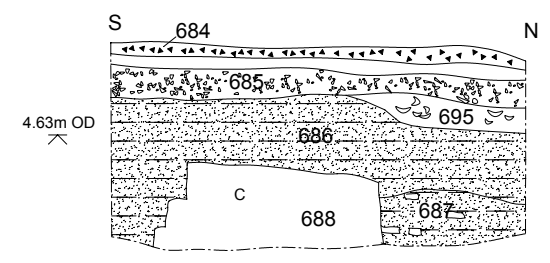
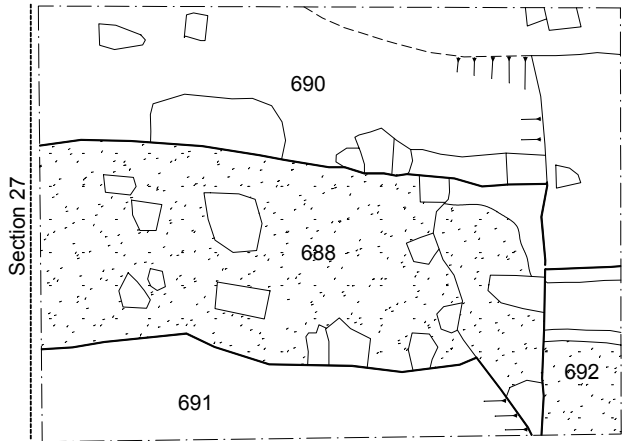
		Archaeological Project Services	
Project Name: Greyfriars, King's Lynn 5477KLY			
		Drawn by: SU	Report No: 136/03

Figure 27 - Trench 10: Sections



Section 27




	Archaeological Project Services	
Project Name: Greyfriars, King's Lynn 5477KLY		
Scale: 1:20	Drawn by: VM/SU	Report No: 136/03

Figure 28 - Trench 12: Plan and Section

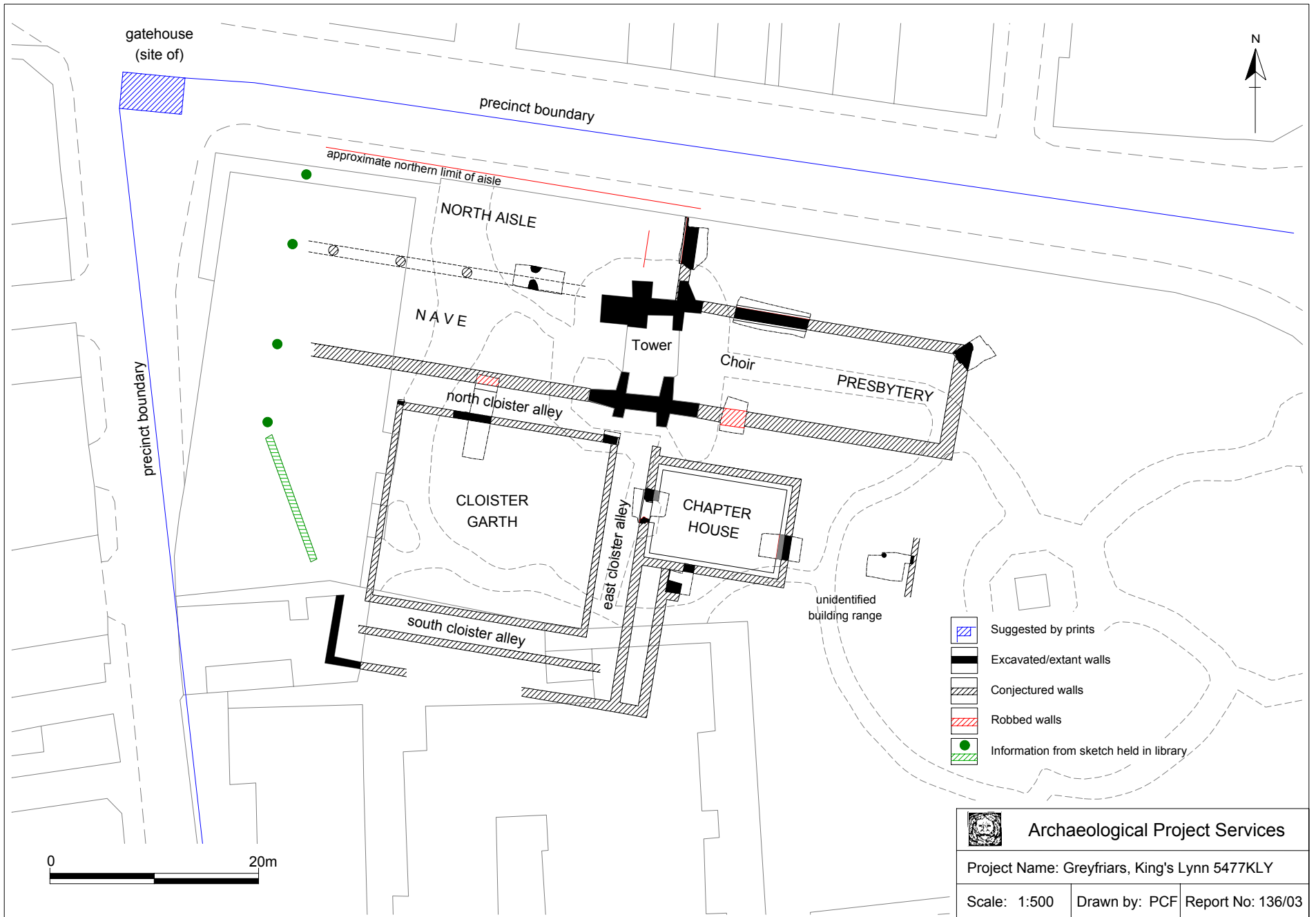
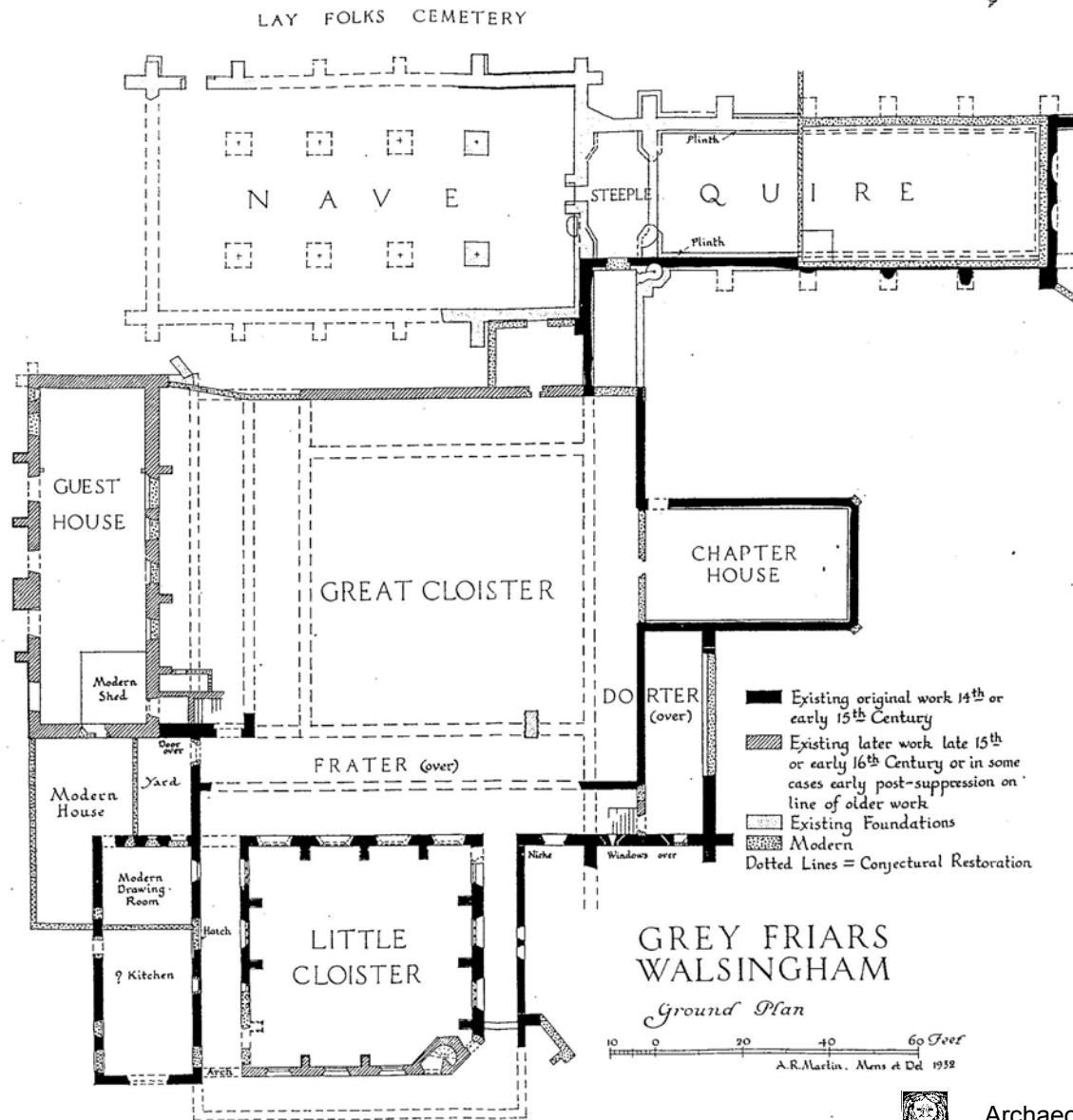



Figure 29 - Plan showing the main features and conjectured layout



0 20m

Figure 30 - Walsingham friary (from Martin 1937)


 Archaeological Project Services
 Project Name: Greyfriars, King's Lynn 5477KLY
 Scale 1:500 Report No: 136/03

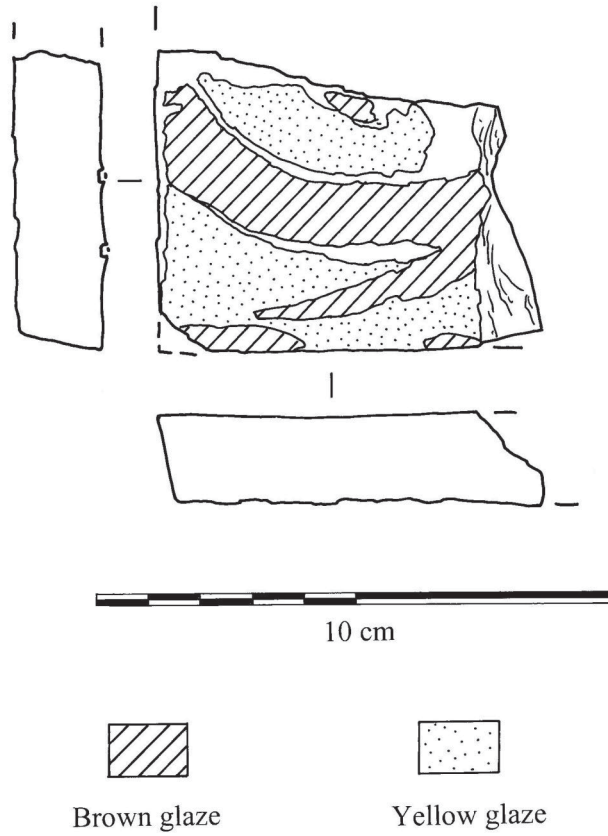
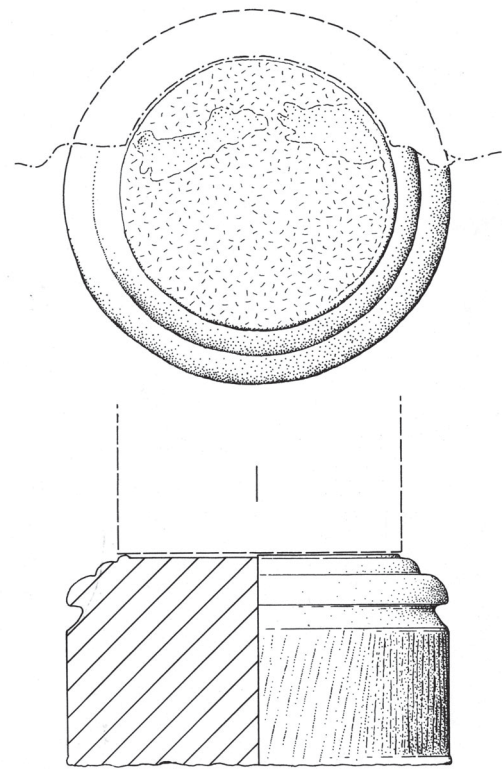
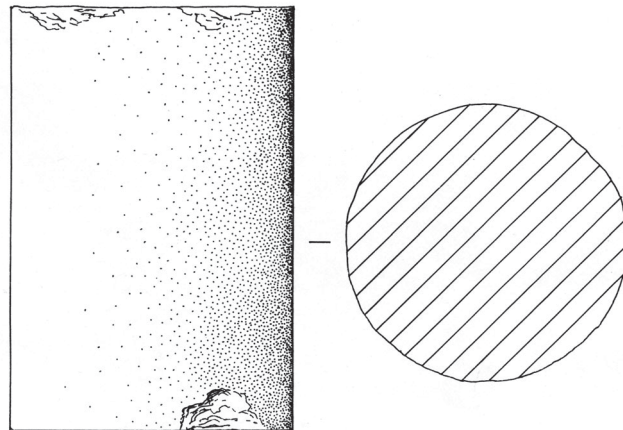


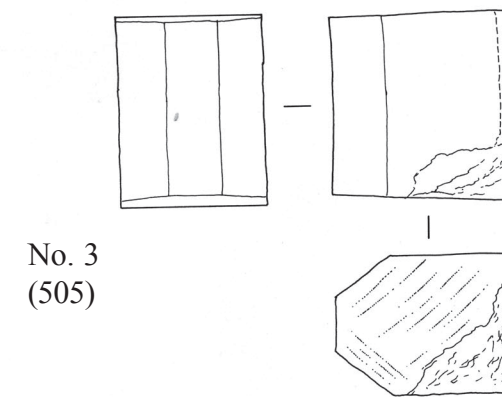
Figure 31 - Decorated floor tile; Context (504)



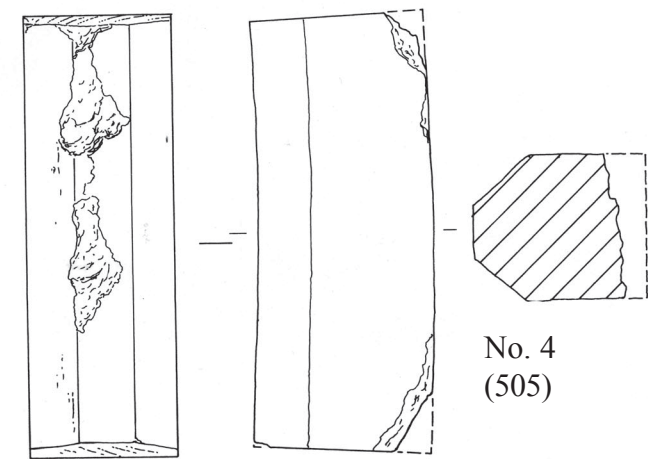
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Column base (666)



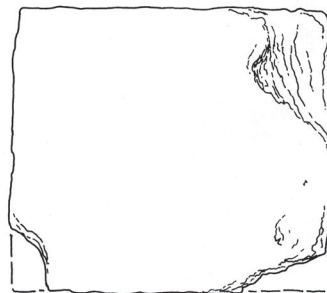
No. 2
Pillar (505)



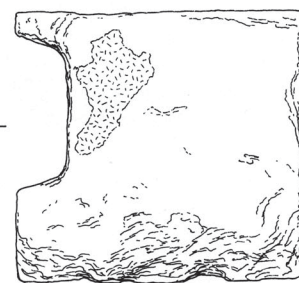
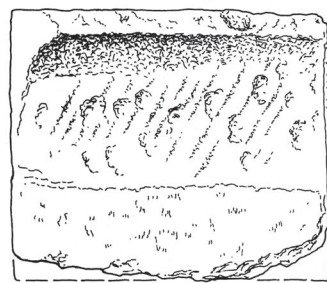
No. 3
(505)



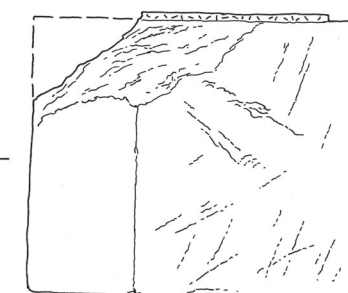
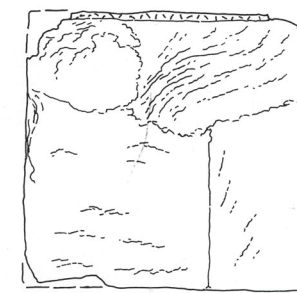
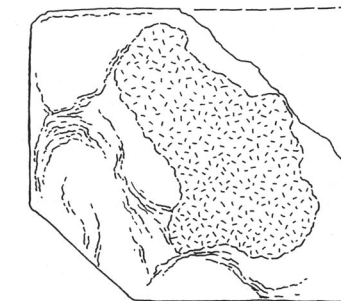
No. 4
(505)



No. 15
(501)



No. 14
(501)



0 50cm

Figure 32 - Architectural fragments

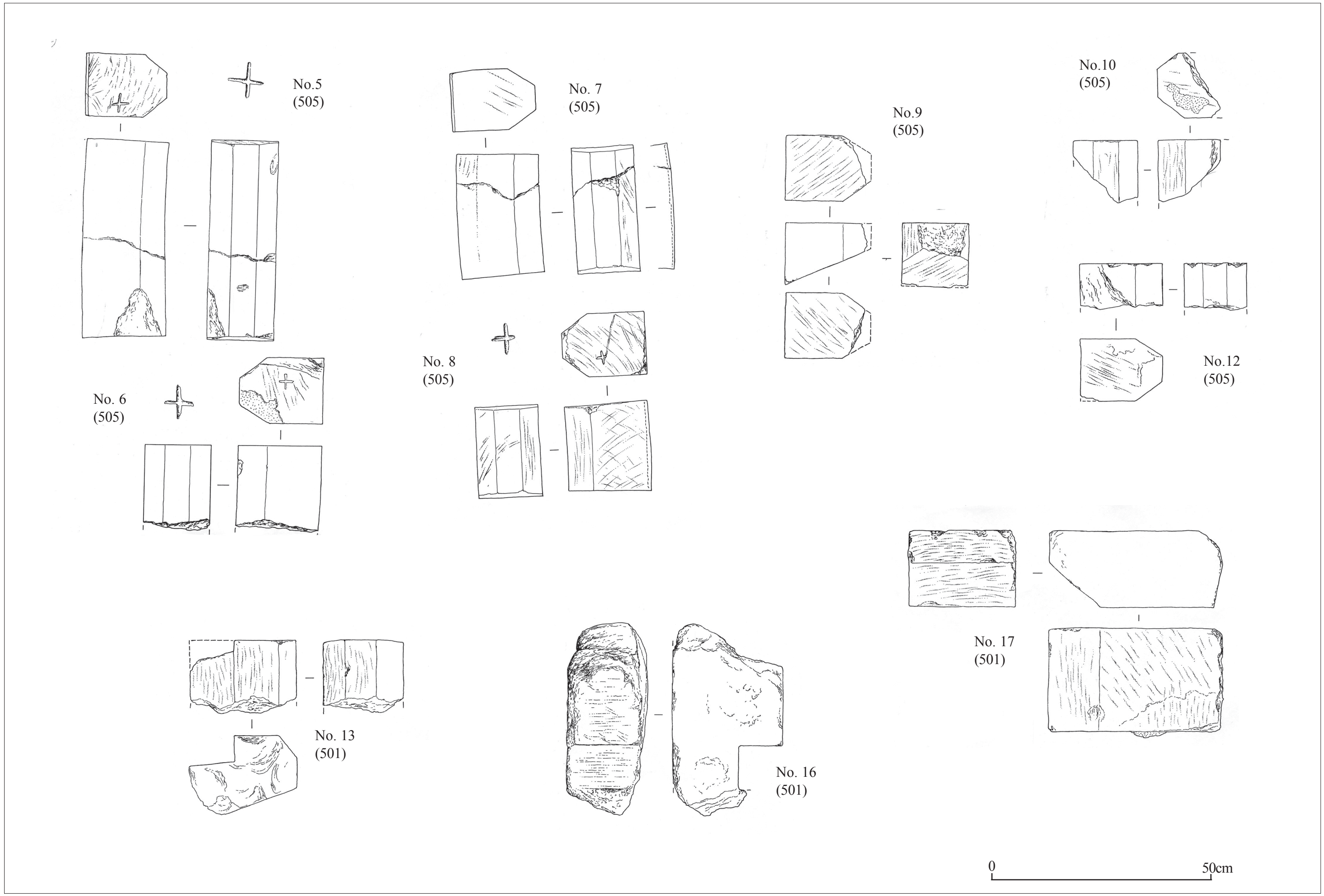


Figure 33 - Architectural fragments

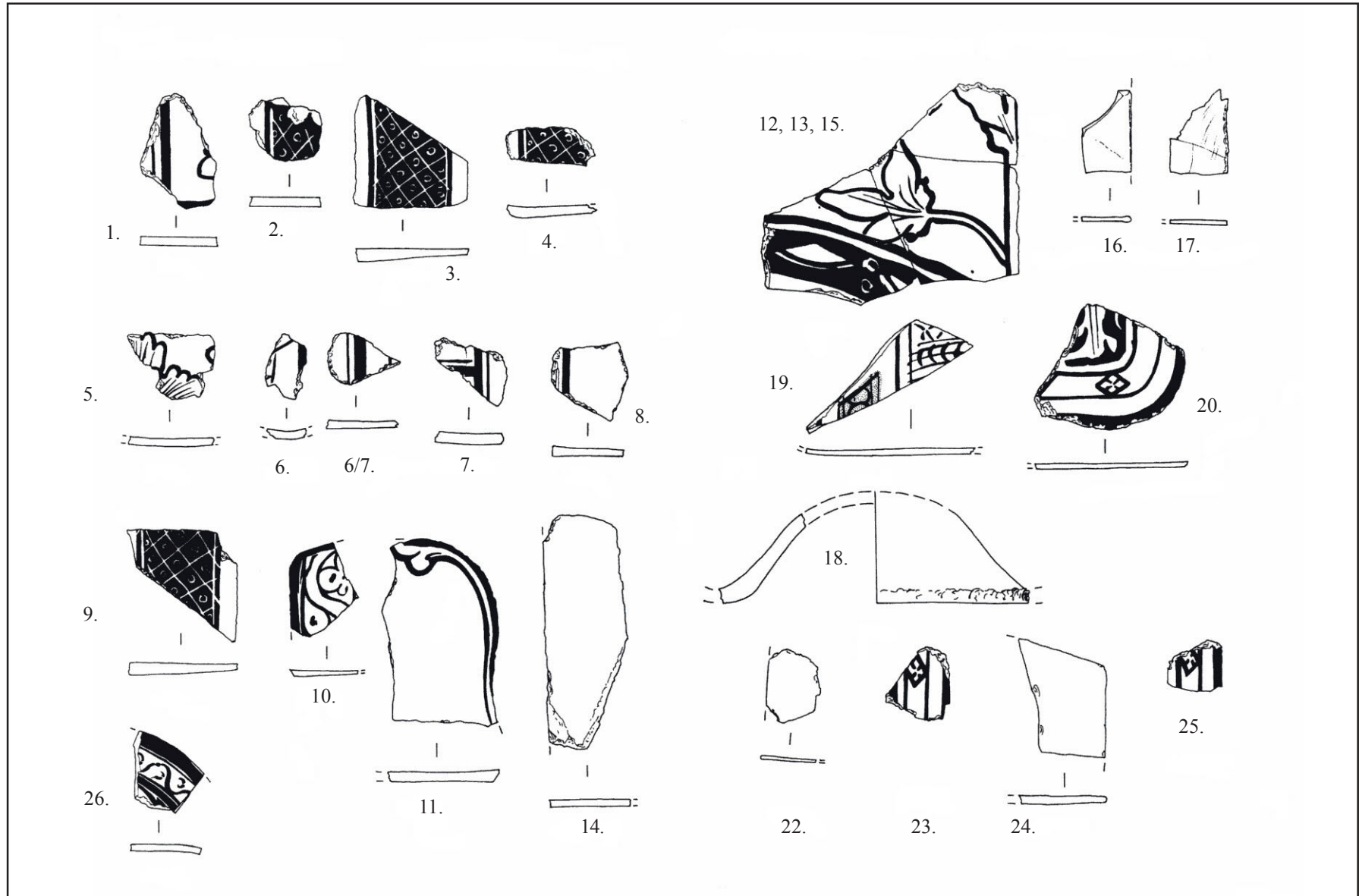


Figure 34 - The window glass and other glass items (scale 1:2)



Plate 1 - General view of Greyfriars Tower, from the southeast



Plate 2 - View of Trench 1 during excavation, looking northeast



Plate 3 - Trench 1 post-excitation, showing the Gault Clay 'pads', looking east



Plate 4 - Trench 1, Section 9, looking southeast



Plate 5 - Trench 2 after cleaning, showing the east wall of the north aisle (508), looking northwest



Plate 6 - Trench 2, elevation of wall (508), looking southwest



Plate 7 - Trench 2, Section 10 showing the limestone plinths, looking south



Plate 8 - View from the top of the tower showing Trenches 2 and 3



Plate 9 - Trench 3 after cleaning, looking east



Plate 10 - Trench 3 showing the limestone plinths (562) in the presbytery wall (513), looking east



Plate 11 - Trench 3 showing the brick lining (514), probably representing the base of the choir stalls, and the presbytery wall (513), looking west



Plate 12 - Trench 3, Section 2, looking west



Plate 13 - Trench 4 showing the east end wall (652) of the presbytery, looking southwest



Plate 14 - Trench 4, elevation of wall (652), looking southwest

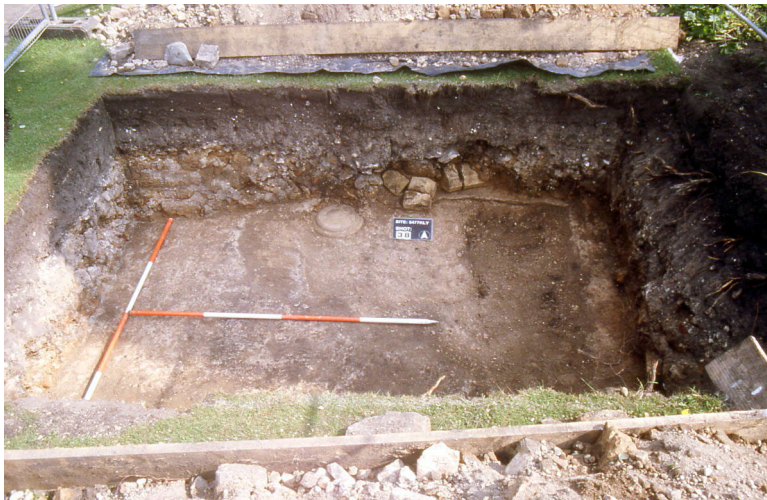


Plate 15 - Trench 5 after cleaning, looking north



Plate 16 - Trench 5, base and column restored. Vaulting ribs can be seen in the section behind. Looking north



Plate 17 - Trench 6 after cleaning, looking southwest



Plate 18 - Trench 6, Section 18, showing the brick base (635) for the stalls on the south side of the presbytery, looking east



Plate 19 - Trench 6, detail showing floor level (637), looking north



Plate 20 - Trench 7, detail of possible 'corridor' room east of the Chapter House, looking south



Plate 21 - Trench 8 after cleaning, looking south



Plate 22 - Trench 8, Section 22, looking west



Plate 23 - Trench 9 during excavation, looking west



Plate 24 - Trench 9, detail of Chapter House doorway (679) and brick bench (678), looking north



Plate 25 - Trench 9, tile impressions on mortar surface (682), looking west



Plate 26 - Trench 10 after cleaning, looking south



Plate 27 - Trench 10, the cloister walk showing tile impressions in mortar surface, looking east



Plate 28 - Trench 10, wall (621), looking north



Plate 29 - Trench 12 after cleaning, looking south



Plate 30 - Trench 12, Section 27, looking west



Plate 31 - Vaulting ribs from (505) showing the curvature of the voussoirs



Plate 32 - Incised cross on bedding joint of voussoir rib

Appendix 1

SPECIFICATION FOR ARCHAEOLOGICAL INVESTIGATIONS AT GREYFRIARS, KING'S LYNN, NORFOLK

1 SUMMARY

- 1.1 *This document comprises a specification for archaeological investigations at Greyfriars, King's Lynn, Norfolk.*
- 1.2 *The Greyfriars tower, Scheduled Monument 172, is the only major architectural survival of the 13th century Franciscan Friary at King's Lynn.*
- 1.3 *The investigations are being undertaken in order to assist in the interpretation of the friary plan.*
- 1.4 *On completion of the fieldwork a report will be prepared detailing the results of the investigation. The report will consist of a text describing and interpreting the archaeological deposits located during the trenching. The text will be supported by illustrations and photographs.*

2 INTRODUCTION

- 2.1 This document comprises a specification for archaeological investigations at Greyfriars, King's Lynn, Norfolk.
- 2.2 The document contains the following parts:
 - 2.2.1 Overview
 - 2.2.2 The archaeological and natural setting
 - 2.2.3 Stages of work and methodologies to be used
 - 2.2.4 List of specialists
 - 2.2.5 Programme of works and staffing structure of the project

3 SITE LOCATION

- 3.1 King's Lynn is located at the southeast corner of The Wash at the edge of the fens of northern Norfolk. The site lies on the southeast side of the town centre, now part of the Tower Gardens, at National Grid Reference TF 6201 1978.

4 PLANNING BACKGROUND

- 4.1 Scheduled Monument Consent for proposed consolidation and restoration works has been granted subject to a condition for a programme of archaeological work. A brief for a programme of trial trenching was produced by the Development Control Archaeologist, Norfolk Landscape Archaeology. The trial trenching may indicate a need for further investigation if significant remains are found and these cannot be preserved *in situ*.

5 SOILS AND TOPOGRAPHY

- 5.1 The site lies at approximately 5m OD. The soils of the site have not been classified as the site is located within an urban area. However, local soils are likely to be Blacktoft or Wisbech Association, both silty calcareous soils, on marine alluvium (Hodge *et al.*, 1984 124; 361). King's Lynn is located at the boundary of this marine alluvium with glaciofluvial and river terrace drift to the east.

6 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 6.1 Of the original friary complex only the Octagonal tower which stood over the cross passage between the nave and chancel of the church survives (Pevsner, 1990). The tower is considered the best surviving example from a Franciscan friary in the country and is a major element of the historic environment of Kings Lynn. The tower itself is thought to be of fourteenth century date and was inserted into the thirteenth century church of which the south doorway into the crossing and a fragment of the nave wall remain
- 6.2 The friary is thought have been founded *c.* 1230-5 (*ibid*), a time around which many of the Mendicant Orders were becoming established around the country. The history of the friary is poorly documented although it is known that the complex was enlarged in 1287 and again in 1364.
- 6.3 Unlike the layout of the buildings of other monastic orders, those of the Greyfriars are poorly understood. The friaries of this order were commonly located in or at the margins of towns, a constraint which could lead to variability in the layout and design of buildings.
- 6.4 Previous investigations have identified some elements of the friary buildings, including the east-end of the chancel, revealed during work undertaken on the George VI Coronation Garden, and layers and floors associated with the complex were recorded during more recent work undertaken by the Norfolk Archaeological Unit. The gatehouse is known to have stood until 1806 and there are paintings which depict post medieval housing abutting the tower.
- 6.5 An architectural survey of the tower undertaken by English Heritage in 1999 identified four phases of building. The first masonry church of the 13th century was radically altered around 1300 and in the later 14th century there was a second phase of refurbishment. The existing lantern tower was added around 1480.
- 6.6 A geophysical survey of the site has also been undertaken, the results of which will be used in conjunction with known information on the layout of the friary to position evaluation trenches.
- 6.7 It has been noted that the role of larger ecclesiastical institutions within urban areas has been infrequently explored and although details of friary layout are becoming better known their impact on their surrounds is little studied (Glazebrook 1997). Identified research areas include examining the impact of ecclesiastical institutions upon urban environment and life; the technological and artistic influence of the church on the local economy and culture; the social role of the church; and, with particular relevance to King's Lynn as an international trading centre, the role of the church as an agent for dissemination of international culture (Brown and Glazebrook 2000).

7 AIMS AND OBJECTIVES

- 7.1 The overall aim of the project will be the interpretation of the friary plan through the information the trial trenching will provide of its layout and phasing.
- 7.2 The objectives of the work will be to:
 - 7.2.1 Establish the type of archaeological activity that may be present within the site.
 - 7.2.2 Determine the likely extent of archaeological activity present within the site.
 - 7.2.3 Determine the date and function of the archaeological features present on the site.
 - 7.2.4 Determine the state of preservation of the archaeological features present on the site.
 - 7.2.5 Determine the spatial arrangement of the archaeological features present within the site.
 - 7.2.6 Determine the extent to which the surrounding archaeological features extend into the application area.
 - 7.2.7 Establish the way in which the archaeological features identified fit into the pattern of occupation

and land-use in the surrounding landscape.

8 TRIAL TRENCHING

8.1 Reasoning for this technique

8.1.1 Trial trenching enables the *in situ* determination of the sequence, date, nature, depth, environmental potential and density of archaeological features present on the site.

8.1.2 The trial trenching will consist of the excavation of ten separate trenches. These will be located (as depicted on attached plan) to address the following specific questions.

- Trench 1- Investigate both the nave and its north aisle along the column bases
- Trench 2- Examine the exterior, the entire width of the nave's north aisle and its relationship to the crossing tower
- Trench 3- Examine two buttresses of the chancel north wall and the sequence of the chancel wall
- Trench 4- Establish the nature of the chancel northeast corner.
- Trench 5- Investigate the anomaly discovered during the geophysical survey to the south of the church and east of the proposed chapter house.
- Trench 6- Examine the south chancel wall and the area directly to the south of the chancel and north of the possible chapter house
- Trench 7- Investigate the east wall of the potential chapter house and the interior and exterior anomalies discovered through geophysical survey.
- Trench 8- Investigate the anomaly within the cloisteral building south of the presumed chapter house.
- Trench 9- Examine the presumed chapter house entrance, the cloister walk sequence and the chapter house sequence.
- Trench 10- Investigate the relationship between the nave, the cloister walk and the inner cloister with particular attention given to the anomaly identified in the cloister garth

8.2 General Considerations

8.2.1 All work will be undertaken following statutory Health and Safety requirements in operation at the time of the evaluation.

8.2.2 The work will be undertaken according to the relevant codes of practice issued by the Institute of Field Archaeologists (IFA). Archaeological Project Services is an IFA registered archaeological organisation (no. 21) managed by a member of the institute (MIFA).

8.2.3 All work will be carried out in accordance with *Standards for Field Archaeology in the East of England, 2003*.

8.2.4 Any artefacts found during the investigation and thought to be treasure, as defined by the Treasure Act 1996, will be removed from site to a secure store and the discovery promptly reported to the appropriate coroner's office.

- 8.2.5 Excavation of the archaeological features exposed will only be undertaken as far as is required to determine their date, sequence, density and nature. Not all archaeological features exposed will necessarily be excavated. However, the evaluation will, as far as is reasonably practicable, determine the level of the natural deposits to ensure that the depth of the archaeological sequence present on the site is established.
- 8.2.6 Open trenches will be fenced with high visibility fencing and/or covered while not attended. Subject to the consent of the archaeological curator, and following the appropriate recording, the trenches, particularly those of excessive depth, will be backfilled as soon as possible to minimise any health and safety risks.
- 8.2.7 The trenches, all exposed surfaces, excavation horizons, and spoil, will be regularly and repeatedly metal-detected to ensure optimum recovery of artefacts. Any identified artefacts will be excavated from its parent context in normal stratigraphic sequence.
- 8.2.8 Prior to commencement of site operations, Archaeological Project Services will liaise with the Norfolk SMR to ensure that the Site Code and Context Numbering system is compatible with the Norfolk SMR.
- 8.3 Methodology
- 8.3.1 Excavation of topsoil and overburden will undertaken as appropriate either by hand or mechanical excavator to the upper surface of any significant archaeological remains. Thereafter, the trenches will be cleaned by hand to enable the identification and analysis of the archaeological features exposed.
- 8.3.2 A metal detector will be used during normal hand excavation in order to maximise artefact retrieval. The spoil heap will also be scanned with a metal detector.
- 8.3.3 Investigation of the features will be undertaken only as far as required to determine their date, form and function. The work will consist of half- or quarter-sectioning of features as required and, where appropriate, the removal of layers. Should features be located which may be worthy of preservation *in situ*, excavation will be limited to the absolute minimum, (*ie* the minimum disturbance) necessary to interpret the form, function and date of the features.
- 8.3.4 The archaeological features encountered will be recorded on Archaeological Project Services pro-forma context record sheets. The system used is the single context method by which individual archaeological units of stratigraphy are assigned a unique record number and are individually described and drawn. All context and site numbering used will be compatible with the Norfolk Sites and Monuments Record.
- 8.3.5 Plans of features will be drawn at a scale of 1:20 and sections at a scale of 1:10. Should individual features merit it, they will be drawn at a larger scale.
- 8.3.6 Throughout the duration of the trial trenching a photographic record consisting of black and white prints (reproduced as contact sheets) and colour slides will be compiled. The photographic record will consist of:
- the site before the commencement of field operations.
 - the site during work to show specific stages of work, and the layout of the archaeology within individual trenches.
 - individual features and, where appropriate, their sections.
 - groups of features where their relationship is important.
 - the site on completion of field work

- 8.3.7 Should human remains be encountered, they will be left *in situ* with excavation being limited to the identification and recording of such remains. The archaeological curator, local environmental health department and, if appropriate, the coroner and the police will be informed. If removal proves necessary, appropriate Home Office licences will be obtained before excavation of human remains commences.
- 8.3.8 Finds collected during the fieldwork will be bagged and labelled according to the individual deposit from which they were recovered, ready for later washing and analysis. All finds work will be carried out to accepted professional standards and the Institute of Field Archaeologists *Guidelines for Finds Work* (1992).
- 8.3.9 Conservation of artefacts will be carried out by Lincoln City and County Museum. The resources available for conservation is dependent on the quantity and type of artefacts recovered from the site.
- 8.3.10 The spoil generated during the evaluation will be mounded along the edges of the trial trenches with the topsoil being kept separate from the other material excavated for subsequent backfilling.
- 8.3.11 The precise location of the trenches within the site and the location of site recording grid will be established by an EDM survey or tape survey to established features recorded on Ordnance Survey maps, as appropriate.
- 8.3.12 Samples will be taken from all waterlogged feature fills. Otherwise, samples will be taken from primary and secondary fills of ditches and pits, the level of sampling being appropriate to the content of the individual feature. Samples will be retained from approximately 50% of half-sectioned postholes. All sampling will follow the procedures in *A Guide to Sampling Archaeological Deposits for Environmental Analysis* (Murphy and Wiltshire 1994).
- 8.3.13 Representative samples of structural masonry will be retained. The retention of unworked structural stone and plain ashlar will be determined by the number of geological types present. All dressed, inscribed or moulded stone masonry will be retained except where there are logistical, or archaeological considerations, not to do so.

9 ENVIRONMENTAL ASSESSMENT

- 9.1 If relevant, during the evaluation specialist advice may be obtained from an environmental archaeologist. If necessary, the specialist will visit the site and will prepare a report detailing the nature of the environmental material present on the site and its potential for additional analysis should further stages of archaeological work be required. The results of any such specialist's assessment will be incorporated into the final report.

10 POST-EXCAVATION AND REPORT

- 10.1 Post-excavation assessment and analysis will be undertaken in accordance with English Heritage's *Management of Archaeological Projects* 2nd edition 1991. An assessment report will be produced outlining the significance of the findings and outlining proposals, where relevant, for full analysis and reporting. Should this assessment determine that full analysis and publication is merited for part or whole of the archaeological remains at the site, a detailed account of all the work (including previous investigations at the site) carried out and the results obtained will be presented in a final report on completion of all fieldwork and analysis.
- 10.2 Stage 1 Initial processing of site archive
 - 10.2.1 On completion of site operations, the records and schedules produced during the trial trenching will be checked and ordered to ensure that they form a uniform sequence constituting a level II archive. A stratigraphic matrix of the archaeological deposits and features present on the site will be prepared. All photographic material will be

catalogued: the colour slides will be labelled and mounted on appropriate hangers and the black and white contact prints will be labelled, in both cases the labelling will refer to schedules identifying the subject/s photographed.

10.2.2 All finds recovered during the trial trenching will be washed, marked, bagged and labelled according to the individual deposit from which they were recovered. Any finds requiring specialist treatment and conservation will be sent to the Conservation Laboratory at the City and County Museum.

10.3 Stage 2 Preparation of Assessment Report to include:

10.3.1 Introduction detailing the scope of the project, circumstances and date of the fieldwork and previous work undertaken on the site, comments on the organisation of the report.

10.3.2 A discussion of the original research aims and summary of the documented history of the site.

10.3.3 An interim statement on the results of the fieldwork.

10.3.4 Summary of the site archive and work carried out for the assessment, with reference to:
·site records: the quantity of material and outline of work done in initial post-excavation phase.

·finds: factual summary of the material and records and assessment of quantity, range, variety and preservation of the material.

·environmental material: factual summary of material recovered and each type of sample; assessment of quantity, range, variety and preservation of the material.

·documentary records: list of relevant sources, and discussion of quantity, variety and intensity of study of sources used.

10.3.5 Discussion of the potential of the data and extent to which the site archive might meet the research aims of the project and statement of the potential of the data in developing new research aims.

10.3.6 A summary of the potential of the data in terms of local, regional, national and international importance.

10.4 Stage 3 Updated project design and report:

10.4.1 A review will be held in consultation with the archaeological curator and the relevant specialists and an Updated Project Design will be prepared setting out a programme for completing the analytical research, publishing the results and depositing the archive in an approved museum. A timetable, including a Critical Path Analysis and the aims of the specialist research will be identified and agreed.

10.4.2 Processing and primary research will include the analysis and investigative conservation of material directly relevant to the chronology, economy, organisation and environment of the site, and the ordering of other classes of data. A comprehensive stratigraphic analysis will be completed, a site narrative prepared and specialist reports on artefacts and environmental data obtained and incorporated into the report synthesis. The report to be completed within two years of the completion of site works.

11 **ARCHIVE**

11.1 The documentation, finds, photographs and other records and materials generated during the evaluation will be sorted and ordered in accordance with the procedures in the Society of Museum Archaeologists' document *Transfer of Archaeological Archives to Museums* (1994), and any

additional local requirements, for long term storage and curation. This work will be undertaken by the Finds Supervisor, an Archaeological Assistant and the Conservator (if relevant). The archive will be deposited with the receiving museum as soon as possible after completion of the project, and within 12 months of that completion date.

- 11.2 The archive will be microfilmed. The silver master will be transferred to the RCHME and a diazo copy will be deposited with the Norfolk Sites and Monuments Record.
- 11.3 Prior to the project commencing, Norfolk Museums Service will be contacted to obtain their agreement to receipt of the project archive and to establish their requirements with regards to labelling, ordering, storage, conservation and organisation of the archive.
- 11.4 Upon completion and submission of the evaluation report, the landowner will be contacted to arrange legal transfer of title to the archaeological objects retained during the investigation from themselves to the receiving museum. The transfer of title will be effected by a standard letter supplied to the landowner for signature.

12 REPORT DEPOSITION

- 12.1 Copies of the evaluation report will be sent to: the client and the Principal Landscape Archaeologist, Norfolk Landscape Archaeology (3 copies); two copies for Norfolk County Sites and Monuments Record and the third for King's Lynn And West Norfolk Borough Council Planning Department. A fourth copy of the report will be supplied to the English Heritage Regional Advisor for Archaeological Science.

13 PUBLICATION

- 13.1 A report of the findings of the excavation will be submitted for inclusion in the journal *Norfolk Archaeology*. Notes or articles describing the results of the investigation will also be submitted for publication in the appropriate national journals: *Post-medieval Archaeology*, *Medieval Archaeology* and *Journal of the Medieval Settlement Research Group* for medieval and later remains, and *Britannia* for discoveries of Roman date.
- 13.2 It is expected that the post-excavation assessment will establish that fuller reporting and publication is required. If such is the case, the format, nature and extent of such publication will be determined by review of the assessment in consultation with the archaeological curator, though a substantive report in the journal *Norfolk Archaeology* is envisaged.

- 13.3 Details of the investigation will also be input to the Online Access to the Index of Archaeological Investigations (OASIS).

14 CURATORIAL MONITORING

- 14.1 Curatorial responsibility for the project lies with Norfolk Landscape Archaeology. As much notice as possible, ideally fourteen days, will be given in writing to the curator prior to the commencement of the project to enable them to make appropriate monitoring arrangements. However, the curator will be contacted at the earliest opportunity to seek reduction, or waiving, of this notification period.

15 VARIATIONS TO THE PROPOSED SCHEME OF WORKS

- 15.1 Variations to the scheme of works will only be made following written confirmation of acceptability from the archaeological curator.
- 15.2 Should the archaeological curator require any additional investigation beyond the scope of the brief for works, or this specification, then the cost and duration of those supplementary examinations will be negotiated between the client and the contractor.

16 STAFF TO BE USED DURING THE PROJECT

- 16.1 The work will be directed by Tom Lane MIFA, Senior Archaeologist, Archaeological Project Services. The on-site works will be supervised by an Archaeological Supervisor with knowledge of archaeological investigations of this type. Archaeological excavation will be carried out by Archaeological Technicians, experienced in projects of this type.
- 16.2 The following organisations/persons will, in principle and if necessary, be used as subcontractors to provide the relevant specialist work and reports in respect of any objects or material recovered during the investigation that require their expert knowledge and input. Engagement of any particular specialist subcontractor is also dependent on their availability and ability to meet programming requirements.

<u>Task</u>	<u>Body to be undertaking the work</u>
Conservation	Conservation Laboratory, City and County Museum, Lincoln.
Pottery Analysis	Prehistoric: Dr D Knight, Trent and Peak Archaeological Trust Roman: B Precious, independent specialist, or local specialist if required by archaeological curator Anglo-Saxon-medieval: D Hall/ P Blinkhorn/ H Healey independent specialists, or local specialist if required by archaeological curator.
Other Artefacts	J Cowgill, independent specialist (formerly City of Lincoln Archaeology Unit)
Human Remains Analysis	R Gowland, independent specialist
Animal Remains Analysis	Environmental Archaeology Consultancy
Environmental Analysis	Environmental Archaeology Consultancy
Soil Assessment	Dr Charly French, independent specialist
Pollen Assessment	Pat Wiltshire, independent specialist
Wood Assessment	Maisie Taylor, Soke Archaeological Services Ltd
Masonry/dressed stone Assessment	Jeremy Ashbee, independent specialist
Radiocarbon dating	Beta Analytic Inc., Florida, USA
Dendrochronology dating	University of Sheffield Dendrochronology Laboratory

17 **PROGRAMME OF WORKS**

- 17.1 The site works are timetabled to take 12 days, depending on the quantity and complexity of archaeological remains encountered. The duration of the post-excavation work cannot be clearly defined as it involves assessment and subsequent analysis and reporting. However, for the initial assessment report, the post-excavation work is timetabled to take about 15 days, within a programme of four to six working weeks depending on the quantity and complexity of archaeological remains encountered and the availability of external specialists.

18 **INSURANCES**

- 18.1 Archaeological Project Services, as part of the Heritage Trust of Lincolnshire, maintains Employers Liability insurance to £10,000,000. Additionally, the company maintains Public and Products Liability insurances, each with indemnity of £5,000,000. Copies of insurance documentation can be supplied on request.

19 **COPYRIGHT**

- 19.1 Archaeological Project Services shall retain full copyright of any commissioned reports under the *Copyright, Designs and Patents Act 1988* with all rights reserved; excepting that it hereby provides an exclusive licence to the client for the use of such documents by the client in all matters directly relating to the project as described in the Project Specification.
- 19.2 Licence will also be given to the archaeological curators to use the documentary archive for educational, public and research purposes.
- 19.3 In the case of non-satisfactory settlement of account then copyright will remain fully and exclusively with Archaeological Project Services. In these circumstances it will be an infringement under the *Copyright, Designs and Patents Act 1988* for the client to pass any report, partial report, or copy of same, to any third party. Reports submitted in good faith by Archaeological Project Services to any Planning Authority or archaeological curator will be removed from said Planning Authority and/or archaeological curator. The Planning Authority and/or archaeological curator will be notified by Archaeological Project Services that the use of any such information previously supplied constitutes an infringement under the *Copyright, Designs and Patents Act 1988* and may result in legal action.
- 19.4 The author of any report or specialist contribution to a report shall retain intellectual copyright of their work and may make use of their work for educational or research purposes or for further publication.

20 **BIBLIOGRAPHY**

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Appendix 2

CONTEXT DESCRIPTIONS

Unstratified Finds Contexts

No.	Location
500	Trench 10 unstratified finds
501	Trench 9 unstratified finds
502	Trench 6 unstratified finds
503	Trench 3 unstratified finds
504	Trench 1 unstratified finds
505	Trench 5 unstratified finds
527	Trench 4 unstratified finds
588	Trench 3 unstratified finds
589	Trench 2 unstratified finds
610	Trench 7 unstratified finds
683	Trench 6 unstratified finds

Phases

Phase I	Pre Friary deposits
Phase II	Friary deposits
Phase III	Post-medieval deposits
Phase IV	Recent deposits

Trench 1

No.	Description	Interpretation	Phase
541	Cancelled context		
542	Soft dark grey silty sand, 0.3m thick	Topsoil	IV
543	Firm light to mid grey silty sand, 0.75m thick	Dumped deposit	IV
544	Firm light to mid grey silty sand with gravel	Dumped deposit	IV
545	Firm mid brown silty sand, 0.64m thick	Former topsoil	IV
546	Firm light greyish brown silty sand, 0.14m thick	Soil build up	III
547	Hard off white mortar and sand, 40mm thick	Mortar surface	II
548	Firm mid to dark greenish yellow clay (?Gault Clay)	Pillar foundation?	II
549	Firm light brown silty sand, 0.18m thick	Consolidation deposit	II
573	Cancelled context		
574	Firm light to mid grey sandy silt, 0.46m thick	Dumped deposit	IV
575	Firm dark grey silty sand and gravel, 0.72m thick	Former topsoil	IV
576	Firm dark grey silty sand with gravel, 0.6m thick	Soil build up	III
577	Firm light brown silty sand, 0.14m thick	Soil build up	III
578	Firm light to mid brown silty sand, 0.16m thick	Soil build up	III
579	Firm mid yellowish brown silty sand with gravel, 0.3m thick	Soil build up	III
580	Firm mid yellowish brown silty sand with gravel, 0.4m thick	Soil build up	III
581	Friable mixed mid yellow, mid grey and mid brown sand, 0.18m thick	Consolidation deposit	II

No.	Description	Interpretation	Phase
582	Firm mid brown sand with gravel, 0.22m thick	Consolidation deposit	II
583	Firm dark brown clayey silt, 0.34m thick	Consolidation deposit	II
584	Hard dark greenish yellow clay (?Gault Clay)	Pillar foundation	II
585	Firm mid brown silty sand with gravel, 0.44m thick	Soil build up	III
586	Firm dark brown silty sand, 0.25m thick	Consolidation deposit	II
594	Firm mid grey sandy silt	Soil build up	III
595	Soft dark yellow sand	Consolidation deposit	II
596	Soft dark yellowish brown sandy clay	Consolidation deposit	II
597	Hard dark brown sand, clay and silt with gravel	Consolidation deposit	II
598	Sub-circular feature, 0.32m by 0.28m by 0.24m deep, tapering point	Posthole	III
599	Firm dark grey silty clay	Fill of (598)	III
600	Hard mid to light brown sandy silt with gravel	Consolidation deposit	II
601	Oval feature, 1.26m long by 0.6m wide by 60mm deep, shallow sides and flattish base	Pit	III
602	Soft dark grey sandy silt	Fill of (601)	III

Trench 2

No.	Description	Interpretation	Phase
506	Firm mid greyish brown clayey sand, 0.25m thick	Soil build up	III
507	Firm light to mid greenish grey silty clay	Soil build up	III
508	Carstone and mortar foundation course with limestone plinth, stepped foundation, aligned north-south, length 4.9m, width 1.36m and >0.48m high	East north aisle wall	II
521	Soft mid brownish grey silty sand, >0.4m thick	Soil build up	III
522	Rectangular brick (228mm x 120mm x 60mm) structure, stretcher bond, 1.48m by 1.18m in extent, 0.35m thick	Manhole	III
564	Firm dark grey silty sand	Backfill within (522)	III
565	Rectangular feature, 1.7m long by 1.4m wide by 0.34m deep, vertical sides	Cut for (522)	III
566	Firm mid yellowish brown silty sand	?Demolition deposit	III
567	Firm dark yellow mortar, 0.14m thick	Demolition deposit	III
568	Loose light grey gravel and silty sand, 120mm thick	Path	IV
569	Loose dark yellow sand and gravel, 50mm thick	Former path	IV
570	Loose dark brownish grey sand, 0.62m thick	Topsoil	IV
571	Soft light greyish yellow sand, 0.26m thick	Dumped deposit	III
572	Loose dark brownish grey silty sand with gravel, 0.49m thick	Soil build up	III
590	Loose light yellow mortar, 0.16m thick	Demolition deposit	III
591	Firm dark grey silty sand, 0.2m thick	Soil build up	III
592	Loose light yellow mortar, 70mm thick	Dumped deposit	III

No.	Description	Interpretation	Phase
593	Brick (208mm x 104mm x 60mm) structure, possible stretcher bond, aligned north-south, 1.26m long by 0.39m high	Wall	III

Trench 3

No.	Description	Interpretation	Phase
510	Soft dark greyish brown silty sand, 0.2m thick	Soil build up	III
511	Friable mid light greenish brown silty sand with frequent mortar flecks, 0.15m thick	Demolition deposit	III
512	Firm light yellowish brown silty sand, Carstone fragments and mortar	Demolition deposit	III
513	Carstone structure, unfinished stone in rough coursing, aligned east-west, stepped foundation, 7.16m long by 1.32m (1.04m) wide and 0.62m high	North chancel wall	II
514	Brick (235mm x 120mm x 40mm) structure, >2.2m long by 0.24m wide, forming an inner wall to (513)	Brick lining	II
515	Brick (235mm x 120mm x 40mm) structure, 0.2m long by 0.13m wide by 0.3m high, forming an inner wall to (513)	Brick lining	II
528	Soft dark brownish grey sandy silt with mortar fragments, 0.25m thick	Demolition deposit	III
529	Soft mid greyish brown sandy silt, 0.32m thick	Soil build up	III
530	Soft mid brown sandy silt with mortar fragments, >0.15m thick	Former topsoil	II
552	Soft mid greyish brown silty sand, 0.21m thick	Demolition deposit	III
553	Loose mid to light brown sandy silt with brick, tile, Carstone fragments and mortar, >0.24m thick	Demolition deposit	III
554	Firm mid to light brown clayey silt	Demolition deposit	III
555	Loose dark greyish brown and light brownish yellow sandy silt and mortar, 0.12m thick	Dumped deposit	III
556	Loose dark brownish grey silty sand, 0.32m thick	Topsoil	IV
557	Loose mixed light yellowish brown and dark greyish brown brick rubble and mortar fragments, 0.32m thick	Demolition deposit	III
558	Loose light yellowish brown mortar fragments with oyster shell, 110mm thick	Dumped deposit	III
559	Loose mixed mid to dark greyish brown and light brownish yellow sandy silt and mortar, 0.33m thick	Demolition deposit	III
560	Soft and friable mid brown silty sand with gravel, 0.2m thick	Dumped deposit	III
561	Carstone structure, roughly coursed, variation in wall (513)	Infilling	II
562	Limestone chamfer course, rough hewn, associated with wall (513)	String course	II
563	Brick (110mm wide x 55mm) and Carstone structure, 1.88m extent and 0.23m thick	Re-facing of wall (513)	II
587	Loose dark greyish brown silty sand with gravel, 0.22m thick	Dumped deposit	III
699	Firm light reddish brown clayey silt, >0.2m thick	Consolidation layer	I

Trench 4

No.	Description	Interpretation	Phase
650	Loose mid grey sandy silt with gravel, 0.3m thick	Topsoil	IV
651	Firm mid greyish brown sandy silt with gravel, 0.4m thick	Dumped deposit	III
652	Carstone structure, rough coursing, stepped foundation, 1.76m long by 1.04m wide by >0.38m high	East wall of chancel	II
653	Soft dark grey silty sand, 80mm thick	Soil build up	III

Trench 5

No.	Description	Interpretation	Phase
612	Firm dark grey sandy silt, 0.5m thick	Topsoil	IV
613	Friable light brownish yellow mortar fragments and bricks, 0.46m thick	Demolition deposit	III
662	Indurated near white mortar, 12mm thick	Mortar surface	II
663	Soft mid brown silty sand, 25mm thick	Make-up deposit for (662)	II
664	Friable near white mortar fragments and brick/tile fragments, 60mm thick	Make-up deposit for (662)	II
665	Indurated light yellowish white mortar	Mortar surface	II
666	For a full description see Appendix 7	Column base	II
700	Compact Carstone and mid to dark brown silty clay, 0.4m thick	Wall infill	II

Trench 6

No.	Description	Interpretation	Phase
533	Firm dark reddish brown silty sand, 0.28m thick	Topsoil	IV
534	Firm dark reddish brown silty sand, 0.35m thick	Former topsoil	III
535	Firm dark reddish brown silty sand	Fill of (630)	III
536	Firm mid yellowish brown sand with gravel, 0.3m thick	Former topsoil	III
537	Firm dark reddish brown silty sand with gravel	Fill of (631)	IV
538	Firm mid reddish brown silty sand, 0.53m thick	Former topsoil	III
539	Firm mid reddish brown silty sand	Former topsoil	III
540	Firm mid reddish brown silty sand	Former topsoil	III
628	Firm mid reddish brown silty sand, 100mm thick	Dumped deposit	IV
629	Firm dark greyish brown silty sand with Carstone fragments, 0.15m thick	Dumped deposit	IV
630	Feature, >0.98m long by >100mm wide by 0.36m deep, concave sides and rounded base	Pit	III
631	Feature, 1.75m wide by 1.04m deep, steep sides and rounded base	Pit	IV
632	Soft mid brownish yellow sand with gravel	Fill of (634)	III
633	Friable mid greyish yellow sand with gravel	Fill of (634)	III
634	Linear feature, aligned east-west, >0.6m long by 1.6m wide by 0.75m deep, steep sides with base being the upper surface of wall (639)	Robber trench	III
635	Brick (220mm x 100mm x 60mm) structure, aligned east-west, >2.1m long by 0.26m wide by 0.53m high	Brick lining	II
636	Firm mid greyish brown sandy silt with Carstone fragments, 0.5m thick	Demolition deposit	III
637	Compacted dark grey silty sand, 60mm thick	Floor make-up	II
638	Firm mid brownish yellow sand	Dumped deposit	I
639	Carstone structure, random coursing, aligned east-west	South chancel wall	II
640	Firm mid grey sand and Carstone fragments, 0.7m thick	Construction deposit	II

Trench 7

No.	Description	Interpretation	Phase
603	Friable dark brownish grey silty sand, 0.35m thick	Topsoil	IV
604	Loose light yellowish brown mortar fragments, 0.75m thick	Fill of (648)	III

No.	Description	Interpretation	Phase
605	Carstone structure, rough coursing, north-south aligned, >2.3m long by 0.65m wide and >0.66m high	East wall of Chapter house	II
606	Loose light yellowish brown mortar, 0.5m thick	Demolition deposit	III
607	Firm mid to light brown sandy silt with mortar fragments, 0.2m thick	Demolition deposit	III
608	Friable mid to light brown silty sand with mortar fragments	Demolition deposit	III
609	Glazed tile (130mm x 130mm x 24mm) surface, 0.39m x 130mm extent	Chapter house floor	II
617	Glazed tile (130mm x 130mm x 24mm) surface, 180mm x 90mm extent	Floor	II
618	Hard light brownish white sandy mortar	Bedding for floor (617)	II
619	Friable light greyish brown sand, 30mm thick	Levelling deposit for (618)	II
620	Soft mid brown sandy silt	Dumped deposit	I
641	Brick (255mm x 125mm x 50mm) structure, bonded to wall (605), >2.3m long by 0.47m wide and 0.65m high	Chapter house bench	II
642	Hard light brownish white sandy mortar	Plaster on wall (605)	II
643	Hard light brownish white sandy mortar	Plaster on wall (605)	II
644	Hard white mortar	Plaster on bench (641)	II
645	Soft mid brown sandy silt and Carstone with mortar, 0.4m thick	Demolition deposit	III
648	Linear feature, aligned east-west, >1.7m by >1.6m by >0.9m deep, gradual sides, not fully excavated	Pit	III

Trench 8

No.	Description	Interpretation	Phase
656	Soft dark greyish brown sandy silt, 0.5m thick	Topsoil	IV
657	Loose light brown mortar with brick/tile, 0.35m thick	Demolition deposit	III
658	Carstone and brick (260mm x 110mm x 70mm) structure, brick in English Garden bond, 2m by 0.11m extent by 0.6m high	East cloister range	II
661	Brick (260mm x 110mm x 70mm) structure, English Garden bond, 1.2m by 1.15m extent by 0.48m high	Buttress	II
701	Carstone structure, unfinished stone in random coursing, aligned east-west, length >1m, only partially exposed	Chapter house wall	II

Trench 9

No.	Description	Interpretation	Phase
516	Firm dark reddish brown silty sand, 0.25m thick	Topsoil	IV
517	Firm mid to dark reddish brown silty sand, 0.37m thick	Dumped deposit	IV
518	Firm mid reddish brown silty sand, 0.35m thick	Demolition deposit	III
519	Firm light yellowish brown sandy silt and Carstone fragments, 0.47m thick	Demolition deposit	III
520	Firm mid to dark reddish brown silty sand	Fill of (676)	IV
523	Firm mid reddish brown silty sand and gravel, 110mm thick	Make-up deposit	III
654	Brick (250mm x 120mm x 50mm) structure, north-south aligned, 1.68m long by 0.34m wide	Infill of Chapter house doorway	III
655	Roof tile structure, 2.05m by 0.94m extent by 30mm thick	Infill of Chapter house doorway	III

No.	Description	Interpretation	Phase
659	Firm mid reddish brown silty sand and brick/tile and mortar, 0.17m thick	Demolition deposit	III
660	Firm light pinkish brown silty clay with mortar flecks, 30mm thick	Floor?	II
668	Indurated black tarmac, 100mm thick	Surface	IV
669	Firm light brownish yellow sandy gravel, 50mm thick	Make-up deposit for (668)	IV
670	Firm mid reddish brown ash with slag, 60mm thick	Former path	IV
671	Crushed cockle shells, 60mm thick	Former path	III
672	Firm dark reddish brown silty sand, 80mm thick	Former topsoil	III
673	Firm light to mid grey ash, 40mm thick	Dumped deposit	III
674	Assorted limestone and Carstone blocks	Retaining wall	IV
675	Firm mid reddish brown silty sand and brick/tile and mortar, 0.17m thick	Demolition deposit	III
676	Feature, 2.05m long by >0.65m wide by 0.88m deep, steep sides and rounded base	Pit	IV
677	Brick (225mm x 103mm x 65mm) structure, aligned north-south, >2.3m long by 0.65m wide and 0.48m deep	Soakaway	III
678	Brick (120mm x 60mm; 110mm x 70mm), tile and Carstone structure, bonded to wall (679), >0.96m long by 0.5m wide by 0.56m high	Chapter house bench	II
679	Carstone structure, random coursing, incorporates limestone sill and door jamb to west and limestone bench end recess on east face, >3.4m long by 0.88m wide by 0.56m high	West wall and doorway of chapter house	II
680	Carstone structure, random coursing	Foundation course for (679)	II
681	Friable light yellowish brown Carstone fragments and mortar, 0.36m thick	Demolition deposit	III
682	Firm light brownish yellow sandy mortar, 30mm thick, retaining tile impressions	Mortar bonding for tile floor	II

Trench 10

No.	Description	Interpretation	Phase
509	Cancelled context		
524	Soft near white mortar, 7mm thick, retaining tile impressions	Mortar bonding for tile floor	II
525	Soft dark grey silty sand	Fill of (526)	III
526	Oval feature, 0.6m diameter by 0.33m deep, vertical sides and rounded base	Pit	III
531	Carstone structure, random coursing (heavily disturbed), aligned east-west, >2.4m long by 1.6m wide by >0.15m high	South Nave wall	II
532	Soft mid grey clayey silt with tile fragments, 0.24m thick	Demolition deposit	III
550	Soft mid brown clayey silt	Fill of (551)	III
551	Rectangular feature, 0.9m long by 0.42m wide by 0.2m deep, vertical sides and uneven base	Construction trench	III
611	Brick (255mm x 125mm x 55mm) and tile (150mm x 70mm x 12mm) structure, 0.33m by 0.35m extent by 0.15m high	Wall within (551)	III
614	Soft dark brown clayey silt, 0.5m thick	Topsoil	IV
615	Firm mid grey sandy silt with brick/tile and mortar fragments, 0.15m thick	Demolition deposit	III
616	Soft light brown clayey silt with brick and tile, 0.2m thick	Demolition deposit	III

No.	Description	Interpretation	Phase
621	Carstone, brick (150mm x 80mm x 30mm) and tile (240mm x 40mm x 20mm) structure, random coursing, east-west aligned, >3.6m long by 0.7m wide and 0.7m high	North cloister wall	II
622	Soft light brown sand, 90mm thick	Levelling deposit	II
623	Soft mid greyish brown clayey silt, 50mm thick	Levelling deposit	II
624	Hard dark yellow sand, 80mm thick	Levelling deposit	II
625	Soft mid greyish brown clayey silt, 50mm thick	Levelling deposit	II
626	Hard dark yellow sand, 80mm thick	Levelling deposit	II
627	Cancelled context		
646	Soft mid grey clayey silt	Fill of (647)	III
647	Rectangular feature, 0.72m long by 0.36m wide by 70mm deep, gradual sides and rounded base	Pit	III
694	Tile (130mm x 112mm x 18mm) facing to wall (621)	Facing	IIII
702	Soft mid grey clayey silt	?Dumped deposit	I

Trench 11

No.	Description	Interpretation	Phase
667	Re-recorded as (686)	Demolition deposit	III
684	Indurated black tarmac, 40mm thick	Path	IV
685	Firm mid brownish red gravel, 80mm thick	Former path	IV
686	Soft dark brown silty sand, 0.39m thick	Demolition deposit	III
687	Firm black silty sand, 0.14m thick	Demolition deposit	III
688	Carstone structure, east-west aligned, >1.3m long by 0.51m wide by 0.2m high	North cloister wall	II
689	Cancelled context		
690	Firm light yellow sand and gravel	Possible former surface	II
691	Firm dark grey silty sand	Soil build up	II
692	Carstone structure, random coursing, north-south aligned, bonded to wall (688), 0.93m long by 0.2m wide by 100mm high	East cloister wall	II
695	Friable light grey sand with cockle shells, 100mm thick	Former path	III

Trench 12

No.	Description	Interpretation	Phase
696	Soft dark brown clayey silt, 0.5m thick	Topsoil	IV
697	Soft mid grey clayey silt, 0.2m thick	Demolition deposit	III
698	Carstone structure, only a few blocks recorded	North cloister wall	II

Appendix 3

THE MEDIEVAL AND EARLY POST-MEDIEVAL POTTERY

By Paul Blinkhorn

The pottery assemblage comprised 76 sherds with a total weight of 1538g. All the pottery was medieval or later, with the range of ware types present indicating that there was activity at the site throughout the medieval period. Despite the relatively small assemblage size, there were a number of imported sherds from Yorkshire, France and the Low Countries, although the bulk of the assemblage comprised local wares, mainly Grimston ware.

One sherd particularly of note is a fragment of a Scarborough ware aquamanile. Such vessels are associated with formal dining, and indicate that the inhabitants of the site were of a somewhat higher than normal status.

Fabric

Most of the fabric types are well-documented in Kings Lynn (cf Clarke and Carter 1977). The following were noted:

Early Medieval sandy ware 1: 12th C? Moderate to dense sub-rounded quartz up to 0.5mm. Hand-built. All the sherds appear to be from small, hand-built jars. 22 sherds, 71g.

Grimston Thetford-type ware: 12th – 13th century (Clarke and Carter 1977, 183). Coarse sandy fabric with grey reduced core and light grey to buff oxidized surfaces. One sherd was from the rim of an extremely large storage vessel (Fig. KL1). 3 sherds, 236 g.

Scarborough Ware: later 12th – 14th century (McCarthy and Brooks 1988, 230). Soft pinkish-buff to hard white sandy fabric. Forms mainly glazed jugs, often ornately decorated. One of the sherds is a short tubular spout from a highly-decorated ?aquamanile (Fig. KL2). 2 sherds, 37g.

Grimston Ware: 13th - 15th century (Leah 1994). Wheel-thrown. Dark grey sandy fabric, usually with grey surfaces, although orange-red and (less commonly) buff surfaces are known. Mainly glazed jugs plain or highly decorated, the former 13th century, the latter 14th. Most of the assemblage comprised sherds from plain, green-glazed jugs, although a single example with brown slip-dots was noted. 31 sherds, 793g.

Rouen ware: 13th – 14th century (Jennings 1981, 35). Continental import. White smooth fabric with few visible inclusions. Usually highly decorated glazed jugs, with painted red slip decoration. Both sherds, were from the same, highly-decorated jug (Fig. KL3). 2 sherds, 14g.

North French White ware: 13th century. Slightly sandy white fabric with a mottled green, copper-spotted glaze. 1 sherd, 1g.

Dutch Redware: 12th – 15th century (Jennings 1981, 31-2). Continental import. Brick red sandy fabric with few visible inclusions. The sherds from this site appear to be from later medieval vessels, such as cauldrons. One sherd was a tubular handle or long spout from a ?skillet, the other a handle from a cauldron (Figs KL4 and 5). 2 sherds, 248g.

Tudor Green Wares: c AD1380-1500. Green-glazed whitewares produced at several centres in the south of England, such as Farnborough Hill, Hants (McCarthy and Brooks 1988, 450). 1 sherd, 5g.

LMT Redwares: 15th – 16th century? Slightly soft and sandy orange-red fabric. The whole assemblage comprised plain bodysherds. 5 sherds, 69g.

NS ware: Late 16th – 18th century (McCarthy and Brooks 1988, 416). Soft, fine, off-white to pink fabric, copper green or yellowish glaze. Full range of early post-medieval vessels. The whole assemblage comprised plain bodysherds with an external and/or internal glaze. 4 sherds, 39g.

The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 1. Each date should be regarded as a *terminus post quem*.

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Table 1: Pottery occurrence by number and weight (in g) of sherds per context by fabric type

Context	EMS		Grim Th		Grim		Scarb		Rouen		N Frnch		Dutch R		Tud G		LMT Red		NS		Date	
	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt		
500					3	301															13 th C	
501					1	12																14 th C
503																	1	3				L 18 th C
504					1	8											1	6				19 th C
505					1	5													1	18		L 18 th C
506			1	8	1	28											1	33				17 th C
507					2	5											1	8				16 th C
511					1	23																13 th C
518							1	35														12 th C??
519	2	2					1	2			1	1										13 th C
521	1	3			3	41							1	124								18 th C
523					1	5																13 th C
527					1	8																13 th C
528																				1	3	18 th C
529	1	2																				12 th C?
530	2	10																				12 th C?
532	2	23			1	3																13 th C
538																	1	22				15 th C?
550	1	2			1	3																13 th C
583	1	2																				12 th C?
584	1	6			1	66																13 th C
586	1	4			1	84							1	124								13 th C
613					1	27									1	5						15 th C
615					2	63														1	4	L 16 th C
616	1	1			2	41																13 th C
632			1	215																		17 th C
633					1	14																13 th C
637	1	2																				12 th C?
638	8	14			3	22																13 th C
648					1	20																13 th C
651					1	7														1	14	L 16 th C
664					2	19																13 th C
683					1	4																L 18 th C
699			1	13	1	6			2	14												13 th C
Total	22	71	3	236	31	793	2	37	2	14	1	1	2	248	1	5	5	69	4	39		

Appendix 4

THE POST-MEDIEVAL POTTERY

by Hilary Healey and Gary Taylor

Recording of the pottery was undertaken with reference to guidelines prepared by the Medieval Pottery Research Group (Slowikowski *et al.* 2001). A total of 280 fragments of post-medieval pottery weighing 4962g was recovered from 38 separate contexts.

Provenance

Most of the pottery was probably made in the general west Norfolk/eastern Cambridgeshire region and there are some definite products from Ely, 40km to the south. There are regional imports from Staffordshire, London and Nottingham. Foreign imports from Germany and China are present and it is probable that some of the Glazed Red Earthenwares, and perhaps the tin glazed wares, are Dutch.

Range

The range of material is detailed in the table.

Table 1: Pottery

Context	Description	No.	Wt (g)	Context Date
500	Plant pot, 19 th -20 th century	2	46	19 th -20 th century
	Glazed red earthenware, mostly upright storage vessels, 1 sooted externally, most abraded, 17 th century	8	215	
	West Norfolk bichrome ware, 17 th century	1	9	
	Westerwald stoneware jug, applied motif, blue and purple paint, 17 th century	1	49	
503	Creamware, incl. plate, enclosed bowl, chamber pot?, tablewares, late 18 th -early 19 th century	6(2 link)	99	Late 18 th -early 19 th century
	White salt-glazed tableware, incl. cup handle or similar, 18 th century	3(2 link)	16	
	Tin glazed earthenware, open bowl, 18 th century	1	21	
	Brown salt-glazed stoneware, ?London, enclosed vessel, 18 th century	1	6	
	Staffordshire slipware, posset? 18 th century	2	7	
	Scratch blue ware, enclosed vessel, mid 18 th century	1	60	
	Westerwald stoneware, incised and applied decoration, 17 th century	1	5	
	Nottingham stoneware, 18 th century	1	23	
	Soft paste porcelain, 18 th century	1	29	
	Plant pot, 18 th -19 th century	1	8	
	Local slipware, plate? 18 th century	1	13	
	Glazed red earthenware, separate vessels, incl. pancheons/open bowls, 17 th century	6	156	
	Black glazed ware, drinking vessels, separate vessels, 17 th century	3	58	
504	Glazed red earthenware, incl. pancheons and upright vessels, 17 th century	11	155	
	Tin glazed earthenware, 18 th century	1	5	
	Local slipware, 18 th century	1	5	
	London salt-glazed stoneware tankard, late 17 th -18 th century	1	21	
	Plant pot, abraded, 18 th -early 20 th century?	1	3	
505	Blackware tyg, all same vessel, mid 17 th century	3(2 link)	262	late 18 th -early 19 th century

Context	Description	No.	Wt (g)	Context Date
505 (cont)	Creamware, teapot?, late 18 th -early 19 th century	1	5	
	Staffordshire slipware, plate? 18 th century	1	5	
	Tin glazed earthenware, 17 th -18 th century	2	10	
	Local slipware, bowl, 18 th century	1	36	
	Weser? slipware, pancheon, abraded, early 17 th century	1	8	
	Frechen stoneware, bottle? 17 th century	1	23	
	?Frechen stoneware, 17 th century	1	6	
	Glazed red earthenware, incl. pancheons, wide-mouthed bowls, pipkins, drinking vessels, storage vessels, 2 sooted on exterior, 17 th century	21	480	
506	Glazed red earthenware, incl. bowls, 1 sooted externally, 17 th century	4	32	Late 18 th century
	Blackware, drinking vessel, 17 th century	1	3	
	Local slipware, plate, 18 th century	1	27	
	Late slipware, do not link but same vessel, Late 18 th century	2	5	
507	Glazed red earthenware, 17 th century	1	7	17 th century
510	Tin glazed earthenware, incl. enclosed vessels, 17 th century	6	74	17 th century
	Glazed red earthenware, incl. upright storage vessel, 1 with limy encrustation internally, 17 th century	4	75	
	Unglazed red earthenware, plant pot? (intrusive?)	1	3	
511	Blackware drinking vessel, 17 th century	1	3	17 th century
	?London stoneware bottle/jug, 17 th century	1	11	
	West Norfolk bichrome ware, enclosed vessel, 17 th century	1	11	
516	Blue and white transfer printed tableware, plate, 19 th century	1	10	19 th century
	White salt-glazed stoneware, plate, 18 th century	1	4	
517	Glazed red earthenware	1	8	17 th century
518	Midlands Purple ware	1	41	17 th century
520	Tin glazed earthenware, enclosed vessel, 18 th century	1	3	18 th century
	White salt glazed stoneware, enclosed vessel, 18 th century	1	3	
	Glazed red earthenware, 17 th century	1	12	
521	Nottingham salt glazed stoneware, tankard handle, 18 th century	1	3	18 th century
	Tin glazed earthenware, 17 th century	1	31	
	White salt-glazed stoneware, enclose vessel, 18 th century	2	9	
	Chinese porcelain, bowl, 18 th century	1	3	
	Blackware, 17 th century	1	3	
	Unglazed red earthenware, upright vessel, 18 th century?	1	25	
523	Late creamware, early 19 th century	1	20	Early 19 th century
	Tin glazed earthenware, 1 very abraded, 17 th -18 th century	2	17	
	Westerwald stoneware, incised decoration, blue paint, 17 th -18 th century	1	5	
	Glazed red earthenware, 17 th century	1	5	
	Staffordshire press-moulded slipware, 18 th century	1	9	
528	White salt-glazed stoneware, bowl? 18 th century	1	28	18 th century
	Glazed red earthenware, 17 th century	1	11	

Context	Description	No.	Wt (g)	Context Date
529	Midlands Yellow ware, 17 th century	1	5	17 th century
	Glazed red earthenware, 17 th century	3	11	
532	Brown salt-glazed stoneware bottle/jug, London? 17 th century	2(link)	55	18 th century
	Staffordshire press-moulded slipware plate, 18 th century	1	24	
	Grey stoneware, post-medieval	1	4	
533	Glazed red earthenware, upright storage vessel, 17 th century	1	45	19 th century
	Late mottled ware, 19 th century	1	34	
	Plant pot, 19 th century	1	8	
534	Glazed red earthenware, incl. large storage vessel, 17 th century	4	153	18 th century
	Local slipware, abraded, 18 th century	1	8	
535	Glazed red earthenware, 17 th century	2	13	18 th century
	Local slipware, plate, abraded, 18 th century	1	17	
	Unglazed red earthenware, 18 th century?	1	20	
	Tin glazed earthenware, incl. plate and unclosed vessel, 18 th century	3(2 link)	14	
	Westerwald stoneware with applied fleurs-de-lys medallions, blue and purple paint, bottle/jug, 17 th century	1	21	
Frechen stoneware bottle, 17 th century	1	11		
536	Glazed red earthenware	1	25	17 th century
537	Tin glazed earthenware, enclosed vessel, 18 th century	1	6	18 th century
	?Raeren stoneware, bottle, 17 th century	2(link)	58	
538	Tin glazed earthenware, plate	1	24	17 th -18 th century
539	Glazed red earthenware, 17 th century	2	49	18 th century
	Tin glazed earthenware, incl. tea bowl, 18 th century	3(2 link)	3	
	Staffordshire slipware, posset? 18 th century	1	2	
540	Red glazed earthenware, incl. pipkin, bowl, upright storage vessel, 17 th century	4	76	17 th century
	Unglazed red earthenware, post-medieval	1	12	
588	Creamware, plates, 18 th -early 19 th century	3	40	19 th century
	Pearlware, upright vessel, early 19 th century	1	14	
	Blue and white transfer printed tableware, bowl, 19 th century	1	4	
	Staffordshire slipware, incl. dish, 18 th century	2	15	
	Staffordshire mottled ware, posset? 18 th century	1	1	
	Nottingham salt-glazed stoneware, 18 th century	1	3	
	Late mottled ware, 19 th century	1	4	
	Yellow glazed earthenware pancheon, 19 th century	1	19	
	Polychrome (green and red) tableware, 19 th century	1	2	
	Glazed red earthenware, 17 th -18 th century	8	77	
Plant pot, 19 th century	1	3		
589	Chinese porcelain, incl. teabowls and dish; dish has initial D on underside of rim, 18 th century	4	30	19 th century
	White salt-glazed stoneware, teabowl, 18 th century	1	4	
	Tin glazed earthenware, plate, 17 th century	1	7	
	Creamware bowl, late 18 th century	1	3	

Context	Description	No.	Wt (g)	Context Date
589 (cont)	Plant pot, 19 th century	2	21	
	Blue and white transfer printed tableware, 19 th century	2	16	
	Blackware, upright vessel, 17 th century	1	13	
	Glazed red earthenware, incl. bowl and upright storage vessel; bowl abraded and sooted externally, 17 th -18 th century	6	174	
	Local slipware, late, 18 th -19 th century	1	3	
610	Glazed red earthenware, incl. pancheon and upright storage vessel, 17 th century	2	131	17 th century
	Black glazed ware, 17 th century	1	9	
	West Norfolk bichrome ware, 17 th century	1	5	
612	White salt glazed stoneware	1	2	18 th century
613	Glazed red earthenware, incl. enclosed vessel, 1 sooted externally, 17 th century	3	50	17 th century
	Blackware, incl. drinking vessel, 17 th century	2	33	
615	Tin glazed earthenware, enclosed vessel, 17 th century	1	3	18 th century
	Blackware, drinking vessel, 17 th century	1	24	
	West Norfolk bichrome ware, 17 th century	1	10	
	Local slipware, pancheon, 18 th century	1	29	
	Glazed red earthenware, incl. upright/enclosed vessels; 1 base sherd trimmed to roughly circular disk, 17 th century	6	133	
632	Glazed red earthenware	1	10	17 th century
649	West Norfolk bichrome ware, enclosed vessel, 17 th century	1	40	19 th century
	Chinese porcelain, tea bowl, 18 th century	1	3	
	Tin glazed earthenware, incl. plate, 17 th -18 th century	4	37	
	Blackware, drinking vessels, 17 th century	2	20	
	White salt glazed stoneware tankard, 18 th century	1	13	
	Grey stoneware, London?, 17 th -18 th century	1	34	
	Brown stoneware, London?, 17 th century	1	23	
	Cream glazed earthenware, 18 th -19 th century	1	22	
Plantpot, impressed maker's mark, 19 th century	1	20		
651	Glazed red earthenware, no link but probably same vessel, pancheon, sooted on exterior of rim, 17 th century	4	99	18 th century
	West Norfolk bichrome ware, 17 th century	1	1	
	London stoneware, jug/bottle, 17 th century	1	19	
	Local slipware, abraded, 18 th century	1	8	
	Nottingham stoneware, jug, 18 th century	1	61	
657	Glazed red earthenware, upright storage vessel	1	40	17 th century
683	Pearlware, late 18 th -early 19 th century	1	1	Late 18 th -early 19 th century
	Creamware, chamber pot, late 18 th -early 19 th century	1	12	
	Tin glazed earthenware, separate vessels, 17 th -18 th century	3	16	
	Nottingham salt glazed stoneware, separate vessels, late 18 th century	2	7	
	Blackware, drinking vessel, 17 th century	1	5	
	Glazed red earthenware, 17 th century	6	59	
	Late mottled ware, separate vessels, 18 th -19 th century	4	86	
686	Glazed red earthenware	2	45	17 th century

Context	Description	No.	Wt (g)	Context Date
697	Glazed red earthenware, incl. large upright vessel, 17 th century	3(2 link)	335	18 th century
	Tin glazed earthenware, 18 th century	1	21	

Four sherds of Westerwald stoneware were recovered. Two of these have purple in the glaze, a decorative application that was introduced about 1665 (Hurst *et al.* 1986, 222). Other German imports included five fragments of stonewares from Frechen and possibly Raeren. All of the German imports are likely to be 17th century, perhaps just going in to the 18th century. Other definite foreign imports are provided by a small amount (6 pieces) of Chinese porcelain. These are all of the Ch'ien Lung period, 1736-95 (Frank 1969, 81).

Blackwares, mostly drinking vessels, were recovered. These are likely to be 'Babylon' wares from Ely, but could have been made much closer to King's Lynn. Substantial fragments from a tall cup were recovered from (505) and, although larger, are most closely comparable to Barker's Type 38, and also very similar to his Types 40 and 41. Examination of production and domestic dumps in Staffordshire suggests these were in use from about 1660 to *c.* 1720 (Barker 1986, 59).

Glazed red earthenwares dominate the assemblage, providing over 40% of the assemblage. Some of these are probably Dutch imports but most are likely to be fairly local products, perhaps from Ely or nearer King's Lynn. Glazed red earthenware is a long-lived pottery type, for example, produced and used in Norwich through the 16th-18th centuries and in Holland from the 12th until at least the 17th century (Jennings 1981, 157; Baart 1994) The examples from the current investigation generally appear to be 17th century types and their association with more closely datable 17th century pottery types confirms this. A variant of Glazed Red Earthenware, West Norfolk Bichrome ware, was found in small quantities (less than 10 pieces). Recent work has shown that this 17th century pottery type was made at Ely in Cambridgeshire (D. Hall, *pers comm*).

Tin glazed earthenwares, probably of mixed Dutch and English origin, constitute over 10% of the assemblage. This is also a pottery type with a protracted period of production, at least from the 16th-18th centuries. The examples from the current investigation are generally of 17th or 18th century date, the earlier material perhaps being slightly more abundant.

Slipwares form almost 10% of the collection and are mostly local or Staffordshire products, though there is one possible Dutch import. Most of these date to the 18th, or perhaps very late 17th century, though there are several late slipwares of probable 19th century date.

Brown stonewares, probably mainly London products and predominantly of 17th century date, are also present in small quantities. Most of these appear to be associated with drinking and include fragments of tankards and bottles/jugs.

White salt glazed stonewares, mostly fine table vessels, were also recovered, though in small numbers. This ware type is confined to the 18th century, with dated examples ranging from 1720 to 1773 (Jennings 1981, 222). A single piece of a variant of this, Scratch Blue Ware, was also retrieved. This type is dated to the middle of the 18th century, about 1740-80 (*ibid.* 227).

Most of the remainder of the assemblage is provided by later tablewares, including creamware, pearl ware and transfer printed tableware, dating from the late 18th and 19th centuries. There is also a small quantity of plant pot of 19th-20th century date, reflecting the more recent use of the area as a garden.

With the exception of the late plant pot, the assemblage as a whole appears to be generally domestic with no obvious form types predominating to suggest functional bias.

Condition

All the material is in good condition and presents no long-term storage problems. Archive storage of the collection is by material class.

Potential

The large collection of post-medieval pottery fragments is generally of moderate-high local potential and significance. The assemblage probably reflects habitation or other activity of 17th-19th century date at the site.

Recommendations

Clarification of the dating and sources of some of the ware types would potential tighten the chronology of some of the activity and should be attempted. Additionally, more thorough examination of the forms should be undertaken to fully establish the range of vessels used at the site in the post-medieval period, and identify conclusively any functional variations represented by the material. With the possible exception of the Blackware cup from (505) and the Scratch Blue ware vessel from (503), none of the material need be illustrated.

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Appendix 5

THE CLAY PIPE

By Gary Taylor

Recording Methodology

Recording and analysis of the clay pipes followed the guidance published by Davey (1981).

Provenance

The clay pipes derive from demolition layers (528 and 529), former topsoils (506, 510, 518, 521, 534, 536, 539, 540 and 686), pit fills (525 and 535), the current topsoil (533 and 612), a dumped deposit (651) and as unstratified material (503, 504, 505, 588, 589, 610).

Most of the clay pipes were probably made in the King's Lynn area and there is one definite Lynn product. However, there are also two regional imports from an indeterminate source, perhaps London.

Range

A total of 89 fragments of clay pipe weighing 541g was recovered from 23 separate contexts and the range of material is detailed in the table.

Table 1: Clay Pipe

Context	Description	No.	Wt (g)	Context Date
503	Bowl, Atkin type 9, 75% rouletting, bore 7/64", 1640-70	1	15	17 th century
	Stems, bore 7/64", 17 th century	3	14	
504	Stem, bore 8/64"	1	5	17 th century
505	Bowl, Atkin type 3, rouletted, incomplete, bore 8/64", 1610-40	1	16	1620-70
	Bowl, Atkin type 4, rouletting 100%, bore 8/64", 1620-50	2	15	
	Bowl, Atkin type 4/5, rouletting 100%, incomplete, bore 7/64", 1620-50	1	14	
	Bowl, Atkin type 6, 30% rouletting, bore 8/64", 1650-70	1	13	
	Bowl, Atkin type 8, rouletting 50%, bore 7/64", 1640-70	1	21	
	Stems, bore 8/64", one with incuse stamp VS, 17 th century	5	26	
	Stems, bore 7/64", 1 mouthpiece, 17 th century	11	42	
	Stems, bore 6/64", 17 th century	4	24	
506	Stem, bore 4/64"	1	2	19 th century
510	Stem, bore 8/64", 17 th century	1	4	17 th century
	Stem, bore 7/64", 17 th century	1	4	
518	Stem, bore 8/64", 17 th century	1	6	17 th century
	Stem, bore 7/64", 17 th century	1	3	
521	Stems, bore 8/64", 17 th century	2	5	19 th century
	Stem, bore 4/64", 19 th century	1	2	
525	Bowl, Atkin type 4, 100% rouletting, bore 7/64"	1	9	1620-50
528	Stem, bore 7/64", 17 th century	1	6	17 th century
	Stem, bore 6/64", 17 th century	1	3	
529	Stems, bore 7/64", 17 th century	2	2	17 th century
	Stem, bore 6/64", 17 th century	1	5	
533	Stem, bore 6/64"	1	9	17 th century
534	Bowls, similar to Atkin types 69 and 74, unmarked, 40% rouletting, bore 6/64", c. 1700-40	2	40	c. 1700-40

Context	Description	No.	Wt (g)	Context Date
534 (cont.)	Bowl, Atkin type 68, marked RD with rosettes on heel, bore 5/64", 1708-37	1	15	
	Bowl, Atkin type 4, bore 6/64", 1620-50	1	13	
	Bowl fragment, bore 6/64", 17 th century	1	7	
	Stems, bore 8/64", 17 th century	2	7	
	Stems, bore 7/64", 17 th century	2	9	
	Stems, bore 6/64", 17 th century	2	5	
535	Bowl, Atkin type 8, incomplete, bore 7/64", 1640-70	1	13	17 th century
	Stem, bore 7/64", marked VS, 17 th century	1	4	
	Stem, bore 7/64", 17 th century	1	3	
	Stem, bore 6/64", 17 th century	1	4	
536	Stem, bore 7/64"	1	7	17 th century
539	Stem, bore 6/64"	1	4	17 th century
540	Bowl fragment, heeled 17 th century type, bore 6/64", 17 th century	1	11	17 th century
	Stems, bore 7/64", 17 th century	3	15	
588	Stem, bore 7/64", 17 th century	1	2	18 th century
	Stem, bore 5/64", 18 th century	1	1	
589	Stems, bore 7/64", 17 th century	3	16	19 th century
	Stems, bore 4/64", 19 th century	2	5	
610	Bowl, Atkin type 4, 50% rouletting, bore 7/64", 1620-50	1	14	17 th century
	Stem, bore 7/64", 17 th century	1	11	
612	Bowl, Atkin type 8, 30% rouletting, incomplete, bore 6/64", 1640-70	2(link)	8	17 th century
	Stem, bore 8/64", 17 th century	1	5	
615	Bowl, Atkin type 8, rouletted, incomplete, bore 6/64", 1640-70	1	8	17 th century
	Stems, bore 7/64", 2 with hexagonal bore, 17 th century	3	21	
651	Stems, bore 7/64"	3	14	17 th century
686	Stems, bore 7/64", 17 th century	2	11	17 th century
	Stem, bore 6/64", 17 th century	1	3	

Most of the clay pipe fragments recovered from the site are 17th century, though there is one group, the second largest context assemblage from (534), which is early 18th century. This group contains 3 bowls all of the same period, about 1700-1740, though the collection also contains much redeposited or residual material, with one early 17th century bowl present and all the stems apparently of 17th century date.

The largest group of pipes was recovered from (505) and is clearly a consistent group of mid 17th century date. Although a wide date range of 1620-70 is suggested in the table, it is likely that the date of the context is in the period covered by the minimum chronological overlap of the pipes, that is, *c.* 1640-50.

Only three marked pipe fragments were recovered. One is a bowl from (534) which has the initials RD on the heel, each initial accompanied by a rosette. This is the mark of the King's Lynn pipemaker Robert Dunn, who was active in the period 1708-1737 (Atkin 1985, 135). The other marked pieces are stems from (505) and (535), both with the incuse stamp VS (the S within the V). This stamp occurs widely and may not represent a specific maker. Clusters of pipe finds with this stamp are known, for example, in the Horncastle area of Lincolnshire on pipes of the date range *c.* 1650-1750 (Wells 1979, 163) and London, where it appears on various types of pipes of the period *c.* 1640-1700 (Atkinson and Oswald 1969, 183; fig 3, no 17).

Two stems from (615) are noteworthy as having hexagonal stem bores, a feature that has only previously been noted in Boston, Lincolnshire (Taylor 2002, 86). Although stem bores were produced with wires of variable section (including square), the wire was generally twisted on removal, producing a bore that is usually round.

The general composition of the whole pipe assemblage suggests two main periods of activity at the site. The earlier of these is the early-mid 17th century, say 1620-1670, while the second is the early 18th century, 1700-1740. There is no evidence to suggest continuous pipe use between or beyond these periods. There is also some restricted pipe use in the 19th century, represented by just 3 stem fragments.

Condition

All the material is in good condition and presents no long-term storage problems. Archive storage of the collection is by material class.

Potential

The moderate collection of clay pipes is of limited-moderate local potential. None of the context groups are large enough to merit bore dating.

The main significance of the assemblage is that there are two separate periods of pipe use distinctly represented in the collection. Consideration of this evidence in association with that from other artefacts and stratigraphic data may elucidate the nature of these separate phases of activity.

Recommendations

No further analysis of the clay pipe assemblage is recommended and no examples need to be drawn.

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Appendix 6

THE CERAMIC BUILDING MATERIALS

by Gary Taylor

A total of 241 fragments of ceramic building materials weighing 50024g was recovered from 51 separate contexts.

Provenance

Most of the material was probably made in the proximity of King's Lynn though there is a significant quantity of pieces in grey-yellow Gault clay that also occurs in the region. There are also some probable Flemish imports.

Range

The range of material is detailed in the table.

Table 1: Ceramic Building Material

Context	Description	No.	Wt (g)	Context Date
500	Tile, reduced core, 8-14mm thick, mortar adhering, medieval	4	339	Medieval
	Tile, yellow-grey fabric, reduced core, 157mm wide, 11-17mm thick, 1 with peghole 15mm dia, mortar adhering, medieval	4	930	
	Tile, yellow-grey fabric, oxidized throughout, 12mm thick, medieval	1	41	
	Glazed roof tile, reduced core, 11mm thick, medieval	1	37	
	Glazed floor tile, very dark mottled green glaze, 125mm x 25mm and 128mm x 28mm, mortar adhering, medieval	2	724	
	Glazed floor tile, pale yellow glaze over white slip, medieval	1	58	
	Handmade brick, 125mm x 50mm	1	724	
504	Tile, reduced core, 12-15mm thick, mortar adhering to 2, pegholes 10mm dia in 2, medieval	8	405	Late post-medieval
	Tile, yellow-grey fabric, reduced core, 12-15mm thick, mortar adhering, medieval	5	163	
	Tile, yellow-grey fabric, oxidized throughout, 13-15mm thick, medieval	4	211	
	Tile, oxidized throughout, 11-13mm thick, mortar adhering to 2, medieval?	4	148	
	Glazed roof tile, reduced core, 13mm thick, medieval	1	41	
	Glazed floor tile, mottled green glaze, 34mm thick, medieval	1	72	
	Glazed floor tile, mottled green glaze, 19mm thick, medieval	2	106	
	Glazed floor tile, triangular, mottled green glaze, 20mm thick, medieval	1	106	
	Glazed floor tile, stamped and slipped? pale yellow glaze with brown arc, 19mm thick, medieval	1	110	
	Glazed floor tile, mottled pale yellow and brown glaze, medieval	1	17	
	Handmade brick, mortar adhering to 2	6	162	
	Tile, oxidized throughout, late post-medieval	1	11	
505	Pantile, mortar adhering, late post-medieval	1	16	19 th -20 th century
	Tile, reduced core, 10-11mm thick, mortar adhering, incl. on broken edges of 1, medieval	3	151	
	Tile, oxidized throughout, medieval?	1	6	
	Tile, yellow-grey fabric, reduced core, 12-15mm thick, mortar adhering to 1, medieval	2	147	
	Pantile, 19 th -20 th century	2	196	
	Glazed floor tile, dark mottled green glaze, 123mm square, 25mm thick, worn on glazed surface, mortar adhering, medieval	1	752	
	Glazed floor tile, dark mottled green glaze, 113mm square, 25mm thick, worn on glazed surface, mortar adhering, medieval	1	543	
Glazed floor tile, dark mottled green glaze, 30mm thick, worn on glazed surface, mortar adhering, medieval	1	318		

Context	Description	No.	Wt (g)	Context Date
	Glazed roof tile, reduced core, 11mm thick, medieval	1	32	
	Brick/tile	1	5	
506	Tile, yellow-grey fabric, 1 with reduced core, 11-13mm thick, mortar adhering to 1, medieval	2	72	Medieval
	Tile	1	1	
507	Tile, reduced core, 13mm thick, 2 with mortar adhering, peghole 14mm dia in 1, medieval	4	262	Medieval
	Tile, yellow-grey fabric, reduced core, 12mm thick, mortar adhering, medieval	1	51	
510	Handmade brick	1	139	
511	Glazed tile, floor tile? green glaze, mortar adhering	1	37	Medieval
516	Brick/tile, oxidized throughout	1	5	Post-medieval
517	Tile, yellow-grey fabric, 11mm thick, mortar adhering, medieval	2	41	Post-medieval
	Pantile, black painted, post-medieval	1	4	
518	Tile, yellow-grey fabric, reduced core, 11mm thick, medieval	1	88	Medieval
	Glazed roof tile, reduced core, 13mm thick, mortar adhering incl on broken edges and glazed face, medieval	1	95	
519	Tile, yellow-grey fabric, reduced core, 15mm thick, medieval	1	30	Medieval?
	Tile, oxidized throughout, 12mm thick, peghole 12mm dia, medieval?	1	133	
	Glazed floor tile, dark mottled green glaze, 125mm square, 25mm thick, worn on glazed surface, mortar adhering, incl on broken edges and glazed faces, medieval	3	1370	
	Glazed floor tile, triangular, mottled green glaze, 24mm thick, mortar adhering, incl on glazed face, medieval	1	272	
	Glazed floor tile, pale yellow glaze over white slip, worn on glazed surface, mortar adhering, incl on broken edges and glazed face, medieval	1	680	
	Unglazed floor tile, 42mm thick, worn on upper surface, medieval	1	680	
520	Tile, reduced core, 12mm thick, peghole 10mm dia, medieval	1	23	Post-medieval
	Tile, reduced core, 15mm thick, mortar and whitewashed plaster adhering, medieval	1	160	
	Tile, oxidized throughout, 16mm thick, mortar and whitewashed plaster adhering, post-medieval	2	259	
521	Tile, yellow fabric, 1 is 13mm thick, peghole 9mm dia; 2 nd is 10mm thick, medieval	3 (2 link)	188	Late post-medieval
	Tile, yellow fabric, reduced core, 13mm thick, peghole 9mm dia. mortar adhering (plugs peghole), medieval	1	170	
	Tile, near fully oxidized, some slight core reduction 15mm thick, medieval	1	266	
	Tile, reduced core; 1 is 13mm thick, mortar adhering; 2 nd is 11mm thick with peghole 12mm dia; 3 rd is 12mm thick, medieval	3	147	
	Tile, oxidized throughout, 15mm thick, late post-medieval	3	145	
	Handmade brick, sooted/burnt on 1 face, 112mm wide, 40mm thick	1	1178	
522	Handmade brick, 208mm x 104mm x 59mm, mortar adhering	1	1930	Post-medieval
523	Tile, oxidized throughout, 12mm thick, medieval?	1	109	Medieval?
	Glazed floor tile, dark mottled green glaze, 25mm thick, worn on glazed surface, mortar adhering, medieval	1	131	
529	Tile, reduced core, 11mm thick	1	22	Medieval
532	Tile, reduced core, 13mm thick, abraded	1	63	Medieval

Context	Description	No.	Wt (g)	Context Date
535	Tile, reduced core, 15mm thick, mortar adhering, medieval	1	59	Medieval?
	Tile, oxidized throughout, 11mm thick, medieval?	1	15	
536	Tile, reduced core, 12mm thick, abraded, medieval	1	14	Medieval?
	Tile, yellow fabric, reduced core, 155mm wide, 15mm thick, peghole 10mm dia, mortar adhering and blocking peghole, medieval	1	329	
	Tile, yellow fabric, oxidized throughout, 11mm thick, peghole 12mm dia, medieval	1	53	
	Handmade brick	1	36	
538	Handmade brick, yellow fabric, 115mm wide, 42mm thick, worn upper surface, mortar adhering	1	950	Post-medieval
539	Tile, reduced core, 12mm thick, medieval	1	18	Medieval
550	Handmade brick	1	25	Medieval
	Tile, reduced core, 11-13mm thick, mortar adhering to 4, medieval	5	260	
	Tile, yellow fabric, reduced core, 14-17mm thick, medieval	2	99	
553	Glazed floor tile, pale yellow glaze over white slip, 28mm thick, worn on glazed surface, mortar adhering, medieval	1	457	Medieval
	Glazed roof tile, 15mm thick, medieval	1	61	
583	Tile, reduced core, 13-15mm thick, mortar adhering to 2, medieval	3	115	Medieval?
	Tile, yellow fabric, reduced core, 15mm thick, mortar adhering, medieval	1	43	
	Tile, yellow fabric, oxidized throughout, 15mm thick, mortar adhering	1	47	
	Glazed roof tile, 15mm thick, medieval	1	97	
	Handmade brick, mortar adhering	3	272	
584	Handmade brick	1	61	
588	Tile, oxidized throughout, 12mm thick, medieval?	1	40	Medieval?
	Tile, yellow fabric, oxidized throughout, 13mm thick, medieval?	1	27	
589	Tile, oxidized throughout, 15mm thick	1	34	Late post-medieval
599	Handmade brick, mortar adhering	1	17	
602	Tile, yellow fabric, reduced core, 13mm thick, medieval	1	75	Medieval?
	Tile, oxidized throughout, 15-17mm thick, medieval?	2	87	
	Handmade brick	3	32	
608	Glazed floor tile, dark mottled green glaze, 28mm thick, worn on glazed surface, mortar adhering, medieval	1	206	Medieval
	Glazed floor tile, dark mottled green glaze, 30mm thick, worn on glazed surface, mortar adhering, medieval	2	993	
	Glazed floor tile, very dark mottled green glaze, 113mm, 115mm and 120mm wide, 25mm thick, worn on glazed surface, mortar adhering, medieval	3	1153	
	Glazed floor tile, very dark mottled green glaze, 120mm wide, 23mm thick, very worn on glazed surface, mortar adhering, medieval	1	160	
	Glazed floor tile, yellow glaze over white slip, 25mm thick, worn on glazed surface, mortar adhering, medieval	1	231	
	Tile, reduced core, peghole 10mm dia, medieval	1	7	
610	Tile, reduced core, 12mm thick, mortar adhering, incl. on broken faces	1	27	Medieval
611	Handmade brick, 260mm x 130mm x 55mm, mortar adhering, medieval?	1	3107	Medieval?
	Handmade brick, 220mm x 110mm x 53mm, mortar adhering	1	2540	

Context	Description	No.	Wt (g)	Context Date
	Tile, oxidized throughout, 155mm wide, 15mm thick, peghole 11mm dia, mortar adhering, medieval?	1	1064	
613	Tile, glazed, overfired, tile fully reduced, glaze near black; 15mm thick, mortar adhering, incl. on broken faces, medieval	1	51	Medieval
	Tile, glazed, 13-14mm thick, mortar adhering to 1, medieval	3 (2 link)	334	
	Glazed floor tile, dark mottled green glaze, 30mm thick, worn on glazed surface, mortar adhering, medieval	1	239	
	Unglazed floor tile, 33mm thick, worn on upper surface, mortar adhering, medieval	1	560	
615	Tile, reduced core, 12mm thick, mortar adhering, incl. on broken faces, medieval	1	73	Late post-medieval
	Glazed floor tile, very dark green glaze, 23mm thick, worn on glazed surface, mortar adhering incl on broken edges and glazed surface, medieval	2	103	
	Glazed floor tile, very dark purple-green glaze, 23mm thick, worn on glazed surface, mortar adhering, medieval	1	156	
	Tile, glazed, reduced core, 12mm thick, medieval	1	32	
	Pantile, late post-medieval	1	306	
632	Tile, reduced core, 13-15mm thick, mortar adhering, incl. on broken faces of 1, medieval	3	199	Post-medieval
	Tile, yellow fabric, reduced core, 14-16mm thick, mortar adhering, medieval	2	160	
	Glazed floor? tile, mottled olive green glaze, 14mm thick, mortar adhering incl on glaze face, medieval	1	24	
	Tile, oxidized throughout, post-medieval	1	7	
	Handmade brick, 55mm thick, mortar adhering	1	380	
633	Tile, reduced core, 14-15mm thick, mortar adhering, medieval	2	245	Medieval?
	Tile, oxidized throughout, 12-13mm thick, 1 with peghole 10mm dia, mortar adhering, medieval?	2	124	
	Tile, yellow fabric, reduced core, 15mm thick, mortar adhering, medieval	1	102	
	Tile, yellow fabric, oxidized throughout, 15mm thick, mortar adhering, medieval	1	167	
	Pantile, yellow fabric, oxidized throughout, 20mm thick, medieval	1	442	
	Glazed roof tile, reduced core, 13mm thick, mortar adhering, medieval	1	10	
635	Handmade brick, 223mm x 111mm x 45mm, mortar adhering	1	2270	Post-medieval
	Handmade brick, 225mm x 95mm x 55mm, mortar adhering	1	2015	
636	Tile, oxidized throughout, 13mm thick, mortar adhering, medieval?	1	104	Medieval?
	Tile, yellow fabric, oxidized throughout, 14-16mm thick, 1 with peghole 12mm across, mortar adhering, medieval	2	525	
	Handmade brick, 105mm wide, 45mm thick, mortar adhering	1	1078	
637	Tile, reduced core, 10mm and 13mm thick	2	16	Medieval
649	Tile, reduced core, 14-16mm wide, mortar adhering, medieval	2	185	Medieval
	Tile, yellow fabric, oxidized throughout, 12mm wide, medieval	1	74	
651	Tile, reduced core, 12-14mm wide, 4 with mortar adhering, 1 with glaze and peghole 10mm dia, medieval	6	231	Post-medieval
	Tile, yellow fabric, reduced core, 14-18mm thick, mortar adhering, medieval	3	143	
	Tile, yellow fabric, oxidized throughout, 2 are 11mm thick, 1 is 12mm, 2 are 14mm thick and 1 is 17mm, medieval	6	150	

Context	Description	No.	Wt (g)	Context Date
	Tile, oxidized throughout, 14mm thick, medieval?	1	18	
	Pantile, 11mm thick, post-medieval	1	13	
	Glazed floor tile, very dark green-brown glaze, medieval	1	18	
653	Handmade brick, mortar adhering	3	95	Post-medieval
	Handmade brick, yellow fabric, worn on upper face, 38mm thick, mortar adhering, post-medieval	1	53	
655	Tile, yellow fabric, reduced core, 157mm wide, 13-15mm thick, peghole 8mm dia, mortar adhering incl on broken edges and in peghole, medieval	2	766	Medieval
	Tile, reduced core, 155mm wide, 14mm thick, mortar adhering, medieval	2(link)	883	
656	Tile, yellow fabric, reduced core, 155mm wide, 14mm thick, peghole 12mm dia, mortar adhering incl on broken edges and in peghole	1	1020	Medieval
657	Tile, oxidized throughout, 10mm thick, twin pegholes 12mm across, post-medieval?	1	405	Post-medieval?
	Tile, reduced core, 265mm long, 160mm wide, 11mm thick, peghole 11mm dia, mortar adhering, medieval	2(link)	1188	
	Tile, 250mm long, 153-4mm wide, 13mm thick, peghole 11mm dia in 1, mortar adhering and blocks peghole, 2 tiles mortared together, post-medieval?	2	1234	
	Tile, reduced core, 235mm long, 150mm wide, 13mm thick, peghole 11mm dia, mortar adhering, virtually complete, medieval	1	1277	
	Tile, 250mm long, 176mm wide, 16mm thick, peghole 14mm dia, mortar adhering and blocks peghole, complete, medieval?	1	1348	
669	Glazed floor tile, very dark green-brown glaze, 30mm thick, mortar adhering, medieval	1	474	Medieval
	Glazed floor tile, very dark green-brown glaze, 121mm wide, 28mm thick, mortar adhering, medieval	1	380	
	Glazed floor tile, mortar adhering, pale yellowish glaze over white slip, 125mm square, 25mm thick, mortar adhering, medieval	1	554	
683	Tile, reduced core, 11mm thick, mortar adhering, incl. on broken faces, abraded, medieval	1	32	Medieval
	Glazed floor tile, mortar adhering, yellowish glaze, medieval	1	15	
686	Glazed floor tile, mortar adhering, pale yellowish glaze over white slip, 28mm thick	1	101	Medieval
694	Tile, reduced core, 160mm wide, 13mm thick, mortar adhering	1	680	Medieval
697	Handmade brick, 125mm wide, 50mm thick, mortar adhering including on broken faces	1	1688	Medieval?
699	Tile, slightly reduced core, 12mm thick, mortar adhering	1	60	Medieval

Much of the material is roof tile and some of this is glazed, though there is no unequivocal evidence that these were ridge tiles. There are few complete examples of roof tile but some of these closely correspond in dimensions with a tile of the period *c.* 1250-1300 found elsewhere in King's Lynn (Clark and Carter 1977, 298).

A moderate quantity of glazed floor tile, 39 examples (16% of the assemblage), was recovered. Most of these are square, or apparently so, though there are two triangular edging tiles from (504) and (519). Most of the recovered tiles, 30 of the group, are dark glazed, generally variants on dark green. The remaining 9 have a light coloured, pale yellow, glaze, though one of these appears to bear a pattern. Excluding this possibly patterned example, this means there is almost 4 times as many dark tiles as light ones. Although it seems likely that the dark and light glazed tiles were used in combination in chequerboard pattern floors, the over-representation of dark tiles suggests that there were pavement areas, perhaps borders, which were entirely dark.

The one possible decorated tile appears to be stamped and slipped, though the pattern evident indicates that the body

of the tile was impressed, leaving an arcing strip of brown body clay in relief against the white slip. Although only about one-quarter of the tile survived, the evident pattern does not readily correspond with known products of the nearby tile kiln at Bawsey (Eames 1955; Clark and Carter 1977, fig 66).

There are several unglazed floor tiles and bricks, evident from the polish on their upper faces caused by protracted wear.

A few of the bricks, included some of the pavers, are of yellow Gault clay. Previous research has indicated this material was not used for bricks until the 16th or 17th century (Clark and Carter 1977, 442).

Condition

All the material is in good condition and presents no long-term storage problems. Archive storage of the collection is by material class.

Documentation

There has been some reported study of brick and tile use in King's Lynn since the medieval period.

Potential

The large collection of medieval and post-medieval ceramic building materials is of moderate local potential and significance. The material indicates that the friary buildings, and later structures in the area, had tile roofs. Additionally, buildings in the friary complex had tiled floors, though such surfaces appear to have been plain or chequerboard with little in the way of decorated mosaic pavements.

Recommendations

Other than clarifying what are local and what are imports, and searching for correlations amongst published, dated tiles, no further work on the ceramic buildings materials is required in terms of Greyfriars Tower. However, the large assemblage should be retained and archived and considered in any wider study of medieval and post-medieval brick and tile use across the whole of King's Lynn and the surrounding area.

References

Clark, H. and Carter, A., 1977, *Excavations in King's Lynn 1963-1970*, The Society for Medieval Archaeology Monograph Series 7

Eames, E., 1955, 'The Products of a Medieval Tile Kiln at Bawsey, King's Lynn', *Antiquaries Journal* XXXV

Appendix 7

ARCHITECTURAL FRAGMENTS

By Paul Cope-Faulkner

Introduction

A total of c.25 fragments of worked stone were identified during investigation at Greyfriars King's Lynn. Of these, only 19 were recorded in detail, the remaining pieces left *in situ*. All but one fragment was left at Greyfriars tower at the request of King's Lynn and West Norfolk Council.

Most of the stones can be securely placed as being part of the friary complex. However, there is a local tradition of bringing worked stones from elsewhere in Lynn to the site.

Geology

All the architectural fragments are derived from Jurassic shell rich limestones of a brownish yellow colour. An example of oolitic limestone was also uncovered which is paler in colour. The nearest sources of this material lie west of Peterborough around Stamford, such as might be quarried at Barnack.

Tooling

Only one form of tooling was identified on the stonework. Known as 'striated tooling' this is formed by an axe, adze or chisel with a straight blade. These produce a striated effect that may be vertical, diagonal or crossed.

The only other finishing technique observed was polishing, possibly using a hard sandstone or file to smooth tool marks.

The Catalogue

Bases

One single base (context 666) was identified (Fig. 32, No. 1). This is a shaft base of attic sequence. There is a circular plinth, retaining diagonal striated tooling. Slight concave scotia cutting upwards to meet the torus at an acute angle. The torus overhangs with a convex fillet above. Above the plinth the stone has been polished.

Shafts

A circular shaft (Fig. 32, No. 2) was retrieved as an unstratified find (505) from Trench 5. Following excavation this was found to have once been *in situ* resting on the base described above until it was dislodged by the machine in opening the trench. The shaft has been smoothed.

Voussoirs

Eleven rib voussoirs were retrieved (Figs 32 and 33, Nos. 3-12; one example has not been illustrated) all as unstratified material from Trench 5 (505). They are all double chamfered but have no rebate in which the web of the vault would key. This might be explained by the predominant use of brick in the building identified in this trench. Tooling varies and where visible diagonal and crossed tooling is visible. The exposed surfaces of these ribs still retain a thin skim of plaster and traces of white paint.

Three of the rib voussoirs have incised crosses cut into the joints or beds of the stones. These are further discussed below. One rib may represent a springer (No. 9).

Further voussoirs were visible in the section of this trench but were left *in situ* and not recorded beyond the section drawing. If further work was undertaken in this area the pattern of the ribs may elucidate the construction of the building.

Door jambs

One jamb (Fig. 33, No. 13) was also retrieved from Trench 5 as unstratified material (505). This was a simple chamfer with slightly splayed reveal. It is moderately small and may be a window jamb. Vertical striated tooling.

One other stone (Fig. 32, No. 14) from context (501) may be part of a doorway arch derived from the Chapter house doorway. This is a chamfered stone with cross diagonal tooling.

The remaining stones

Bench end recess (Fig. 32, No. 15) from Trench 9 (context 501). Links with *in situ* example within the Chapter house doorway element.

Stone, from Trench 9 (context 501; not illustrated). Contains deep rectangular rebate.

Plinth (Fig. 33, No. 17), Chamfered moulded string course from Trench 9 (Context 501).

Open voussoir, tracery? Chamfer moulded voussoir with slight curve from Trench 5 (context 613; not illustrated)

Dressed ashlar (Trench 9; context 519; not illustrated). Rectangular plinth with thin skim of mortar and white paint. Vertical striated tooling. Possibly reused as broken face has mortar adhering to it.

Mason marks

Three of the voussoir ribs have incised marks. These are all a simple cross and are found on the bedding joints of the respective stones. Such marks have previously been interpreted as indicators of high quality stone suitable to be worked for specialised forms and may have been so marked at the quarry they were extracted from (Stocker 1999, 353). They are not 'bankers marks', varieties of which can be seen inside the tower and which would normally be exposed, or keying grooves as they are too small.

Dating

Glyn Coppack has placed the base and column, on the basis of the mouldings, within the latter half of the 13th century. The remaining stonework is probably of a similar date, possibly of a more central mid 13th century date if related to extant stonework within the tower.

Condition

All the worked stone is in generally good condition apart from a small fragment of voussoir rib which, because of its oolitic make-up, is quite friable.

Acknowledgements

I am indebted to Dr. Glyn Coppack for his comments on the stone and, particularly, the dating of the material.

References

Stocker, D.A., 1999, *The College of the Vicars Choral of York Minster at Bedern: Architectural Fragments*, The Archaeology of York: The Medieval Walled City north-east of the Ouse Vol. **10**, Fasc.

Appendix 8

THE MEDIEVAL WINDOW GLASS AND OTHER GLASS CATALOGUE

by Rachael V. Hall

Introduction

The following glass assemblage was retrieved during excavation undertaken at Greyfriar's Towers, King's Lynn, Norfolk. The assemblage has been divided into decorated window glass with type subdivisions, undecorated window glass and bottle glass. Within these groups the catalogue is arranged in context order. Much of the painted glass is shown on Figure 34.

The Window Glass/Decorated

Linear stickwork patterns and borders

- 521:** Opaque, with red linear decoration, grozed along one edge, 14th c. w.13mm x l.17mm x t.3mm, w.25mm x l.25mm x t.3mm dr.7 and 8
- 532:** Opaque, with red curvilinear wavy line with semi-circles interspersed, grozed along one edge, 14th c., w.21mm x l.22mm x t.3mm dr.26
- 667:** Opaque, quatrefoils in stickwork, grozed along one edge, 14thc. w.18mm x l.14mm x t.3mm dr.25
- Transparent, diamonds in stickwork, grozed along one edge, 14th c. w.22mm x l.23mm x t.2mm dr.23
- Transparent, with red diamonds inset with diagonal short lines, start of foliage pattern, grozed to a corner, 14th c. w.39mm x l.50mm x 3mm dr.20

Motifs

- 608:** Opaque, grozed to a corner, with strapwork and beginning of rinceau, 14thc. w.32mm x l.62mm x t.4mm
- 613:** Two joining colourless sherds with pattern picked out in red of leaf with short line indentations and canopy, 14thc. w.41mm x 48mm x t.2.5mm, w.45mm x l.50mm x t.3mm dr.12 and 13
- 657:** Transparent, with yellow stained strapwork edge, decorated with painted outlines, 14th c. w.18mm x l.64mm x 2mm

Diaper

- 521:** 4x opaque, painted with a red wash divided into small lozengers, each with a circle scratched out of it, two sherds are grozed along two edges 14th c. w.38mm x l.36mm x 4mm, w.34mm x l.30mm x t.4mm, w.24mm x l.18mm x t.3mm, w.28mm x l.11mm x t.4mm dr.3 joins dr.9, dr.2 and 4
- 525:** Opaque, with red border and quatrefoil painted in reserve with stickwork, 2 edges grozed, 14th c., w.22mm x l.33mm x t.1.5mm dr.10
- 613** Heavily iridescent, pentagonal quarry with remains of undiagnostic pattern, w.25mm x 43mm x t.3mm dr.15

Misc.

- 521:** 2x opaque with obscured pattern, 14th c. w.27mm x l.11mm x t.3mm, w.12mm x l.8mm x t.3mm
- 2 x opaque with red linear, grozed along one edge, 14th c. w.25mm x l.37mm x t.3mm, w.22mm x 15mm x 3mm, w. 9mm x 20mm x t.3mm dr.8 and 6

- 667: Transparent, with remains yellow stain, pattern obscured with one edge grozed w.25mm x l.25mm x t.1mm

The Window Glass/Undecorated

- 503: Colourless sherd, 18th c. w.13mm, l.20mm, t.1mm
Colourless sherd, 19/20th c. w.43mm x l.48mm x t.1mm
- 505: Heavily iridescence triangular quarry, 17thc. w.24mm x 29mm x t.3mm
- 507: Colourless sherd, very heavy iridescence, undated w.25mm x l.46mm x t.2mm
- 516: Colourless triangular quarry, 17/18th c w.22mm x l.26mm x t.1mm
- 535: Colourless sherd, 18th c. w.15mm x l.25mm x t.2mm
Colourless square quarry with grozing along one edge, 18th c w.25mm x l.26mm x t.1mm
- 588: Colourless sherd, 20th c. w.20mm x l.23mm x t.2mm
- 613: Colourless sherd with fire rounded edge, undated, w.17mm x l.26mm x t.2mm
Heavily iridescent, elongated quarry, 14th c?, w.27mm x l.77mm x t.2.5mm
- 615: 2x colourless sherds, undated, w.15mm x l.24mm x t.1mm, w.10mm x l.19mm x t.1mm
- 636: Highly weathered fragments of undiagnostic window glass, undated and unmeasured
- 683: Three sherds of colourless, heavily iridescent window glass with one sherd displaying grozing along one edge, 18/19th c. w.25mm x l.30mm x t.1mm, w.17mm x l.38mm x t.1mm, w.31mm x l.35mm x t.1mm
- 667: Heavily eroded small fragments of glass, 14th c
3x opaque quarries, heavy iridescence, 14th c. w.35mm x l.45mm x t.3mm, w.11mm x l.24mm x t.1mm, w.26mm x l.36mm x t.2mm dr.21, 22 and 24

Abbreviations

- w. width
l. length
t. thickness
wg. weight (only used in bottle catalogue)
dr. drawing number

NB. Opaque has been used to refer to the glass blackened by weathering/ferrous sulphide

Discussion of window glass:

A reasonably large assemblage of window glass was retrieved during the Greyfriars excavations. The window glass can be broadly divided into two groups: decorated and undecorated. Within the undecorated category several fragments of colourless window glass dating post-18th century were identified.

Of the remaining undecorated fragments, many were heavily eroded and small in nature making dating difficult. It is however likely that these fragments can be attributed a 14th century date due to the nature of the material and the dated fragments of decorated window glass also identified from the same context.

Twenty two fragments of decorated window glass were identified. These can be divided into several categories;

Linear stickwork: patterns that are painted in reverse or picked out from a colourwash of red paint as they are at Greyfriars. In the instance of Greyfriars it is likely that the patterns would have formed narrow borders to larger patterned panels.

Motifs and patterned: *patterned fragments with trefoils, quatrefoils and leaf.* A good example of a patterned/motif is from cxt.613 where a leaf and canopy design has been picked out in red. The canopy motif is a reflection of architectural design. An example of painted transparent glass was identified from cxt.657. This fragment displayed a yellow-stained strapwork edge and was decorated with painted outlines.

Diaper: *a repeated pattern which may frame a figural composition.* Four examples of cross diaper were identified at Greyfriars. The design consisted of a series of small lozengers with circles inset. This was produced by picking out a cross-hatch design out of a painted wash and then scratching circles within each lozenge. Similar designs have also been recorded at monastic sites such as Fishergate and Tewkesbury Abbey. A quatrefoil decoration was also seen in one sherd.

Though much of the decorated and undecorated window glass from Greyfriars has suffered weathering in the form of pitting, iridescence, and the blacking of the glass, it offers great potential for further study and analysis.

Glass bottles and misc.

- 500:** Colourless, fragment of bottle push-up with pontil scarring, 18th c. wg.6g
- 503:** Green bottle body sherd, 19th c wg.18g
- 504:** Dark green, fragment of wine bottle push-up with square profile, late 18th c. wg.48g
Green bottle body/shoulder fragment, 18/19th c. wg.48g
- 505:** Dark green, fragment of wine bottle push-up, shallow profile with slight pontil scarring, heavy iridescence, 17/18th c. wg.16g
- 589:** Dark green, neck and collared string rim of wine bottle, 17thc. wg.70g and body sherd wg. 6g
- 615:** 4x sherds of green bottle glass, including section of steep profiled push-up, late 18/19th c. wg 60g
- 683:** 2x sherds of green bottle glass, iridescence, 19th c. wg.10g
Colourless, moulded rim sherd, 19th c. wg. 4g

Discussion of bottles and misc:

Several fragments of bottle glass (wine) were recovered during the excavations. Most date to the 18th century or later, though fragment of neck from cxt. 589 dates to the 17th century. Such an assemblage of post-medieval bottle glass is normal from later demolition/rubbish layers. This fact coupled with the small amount of bottle glass retrieved from the site would mean that there is little potential for the further study of the bottle glass.

Summary

The window glass from Greyfriars is an extremely good example of late 13th/14th century window glass. The assemblage offers very good potential for further analysis and comparative study.

Bibliography:

Franks, S., 1982, *Glass and Archaeology*

Graves, C.P., 2000, *The Window Glass of the Order of St. Gilbert of Sempringham: A York Based Study*

Hume, N., 1991, *Artifacts of Colonial America*

Appendix 9

THE METAL FINDS

by Gary Taylor

A total of 31 metal items weighing 664g was recovered from 17 separate contexts.

Range

The range of material is detailed in the table.

Many of the items, perhaps 14 of the 31 objects, appear to be structural in function and these include nails, window lead, lead off cuts and probably part of a lead clamp. Items associated with clothing, including buttons, a pin, a strap fitting and a possible watch chain, provide a further 5 objects in the assemblage.

Table 1: Metal Items

Context	Material	Description	No.	Wt (g)	Comments
000	Iron	Nail, rectangular section and head	1	21	Incomplete
501	Steel	Spoon, stamped GLADWIN LTD NS, bent	1	45	19 th -20 th century
503	Copper alloy	Button, machine-cut 'ray' decoration, gilded	1	9	Late post-medieval, prob. 19 th -early 20 th century
	Copper alloy	Coin, halfpenny, virtually illegible	1	10	1672-1799
504	Copper alloy	Button, stamped with illegible legend around perimeter	1	1	19 th century
	White metal?	Toy gun	1	7	Post-medieval
	Copper alloy	Strap fastener, approx. triangular, folded sheet, riveted, decorated with lines of small stamped circles in borders	1	54	15 th century?
	Lead	Off cuts	2	7	No corrosion; recent
505	Lead	Strip	1	13	
	Iron	Nail, rectangular section and head	1	14	
506	Copper alloy	Pin, wound wire head, 35mm long, Margeson type 3 pin	1	1	17 th century
	Iron	Nail shaft, rectangular section	1	19	Incomplete
	Iron	Unidentified	1	14	
518	Copper alloy	Chain, with circular attachment loops at each terminal, 213mm total length; possible watch chain,	1	21	Late post-medieval
521	Iron	Probable blade fragment	1	19	Heavily corroded
527	Iron	Nail shaft, rectangular section	1	5	Incomplete
	Iron	Slag, smithing slag ?	2	24	
595	Iron	Nail	1	6	
	Iron	Nail, rectangular section, bent, mortar adhering	1	16	
	Iron	Amorphous ferrous concretion	1	7	
610	Copper alloy	Coin, rose farthing, James I (1604-5) or Charles I (1631-2)	1	1	Obverse illegible
636	Copper alloy	Bell, open bell	1	38	Medieval
651	Iron	Nails, rectangular section and heads	3	70	
664	Lead and iron	Triangular/pyramidal lead	1	83	Part of structural clamp?

Context	Material	Description	No.	Wt (g)	Comments
		block and iron nail?			
667	Lead	Window came	1	6	
683	Iron	Nail?	1	17	Heavily corroded
697	Iron	Horseshoe	1	136	Post-medieval

A coin was recovered from (503). This is a copper halfpenny but is almost illegible; the coin is worn and the obverse and, to a lesser extent, the reverse are encrusted. Only part of the figure of Britannia and the exergue line on the reverse is evident. Halfpenny coins of this type were first minted under Charles II in 1672 but production of this coin type continued until 1799 and they remained legal tender until 1860. A second coin was retrieved from (610). This is a copper rose farthing and although the obverse is illegible this coin type dates from the first half of the 17th century, being minted under James I and Charles I.

Part of a strap fastener was recovered from (504). The surviving section is the strap end, the actual swivel tag frame being missing. The lack of an opening where a pin would hinge indicates that this object is a strap fastener, not a belt end. Examples of such strap fasteners previously found in Norwich appear to mostly date from the 15th century (Margeson 1993, 38).

An open bell in a heavily leaded copper alloy was recovered from (636). A moderately similar bell was found in Beverley, Yorkshire, and dated to the late 11th-early 12th century (Goodall 1991, 152, fig 115 no 626).

The pin from (506) with the wire wound head appears to be Margeson's Type 3 pin and is probably of similar date, that is, 17th century (Margeson 1993, 13; fig 5 nos 39, 40).

One branch of a horseshoe was retrieved from (697). Too little of this survives for the typology to be determined with certainty but it has even, parallel sides with a slightly flaring heel, widening inwards. It has been noted that there was a tendency in the first half of the 17th century for horseshoes to spread inward at the heels in this manner, but the style continued till about 1740 (Hume 1991, 239). It therefore seems likely that this example dates from the period 1600-1740.

The window came from (667) indicates the presence of leaded windows.

Condition

All the material is in good condition and presents no long-term storage problems. Archive storage of the collection is by material class. None of the material has been X-rayed.

Potential

As a moderate collection of metal items that is mixed in date, the assemblage is generally of limited-moderate local significance. It is probable that the medieval items relate to the use of the friary in that period. Early post-medieval objects indicate use of the site, perhaps in the 17th century. There are also some generally domestic pieces (clothing fittings, eating utensils) of recent date that signify use of the site in the 19th-early 20th century.

Recommendations

Closer comparabilia for some of the pieces, specifically the strap fastener, bell and toy gun, should be sought.

The iron objects should be X-rayed, as should the non-recent copper alloy items.

Some of the pieces, particularly the strap fastener and bell, would merit illustration.

References

Goodall, A., 1991 'The Copper Alloy and Gold', in P. Armstrong, D. Tomlinson and D. H. Evans, *Excavations at Lurk Lane Beverley, 1979-82*, Sheffield Excavation Reports **1**

Hume, I. N., 1991 *A Guide to Artifacts of Colonial America* (Vintage Books)

Margeson, S., 1993 *Norwich Households: The Medieval and Post-Medieval Finds from Norwich Survey Excavations 1971-1978*, East Anglian Archaeology **58**

Appendix 10

THE OTHER FINDS

by Gary Taylor

A total of 56 items weighing 2333g was recovered from 23 separate contexts.

Range

The range of material is detailed in the table.

Table 1: Other Finds

Context	Material and Description	No.	Wt (g)	Comments
503	Clinker	1	19	
504	Clinker	3	31	
	Chlorite mica schist hone	1	76	
	Coarse sandstone, mortar adhering	1	56	
	Broken cobble	1	69	
505	Plaster/mortar, whitewashed	1	173	Medieval
507	Stone roof tile, 7mm thick	1	20	
512	Plaster/mortar, whitewashed	2	40	
517	Coal/shale	1	1	
518	Clinker	1	10	
520	Plaster, whitewashed	4	14	
529	Flint flake	1	36	
534	Clinker	1	8	
535	Coal	1	2	
	Clinker	1	193	
549	Mortar	1	69	
550	Mortar	1	57	
583	Plaster/mortar, whitewashed	1	15	
588	Limestone, amorphous	1	129	
608	Plaster/mortar, whitewashed	2	168	
632	Clinker, mortar adhering	1	13	
633	Building stone, rubble, mortar adhering	1	403	
636	Shale; roofing material?	1	5	
	Plaster/mortar, whitewashed	22	676	
651	Coal	2	1	
	Micaceous sandstone, 17mm thick, roof tile?	1	46	
653	Bone button, lathe turned, 21mm diameter	1	3	18 th -19 th century

The bone button from (653) bears similarities to types found in America and there dated to the mid 18th century, the period 1726-76 (Hume 1991, 90, fig 23).

About three-quarters of the assemblage is associated with construction or demolition activities and reflects the presence of buildings at the site in the past. However, most of this material is undatable.

Over 20% of the assemblage is associated with burning and includes clinker and coal. This probably indicates fires at the site, and the presence of unburnt coal suggests that these were largely domestic in nature, rather than destructive.

Condition

All the material is in good condition and presents no long-term storage problems. Archive storage of the collection is by material class.

Potential

The moderate collection of mixed materials is of limited local potential. However, the majority of the items are associated with construction and reflect the presence of buildings in the area from the medieval period onward. There is also a significant quantity of items associated with burning that may indicate fires at the site, though this material

could also have entered the area through dumping of fire ashes.

Recommendations

More detailed research for comparabilia for the hone is merited. None of the remainder of the collection requires any further analysis.

Reference

Hume, I. N., 1991 *A Guide to Artifacts of Colonial America* (Vintage)

Appendix 11

CATALOGUE OF THE ANIMAL BONE

By James Rackham

site	context	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment	preservation
5477KLY	500	BOS	MTT	1	L		1						SHAFT AND PART PROX END-POROUS SURFACE	4
5477KLY	500	BOS	ULN	1	R		23						SEMILUNARIS-POROUS SURFACE	4
5477KLY	500	OVCA	AXI	1	L	AF	3	CH					POST FRAGMENTOCHOPPED OBLIQUE TRANSVERSE AND AXIALLY	4
5477KLY	500	UNI	UNI	2	F								INDET-4 PIECES	4
5477KLY	500	CSZ	UNI	1	F								INDET	4
5477KLY	500	BOS	MTT	1	R		5	CH					2 THIRDS SHAFT-PROX ANT SHAFT CHOPPED- 2 PIECES	4
5477KLY	500	OVCA	TIB	1	R	PN	4						PROX SHAFT FRAGMENT	4
5477KLY	504	BOS	RIB	1	L	PN		CHKN					PROX END-HEAD CHOPPED THRU-PROX SHAFT CUT	4
5477KLY	504	BOS	SKL	1	R								ZYGOMATIC ARCH	4
5477KLY	504	BOS	CEV	1	F			CH					POST ZYGAPOPHYSIS-CHOPPED FROM REST OF VERT	4
5477KLY	504	BOS	ULN	1	F				DG				PROX SHAFT FRAGMENT-PROX END CHEWED	4
5477KLY	504	FISH	VER	1	F								LARGE GADID VERTEBRA	4
5477KLY	506	CSZ	RIB	1	F			CH					MIDSHAFT FRAGMENT-PROX CHOPPED	4
5477KLY	506	OVCA	AST	1	L		1						COMPLETE	4
5477KLY	506	OVCA	HUM	1	L	DF	6789	CH			BT-30 HT-17.7		DISTAL HALF-SHAFT 'SHAVED'	4
5477KLY	506	SUS	SCP	1	L		35						DISTAL FRAGMENT OF BLADE-SMALL	4
5477KLY	506	BOS	MAN	1	L								HORI RAMUS FRAGMENT WITH MOLAR ALVEOLI- 5 PIECES	4
5477KLY	506	BOS	LM2	1	L				J12				ROOTS BROKEN OFF	4
5477KLY	506	CSZ	SKL	3	F								INDET	4
5477KLY	506	CSZ	UNI	2	F								INDET	4
5477KLY	510	BOS	RIB	1	L			CH					PROX SHAFT-PROX END CHOPPED	4
5477KLY	510	OVCA	TIB	1	R		4						PROX MIDSHAFT-SLIGHTLY POROUS	4
5477KLY	510	OVCA	HUM	1	R	DF	6789	KN			BT-31 HT-18.9		DISTAL HALF-CONDYLE WITH CUT MARK ON MEDIAL EDGE	4
5477KLY	510	SUS	FEM	1	R		4						SHAFT	4
5477KLY	519	OVCA	RIB	1	R	PF	1						PROXIMAL END	4
5477KLY	519	BOS	FEM	1	F		4						FRAGMENT OF FOSSA	4
5477KLY	519	OVCA	TIB	1	L				ROD				MIDSHAFT-GNAWED AND ERODED	3
5477KLY	521	BOS	MAN	1	R		4						PART OF CORONOID	4
5477KLY	521	CSZ	RIB	1	F								MIDSHAFT FRAGMENT	4
5477KLY	521	OVCA	ATL	1	R			KN					RIGHT SIDE OF CENTRUM-POST FACET CUT	4
5477KLY	521	ORC	HUM	1	L	DF							DISTAL END	4
5477KLY	521	BOS	ULN	1	L	PF	1	CH					OLECRANON AND PART SEMILUNARIS-CHOPPED Laterally	4
5477KLY	521	BOS	HUM	1	R	DF							PART OF DISTAL CONDYLE	4
5477KLY	521	SUS	TIB	1	L		4						FRAGMENT OF PROX SHAFT-POROUS	4
5477KLY	521	OVCA	SKL	1	F								FRONTAL SUTURE- 2 PIECES	4
5477KLY	521	CSZ	VER	1	F								FRAGMENT OF CENTRUM	4
5477KLY	521	SSZ	INN	1	F		2						FRAGMENT OF ILIUM	4
5477KLY	521	OVCA	SKL	1	L		8						TEMPORAL FRAGMENT	4
5477KLY	521	SSZ	ULN	1	F								DISTAL SHAFT FRAGMENT	4
5477KLY	521	OVCA	SCP	1	L	DF	1235				GLP-36.8 LG-28.3 BG-21.9 SLC-22.4		GLENOID NECK AND DISTAL BLADE- 7 PIECES	4
5477KLY	521	BOS	LPM3	1	L				G12				COMPLETE	4
5477KLY	521	SUS	MAN	1	F								FRAGMENT FROM ANGLE REGION-SMALL	4
5477KLY	521	OVCA	SKL	1	R								POST FRONTAL FRAGMENT	4
5477KLY	521	UNI	UNI	1	F								INDET	4
5477KLY	521	CSZ	LBF	1	F			CH					POROUS MIDSHAFT FRAGMENT-CALF?-CHOPPED	4
5477KLY	521	SUS	HUM	1	R		0		DG				PROX SHAFT-PROX END CHEWED	4
5477KLY	529	OVCA	PH1	1	R	PF	12						COMPLETE	4

site	context	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment	preservation
5477KLY	530	BOS	SCP	1	L	DF	123	CH					PART OF GLENOID AND NECK-ORIGIN OF SPINE AND CAUDAL MARGIN CHOPPED	4
5477KLY	530	OVCA	FEM	1	R								SHAFT	4
5477KLY	533	BOS	LM3	1	L					K10			COMPLETE	4
5477KLY	584	CSZ	RIB	1	L								MIDSHAFT FRAGMENT	4
5477KLY	584	CSZ	RIB	1	L			CH					PROX SHAFT FRAGMENT-BOTH ENDS CHOPPED	4
5477KLY	584	CHIK	HUM	1	R								ENDS DAMAGED-JUVENILE	4
5477KLY	584	OVCA	INN	1	L		3		DG				ILIAL SHAFT-ANT CHEWED	4
5477KLY	615	BOS	SCP	1	R	DF	23	CH					PART OF GLENOID AND NECK-CRANIAL MARGIN CHOPPED	4
5477KLY	615	OVCA	SCP	1	R	DF	1235				SLC-20.4		GLENOID NECK AND DISTAL BLADE- 2 PIECES	4
5477KLY	615	CSZ	RIB	1	F								SPLIT SHAFT FRAGMENT	4
5477KLY	615	BOS	HUM	1	R	DF	6789						DISTAL THIRD-SLIGHTLY CHEWED-SL POROUS	4
5477KLY	615	BOS	HUM	1	R	PN	1						PART OF PROX EPIPHYSIS	4
5477KLY	615	BOS	PH1	1	R	PF	12						ANT-PORX END DAMAGED	4
5477KLY	615	BOS	PH1	1	L	PF	12						PROX END BROKEN	4
5477KLY	615	BOS	MTT	1	F	DN		CH					SPLIT ZONE 5	4
5477KLY	615	EQU	TTH	1	W								WELL WORN	4
5477KLY	615	BOS	UM3	1	L					K11			COMPLETE	4
5477KLY	615	SUS	PH1	1	L	PF	12						COMPLETE	4
5477KLY	615	CSZ	RIB	1	R								PROXIMAL SHAFT-SL POROUS	4
5477KLY	615	SSZ	RIB	1	L								PROX HALF SHAFT	4
5477KLY	615	SUS	FEM	1	F								MIDSHAFT FRAGMENT-SL POROUS	4
5477KLY	615	BOS	TIB	1	R								MIDSHAFT-SMALL-JUVENILE	4
5477KLY	615	OVCA	LM2	1	L				J7				BROKEN	4
5477KLY	615	OVCA	TIB	1	R	DF	567				SD-15.5 Bd-28.5 Dd-21.6		DISTAL HALF	4
5477KLY	615	OVCA	TIB	1	R	DF	567				SD-17.2 Bd-29.4 Dd-23.4		DISTAL HALF-POROUS	4
5477KLY	635	ORC	TIB	1	L	PF							PROX HALF	4
5477KLY	635	SSZ	TRV	1	F		1						SPINE 2 PIECES	4
5477KLY	649	OVCA	RAD	1	R	DF	456				Bd-29.2 Dd-21		DISTAL HALF	4
5477KLY	649	OVCA	INN	1	R		7	CH					ISCHIAL SHAFT-ANT CHOPPED	4
5477KLY	651	BOS	CAL	1	L	PN	2	CH					DISTAL END CHOPPED OFF-TUBEROSITY CT-POROUS	4
5477KLY	651	BOS	UM1	1	R							I16	COMPLETE	4
5477KLY	651	BOS	MTT	1	F								SPLIT PROX END-POROUS	4
5477KLY	651	FISH	VER	1	W								MED-LARGE GADID?	4
5477KLY	651	CSZ	RIB	1	F			CH					MIDSHAFT FRAGMENT-ONE END CHOPPED	4
5477KLY	651	CSZ	RIB	1	L								PROX SHAFT FRAGMENT	4
5477KLY	656	BOS	UPM3	1	R							G12	COMPLETE	4
5477KLY	656	OVCA	INN	1	L		4						ANT PUBIS FRAGMENT	4
5477KLY	656	OVCA	HUM	1	L	PF	5						PROX AND MIDSHAFT FRAGMENT- 3 PIECES	4
5477KLY	656	SSZ	UNI	1	F								INDET	4
5477KLY	656	OVCA	MAN	1	F								ANT VENTRAL FRAG HORI RAMUS	4
5477KLY	657	OVCA	RIB	1	R	PN	1	CH					PROX HALF-FIRST RIB-DISTAL END CHOPPED	4
5477KLY	697	OVCA	SCP	1	R	DF	123				GLP-32.8 LG-25.4 BG-20.4 SLC-21.3		GLENOID AND NECK	4
5477KLY	697	CSZ	SCP	1	R								PROXIMAL BLADE FRAGMENT-POROUS- 2 PIECES	4
5477KLY	697	CSZ	SCP	1	F								NECK FRAGMENT	4

Appendix 12

THE MOLLUSC SHELL

by Gary Taylor

A total of 12 fragments of mollusc shell weighing 891g was recovered from 7 separate contexts. Other faunal remains were also recovered and are reported separately.

Range

The range of material is detailed in the table.

Table 1: Mollusc Shell

Context	Species	Description	No.	Wt (g)	Comments
500	Oyster	Shell, 82mm across	1	62	
504	Oyster	Shell, 43mm across	1	7	
505	Oyster	Shell, 90mm across	1	53	
558	Oyster	Shell, 97-108mm across	4	363	
602	Oyster	Shell, 50mm across	1	9	
649	Oyster	Shell, 100-107mm across	2	280	
651	Oyster	Shell, 82-90mm across	2	117	

Only oyster shells were recovered and constitute food waste. Three size ranges are evident in the shell assemblage, these being: 43-50mm across; 82-90mm across; and 97-108mm across. These distinct size ranges indicate the oysters were obtained from managed beds of different maturity and most of the shells are large.

Condition

All the material is in good condition and presents no long-term storage problems. Archive storage of the collection is by material class.

Potential

As a small assemblage of food waste the collection is of limited local potential but does indicate that past occupants of the site had access to marine foodstuffs.

Recommendations

No further analysis of the material is required.

Appendix 13

PLANT MACROFOSSILS AND OTHER REMAINS: AN ASSESSMENT

By Val Fryer

Introduction

Excavations on the site of the Kings Lynn Greyfriars were undertaken in June 2003 by Archaeological Project Services. Samples for the extraction of the plant macrofossil assemblages were taken from occupation/constructional deposits of medieval and post-medieval date, and five were submitted for assessment.

Methods

The samples were processed by manual water flotation/washover, collecting the flots in a 500 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16, and the plant macrofossils and other remains noted are listed on Table 1. Nomenclature within the table follows Stace (1997). Unless otherwise stated, all plant remains were preserved by charring.

The non-floating residues were collected in a 1mm mesh sieve and sorted when dry. Artefacts/ecofacts including pot, bone, fish bone, eggshell, and building materials were removed for further specialist analysis.

Results of assessment

Plant macrofossils

Cereal grains/chaff, seeds of common weeds and wetland plants, and tree/shrub macrofossils were recorded at a low to moderate density in all five samples. Preservation was moderately good, although some cereal grains had become puffed and distorted during charring.

Oat (*Avena* sp.), barley (*Hordeum* sp.) and wheat (*Triticum* sp.) grains were noted, mostly as single specimens. Chaff elements were extremely rare, but a single barley rachis node was recovered from sample 1. Weed seeds were also rare, being noted in only three samples. Gromwell (*Lithospermum officinale*) seeds were recorded from sample 1 and cabbage/turnip (*Brassicaceae*) testa fragments were found in sample 4. Wetland plant macrofossils, including nutlets of sedge (*Carex* sp.), saw-sedge (*Cladium mariscus*) and spike-rush (*Eleocharis* sp.) were present in samples 1, 2 and 4, and the latter sample also produced hazel (*Corylus avellana*) nutshell fragments.

Charcoal fragments and pieces of charred root, rhizome or stem were present in all but sample 2. A single possible bracken (*Pteridium aquilinum*) pinnule fragment was noted in sample 1. Other plant macrofossils included indeterminate culm nodes, moss fragments and seeds.

Other materials

The fragments of black porous 'cokey' material, black tarry material and the siliceous globules are possibly derived from the combustion of organic remains at very high temperatures. Possible dietary refuse included fragments of bone, eggshell, fish bone and marine mollusc shell. Construction materials included fragments of brick/tile and mortar/plaster.

Discussion

Sample 1 is the only sample taken from a pre-friary (i.e. pre-1250) deposit, and the assemblage appears to be largely derived from hearth waste. An extremely small quantity of cereal processing detritus is present along with possible fuel waste including numerous stem fragments (very fragmented but some possibly heather) and bracken. The presence of dietary residues may indicate that some or all of this material is derived from domestic hearth waste.

The remaining samples are all from deposits associated with the construction/rebuilding/demolition of the friary complex. The assemblages appear to be indicative of mixed refuse, containing dietary refuse (cereals, bone, eggshell, fish bone), sewage waste and construction/demolition debris. The wetland plant macrofossils may be derived from burnt thatch/litter, or possibly from peat ash, although the burnt mollusc shells normally associated with the latter are absent.

Conclusions and recommendations for further work

In summary, although the pre-friary assemblage may possibly be derived from domestic hearth waste, the remaining samples contain a mixture of material, which is not indicative of any specific activity.

As the density of material recorded is generally very low (<50 specimens), and as the assemblages cannot be conclusively interpreted, no further quantitative analysis is recommended.

References

Stace, C., 1997, *New Flora of the British Isles*. Second edition. Cambridge University Press

Key to Table

x = 1 – 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens
m = mineral replaced b = burnt

Sample No.	1	2	3	4	5
Context No.	638	597	519	616	532
Cereals					
<i>Avena</i> sp. (grains)	xcf			x xm	
Cereal indet. (grains)	xx		x	x	x
(rachis node frag.)	x				
<i>Hordeum</i> sp. (grains)			x	x	
(rachis node)	x				
<i>Triticum</i> sp. (grains)			x		x
Herbs					
<i>Brassica</i> sp.				x	
Brassicaceae indet.				x	
Chenopodiaceae indet.			x		
<i>Linum catharticum</i> L.	xcf				
<i>Lithospermum officinale</i> L.	x				
Wetland plants					
<i>Carex</i> sp.				x	
<i>Cladium mariscus</i> (L.)Pohl	x	x		x	
<i>Eleocharis</i> sp.				x	
Trees/shrubs					
<i>Corylus avellana</i> L.				x	
Other plant macrofossils					
Charcoal <2mm	xxx		xxx	x	xx
Charcoal >2mm	x		xx		
Charred root/rhizome/stem	xxx		x	x	
<i>Pteridium aquilinum</i> (L.)Kuhn (pinnule frag.)	xcf				
Indet.culm node	x		x	x	
Indet.moss	x				
Indet.seeds	x		x	x xm	
Other materials					
Black porous 'cokey' material		xxx	xx	x	xxx
Black tarry material		xx		x	xxx
Bone		xb	x		
Brick/tile				x	
Eggshell			x	x xb	
Fish bone	x		x	x	x
Marine mollusc shell frags.	xb				
Mineralised/faecal concretions	x			x	
Mortar/plaster			x	x	
Siliceous concretions	x				
Small coal frags.		xxx	xxx		xxx
Small mammal/amphibian bone	x				
Vitrified material		x	x	x	
Sample volume (litres)	5	8	8	5	5
Volume of flot (litres)	<0.1	<0.1	0.1	0.1	0.1
% flot sorted	100%	100%	100%	100%	100%

Table 1. Plant macrofossils and other remains from the Greyfriars excavation, Kings Lynn, Norfolk.

Appendix 14

GLOSSARY

Choir	Part of a church to the liturgical east of the nave appropriated for the singers (i.e. the Friars).
Context	An archaeological context represents a distinct archaeological event or process. For example, the action of digging a pit creates a context (the cut) as does the process of its subsequent backfill (the fill). Each context encountered during an archaeological investigation is allocated a unique number by the archaeologist and a record sheet detailing the description and interpretations of the context (the context sheet) is created and placed in the site archive. Context numbers are identified within the report text by brackets, <i>e.g.</i> (004).
Cut	A cut refers to the physical action of digging a posthole, pit, ditch, foundation trench, <i>etc.</i> Once the fills of these features are removed during an archaeological investigation the original 'cut' is therefore exposed and subsequently recorded.
Dumped deposits	These are deposits, often laid down intentionally, that raise a land surface. They may be the result of casual waste disposal or may be deliberate attempts to raise the ground surface.
Fill	Once a feature has been dug it begins to silt up (either slowly or rapidly) or it can be back-filled manually. The soil(s) which become contained by the 'cut' are referred to as its fill(s).
Geophysical Survey	Essentially non-invasive methods of examining below the ground surface by measuring deviations in the physical properties and characteristics of the earth. Techniques include magnetometry and resistivity survey.
Layer	A layer is a term to describe an accumulation of soil or other material that is not contained within a cut.
Medieval	The Middle Ages, dating from approximately AD 1066-1500.
Messuage	A dwelling and the land surrounding it.
Natural	Undisturbed deposit(s) of soil or rock which have accumulated without the influence of human activity.
Post-medieval	The period following the Middle Ages, dating from approximately AD 1500-1800.
Presbytery	Part of the church, east of the choir, where the high altar stands in monastic establishments, not the 'priest's house' which usually lies off the chancel in a parish church or chapel.

Appendix 15

THE ARCHIVE

The archive consists of:

203	Context records (numbered 500-702)
19	Plan sheets
25	Section sheets
15	Sheets of worked stone drawings
1	Photographic record sheet
3	Boxes of finds
1	Stratigraphic matrix

All primary records and finds are currently kept at:

Archaeological Project Services
The Old School
Cameron Street
Heckington
Sleaford
Lincolnshire
NG34 9RW

The ultimate destination of the project archive is:

Norfolk Museums Service
Union House
Gressenhall
Dereham
Norfolk
NR20 4DR

The archive will be deposited in accordance with the document titled *Standards for Field Archaeology in the East of England*.

Archaeological Project Services Site Code:

5477 KLY

The discussion and comments provided in this report are based on the archaeology revealed during the site investigations. Other archaeological finds and features may exist on the development site but away from the areas exposed during the course of this fieldwork. *Archaeological Project Services* cannot confirm that those areas unexposed are free from archaeology nor that any archaeology present there is of a similar character to that revealed during the current investigation.

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