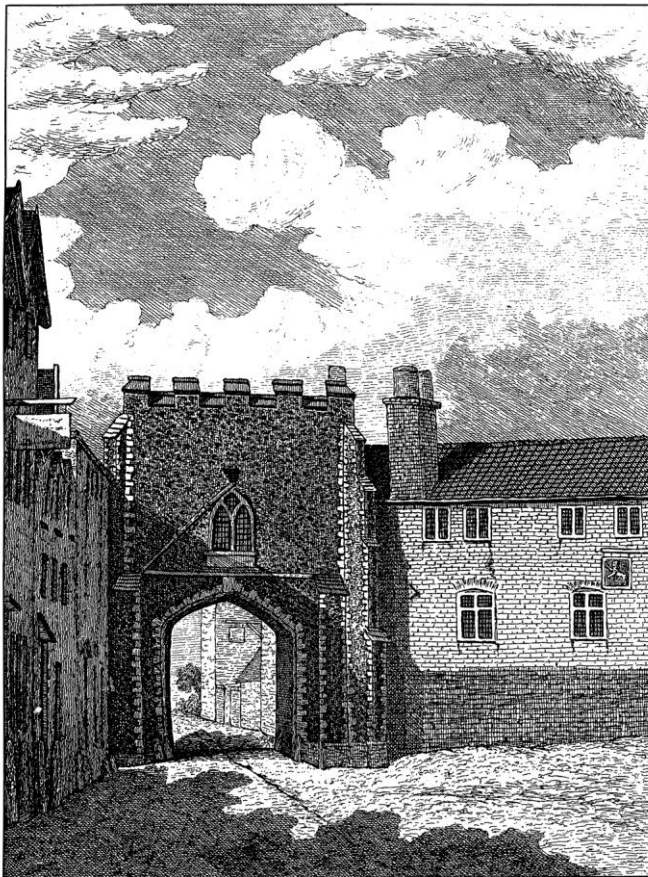


2017/1335

**150-152 Magdalen Street,
Norwich, Norfolk**

Archaeological Monitoring and Excavation



JOHN-NINHAM-DEL-1791-

WALTER-HAGREEN-FECIT-

**Prepared for:
Oliver Tookman**

Planning Ref: 08/01337/F

HER:ENF 137129

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Client:	Oliver Tookman
Location:	150–152 Magdalen Street, Norwich, Norfolk
District:	Norwich City Council
Planning Reference:	08/01337/F
Grid Reference:	TG 2313 0964
HER No.:	ENF 137129
OASIS ID:	norfolka1-298410
Dates of Fieldwork:	13 – 17 April 2015

Summary

NPS Archaeology was commissioned by Oliver Tookman to carry out a programme of archaeological works ahead of the redevelopment of a plot of land at 150-152 Magdalen Street, Norwich (TG 2313 0964). The development comprised a mixture of residential and retail units.

The 0.05ha site lies immediately within the northern boundary of the medieval city walls, close to the former Magdalen Gate. From at least the late 17th century, maps depict buildings on the plots Magdalen Street frontage, and the site is identified as having high potential for archaeological remains of medieval date and later.

Given the sites potential and results of previous archaeological evaluation, Norfolk County Council Historic Environment Service (NCCHES) requested that archaeological excavation and monitoring was carried out, this taking place in April 2015.

The earliest recorded features were a group of waste pits of probable 14th century date thought to be associated with a street frontage building, of which any traces had been destroyed by the time of the current excavation.

Following the infilling of probable early 17th century pits present at the west end of the development area, a rectangular flint, mortar and brick structure was constructed, this also thought to date to the 17th century.

Following abandonment and partial demolition of this structure, an apparently organised dumping of waste material, largely during the 18th century, had raised the pre-existing ground level in the vicinity by approximately 1.0m.

Following some accumulation of waste material, a further masonry building was then constructed on site. The remains of this second building comprised a flint, mortar and brick-built cellar with an adjoining barrel-vaulted cellar and foundations.

Many of the materials used in the various elements of the latter build, including most of those used for the adjoining barrel vault, were reclaimed from a variety of sources. On balance, an 18th century date of construction seems likely.

1 0 INTRODUCTION

1.1 Project Background

- 1 A proposal to redevelop 150-152 Magdalen Street, Norwich (TG 2313 0964) and construct two small shop units, three houses and five flats required a programme of archaeological works. These works consisted of monitoring the demolition of standing buildings at the site and the removal of their footings or foundations, followed by archaeological evaluation to assess the potential effects of the proposed development on the archaeological resource. As a result of the evaluations findings, it was determined that archaeological excavation should initially take place of those archaeological deposits impacted by site reduction to formation levels for foundation testing, with possible further excavation of deposits that may be affected by groundworks for the finalised foundation designs and services.
- 2 The site was formerly occupied by a relatively modern, flat-roofed, two-storey former furniture shop building, fronting Magdalen Street. A group of adjoining buildings ran back from the street along Wall Lane, perpendicular to Magdalen Street and parallel to remains of the city wall (Figure 1).
- 3 The 0.05ha site lies immediately within the northern circuit of the medieval city walls, close to the former site of Magdalen Gate. The earliest maps consulted, such as Cleer's map of 1696, show buildings on the Magdalen Street frontage of the plot, and the site was identified as having high potential for the presence of archaeological remains from the medieval period onwards. An archaeological evaluation (Boyle 2015) in January 2014 consisted of one evaluation trench measuring c. 4.0m x 4.0m, excavated at the rear of the plot from the Magdalen Street frontage.
- 4 Two walls belonging to a probable post-medieval building were present in the evaluation trench. Structural elements probably associated with late post-medieval or modern buildings were also recorded, along with dumped deposits deriving from a mix of demolition and domestic waste disposal. Two large post-medieval cellars were revealed during archaeological monitoring at the site; at least one of these cellars may have remodelled an earlier structure.
- 5 Given the potential of the site and the results of the evaluation, Norfolk County Council Historic Environment Service (NCCHES) requested that archaeological excavation was carried out. Dr Ken Hamilton of NCCHES issued an excavation brief, (Generic Brief for Archaeological Excavation) and also stated that "archaeological excavation must extend to the depth of proposed ground disturbance"(email correspondence K Hamilton).

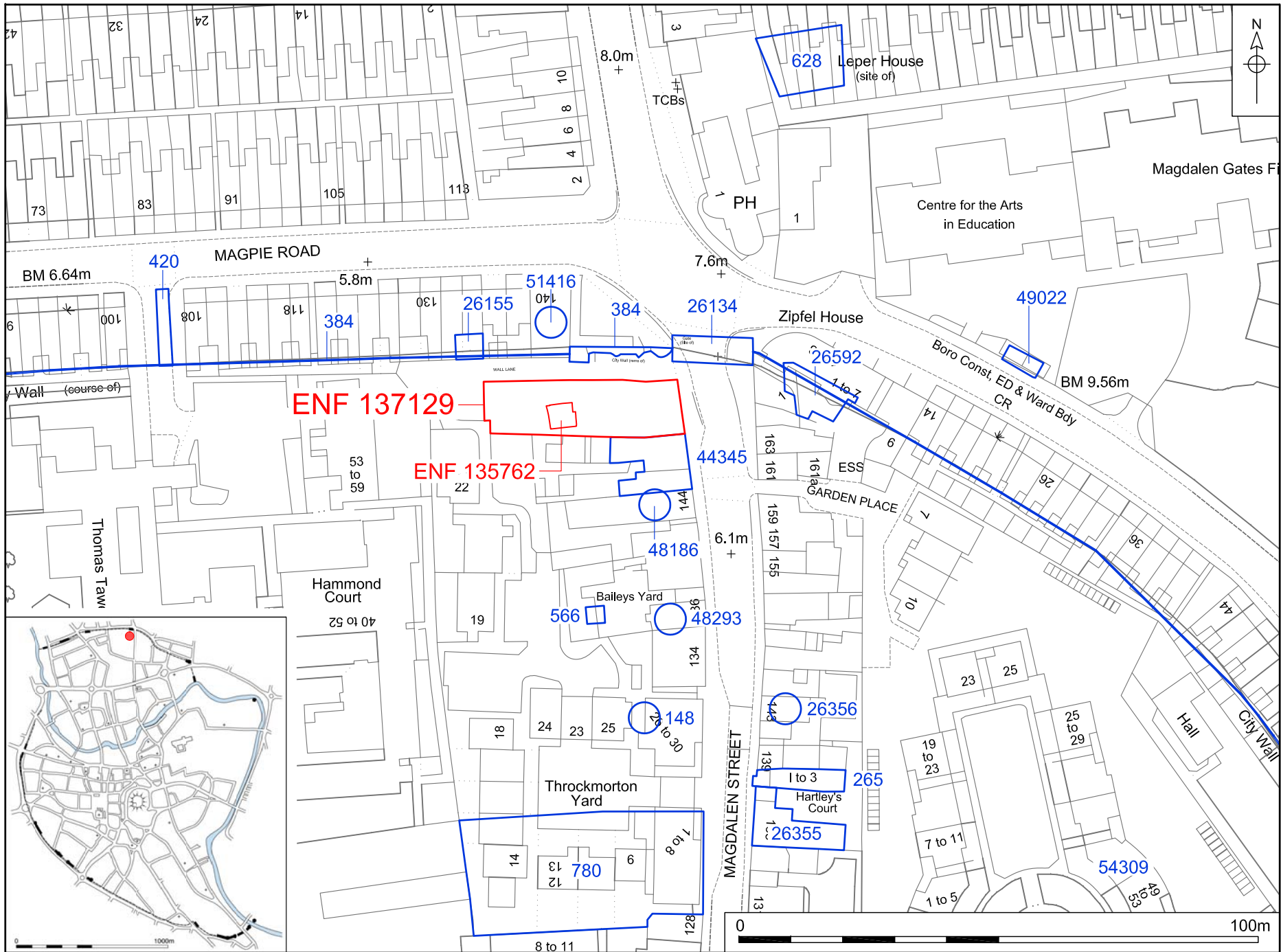


Figure 1. Site location with selected HER data. Scale 1:1000

1.2 Planning Background

- 6 This work was undertaken to fulfil planning requirements set by Norwich City Council (planning ref. 08/01337/F). The work was conducted in accordance with a Written Scheme of Investigation prepared by NPS Archaeology (WSI ref 01-04-14-2-1335).
- 7 Mr Oliver Tookman commissioned and funded NPS Archaeology to carry out a programme of archaeological works to fulfil the requirements of the *Generic Brief* issued by NCCHEs.
- 8 The programme of work was designed to assist in defining the character and extent of any archaeological remains within the proposed redevelopment area, following the guidelines set out in *National Planning Policy Framework* (Department for Communities and Local Government 2012). The site archive is currently held by NPS Archaeology and on completion of the project will be deposited with Norfolk Museums Service following relevant policies on archiving standards. The recipients of this report will be consultants and their client, Norfolk County Council Historic Environment Service and Local District Authority.

2.0 GEOLOGY AND TOPOGRAPHY

- 9 The solid geology at the site is chalk formed c. 71–94 million years ago in the Cretaceous Period when the local environment was dominated by warm chalk seas. There is also the potential for overlying superficial deposits comprising river terrace deposits of sand and gravel formed up to 3 million years ago in the Quaternary Period when the local environment was dominated by rivers. (<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>)
- 10 The development area is relatively level and lies at an elevation of c. 7.00m OD. Superficial geological deposits **54** were variable over the site mainly consisting of pale or orange-brown sands or clay sands containing varying quantities of flecks and pieces chalk and flint gravel. These Quaternary deposits largely lay at a height of c. 5.30m-5.40m OD.
- 11 The site is bounded by Magdalen Street to the east, and to the north is separated from the east-west aligned medieval city wall by a narrow thoroughfare known as Wall Lane. The River Wensum is present some 250m to the south.



Plate 1. The site, looking east

3.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.1 Sources

- 12 The primary source for archaeological evidence in the county of Norfolk is the Norfolk County Council Historic Environment Record (HER), which details archaeological discoveries and sites of historical interest. In order to characterise the likely archaeological potential of the proposed development site, HER record data was purchased from NCHES for a 100m radius centred on TG 2313 0964. This exercise returned twenty-two individual records, including scheduled monuments, other monuments, spot finds and buildings, containing evidence of historical activity spanning the medieval to modern periods. The more relevant results of this search are summarised below along with details of previous archaeological work in the vicinity. Sites referred to in the following text with the prefix NHER are cited from Norfolk Historic Environment Record (NHER) and all data are copyright of Norfolk Historic Environment Service/Norfolk County Council.
- 13 A reference table listing dates for historical periods described in this report is provided in Appendix 3.

3.2 HER Data

NHER 384

- 14 Norwich's city walls were built around 1294–1343 and no houses were built outside the wall until 1779–89. The walls included a number of towers, such as the Boom Towers, Cow Tower and Black Tower. The west Boom Tower contains an 18th-century coke oven. The Black Tower was traditionally the residence of the Constable and was also used for plague victims in the 16th century. The walls also incorporated several gates.
- 15 The site at 150–152 Magdalen Street is situated immediately to the west of the former Magdalen Gate (NHER 26134) on the north edge of the medieval city. During the English Civil War, three of the city's gates (St Augustine's, Conesford and Bishop's) were blocked-up with earth.
- 16 Research into the defences shows that the Boom Towers, like the rest of the walls, gradually fell out of practical use, becoming monuments in the landscape, valued for their picturesque character and historical interest. The inside of the walled circuit was deliberately kept open for access in the Middle Ages.

NHER 26592

- 17 In 2001, an archaeological evaluation followed by a strip, map and sample excavation was carried out at 167–171 Magdalen Street. The site lies immediately to the east of the former Magdalen Gate and the line of the city wall crosses the site. Traces of a probable ditch predating the city wall were identified, possibly representing an earlier defensive line for the city. The city wall was found to be constructed upon the backfilled ditch and to maintain the same alignment as the ditch. In addition to the city wall, the foundations of what appeared to be a tower were recorded in the east of the site. The site was extensively truncated by 19th–20th-century activity. A demolished cellar and its associated backfilling occupied much of the excavated area.

NHER 26155

- 18 In 1957, City Engineers' operations in the back yard of 134 Magpie Road revealed part of the city wall.

NHER 420

- 19 Two pieces of post-medieval pottery and an 18th-century clay tobacco pipe bowl were recovered when a sewer trench was dug through what was thought to be part of the city's medieval defensive ditch in 1979.

NHER 628

- 20 It is recorded that a leper hospital, dedicated to St Leonard, was situated close to the site outside Magdalen Gate. It is believed to have been founded by 1335, and was not suppressed during the 16th century.

NHER 566

- 21 It is known from documentary evidence that the Church of St Margaret Fyebriggate in Combusto stood close to Magdalen Gate, and the discovery of a graveyard just to the south (NHER 148, NHER 780) confirmed its location.

- 22 Although the foundation date of the church is unclear, it is known that it was demolished in 1547 when the parish was united with St Paul's.

NHER 148/780

- 23 The site of the churchyard of the medieval church of St Margaret in Combusto (NHER 566) (first reference AD 1254, redundant by 1468) is situated approximately 75m south of the site at 150–152 Magdalen Street.

- 24 Excavations in 1987 discovered 436 human burials, a large proportion of which were male. This is attributed to the fact that St Margaret's was known as St Margaret ubi sepeliunter suspensi ('where those who have been hanged were buried'), and assumes fewer women than men were hanged. A number of skeletons were found in groups buried face down, which is highly unusual in a Christian cemetery. Metal finds and mineralised fragments of cloth from the skeletons suggest a date range from the 11th/12th century to the mid–late 15th century. A further 600 disarticulated and semi-articulated skeletons were also recovered.

- 25 Several pieces of dressed limestone from the original church were located in a cellar wall at the street frontage. No evidence of Saxon occupation was noted, but a 9th-century copper alloy disc brooch with a backward-facing animal was found during the levelling of the site.

- 26 In the 19th and 20th centuries the site was covered by the Norwich Institute for the Blind. No trace of the old church was found, and it was probably destroyed by the massive cellars of the Institute, itself demolished in 1973 for a shop development.

- 27 Excavations in 1973 and a watching brief in the 1980s noted human remains and evidence of 13th–14th-century buildings, and a possible fire destruction layer, followed by re-planned 16th–17th-century structures.

NHER 265

- 28 Sherds from a 16th century jug were recovered during restoration and renovation work at 137 Magdalen Street in 1974.

NHER 44345

- 29 The two properties 146–148 Magdalen Street are immediately adjacent to the site to the south. These Grade 2 listed three-storey buildings have 17th century ranges to the rear with refaced late 19th-century shop fronts.

NHERs 48293, 48186, 26356, 51416 and 26355

- 30 Are further examples of post medieval houses and shops in the vicinity of the site.

NHER 53677, 54309 and 49022

- 31 Are the locations of World War Two air-raid shelters in the area.

3.3 Cartographic Evidence

- 32 Perhaps the earliest reliable map incorporating the site at Magdalen Street is Cleer's 1696 Map of the City of Norwich (Frostick 2002, 21). This map, although rather schematic, at least indicates a building on the site at that time, though no informative detail is discernible. A track or path is also visible leading directly south-west from the site across open ground, appearing to end at Botolph Street close to the medieval church of St Augustine. The inside of the walled circuit formed by the city wall is shown to be open as a lane.
- 33 Hochstetter's map of 1789 (Frostick 2002, 60) shows a long and relatively narrow building running back from Magdalen Street and parallel to the city wall. A small thoroughfare is again visible between the building and the city wall, and there is what appears to be a yard immediately adjacent to the south aspect of the structure.
- 34 The 1905 First Edition Ordnance Survey map shows a very similar scene to that depicted in 1789, raising the possibility that the same building is illustrated. There is still a large area of relatively open ground to the west at this time.

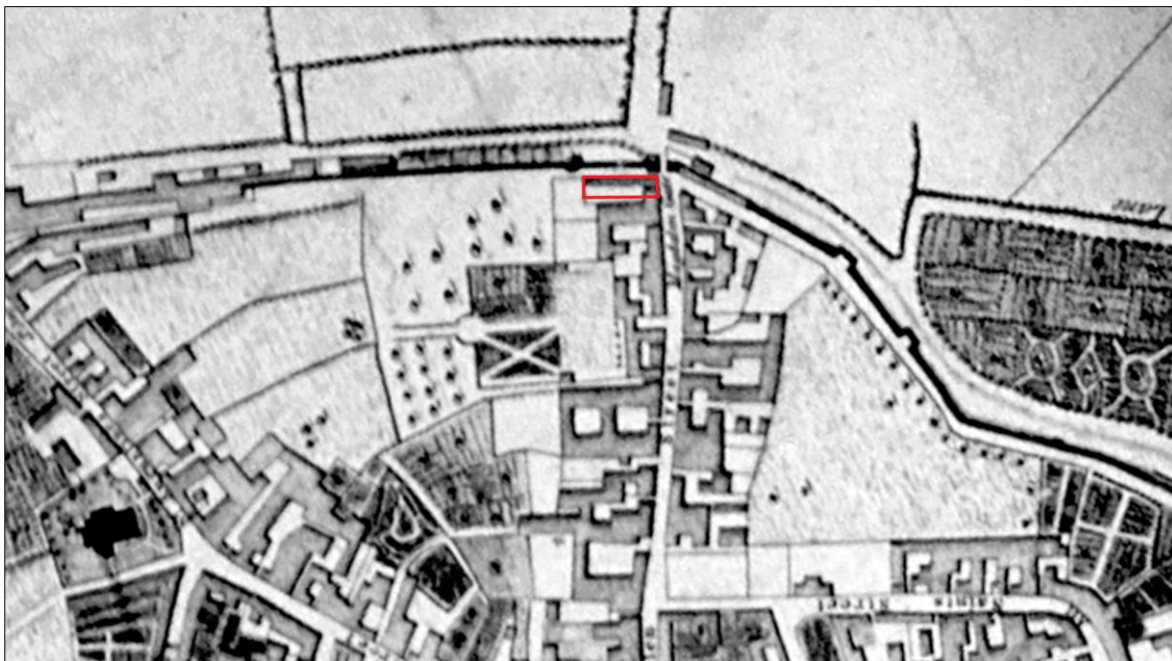


Figure 2. Hochstetter's map of 1789

4.0 METHODOLOGY

4.1 General

- 35 Methodology for the archaeological monitoring and excavation followed the agreed Written Scheme of Investigation (WSI ref 01-04-14-2-1335 NPS Archaeology N. Oakey 2015), where the mitigation strategy for the works is presented in full (Appendix 11).
- 36 Archaeological procedures conformed to guidelines issued by the Chartered Institute for Archaeologists (CIfA 2014a) and the monitoring and excavation was conducted within the context of the relevant regional archaeological framework (Medlycott 2011).



Plate 2. General view of work underway, looking north-east

4.2 Objectives

- 37 The objective of the archaeological monitoring and excavation was to determine as far as reasonably possible the presence or absence, location, nature, extent, date, quality, condition and significance of any surviving archaeological deposits within the development area.
- 38 The archaeological project aimed to provide appropriate and adequate data to permit informed decisions regarding any requirement for future archaeological mitigation work at 150-152 Magdalen Street, Norwich, and to make the results of the work accessible.

4.3 Methods

- 39 The generic brief issued by Dr K. Hamilton NCCHEs was qualified by the statement “archaeological excavation must extend to the depth of proposed ground disturbance”. Initially this will be to formation level of the proposed foundations, but

Dr Hamilton noted that “if the foundations require a greater depth of excavation than that proposed, the excavation must extend to the depth of actual ground disturbance. Excavation should include all services, soakaways etc.”

- 40 Prior to mechanical excavation, the site was scanned with a CAT to check for buried services. The area to be stripped of overburden was examined for surface features and for archaeological artefacts prior to any excavation.
- 41 Machine excavation was carried out by a hydraulic 360° excavator equipped with a toothless ditching bucket. All mechanical excavation was constantly and directly monitored by a suitably experienced archaeologist.
- 42 Spoil, exposed surfaces and features were scanned with a metal-detector. All metal-detected and hand-collected finds, other than those that were evidently modern, were retained for examination. All retained finds were identified by context number to a specific deposit and were processed and recorded in line with relevant guidelines for archaeological finds (ClfA 2014b).
- 43 All archaeological features and deposits were recorded using NPS Archaeology pro forma. Trench locations, plans and sections were recorded at appropriate scales. 35mm monochrome negatives and digital photographs were taken of all relevant archaeological features and deposits where appropriate.
- 44 The temporary benchmark used during the course of the work was transferred from an Ordnance Survey Spot Height with a value of 7.60m OD, located at the junction of Magpie Road and Magdalen Street, adjacent to the Artichoke public house.
- 45 Site conditions were good and the work took place in fine weather.
- 46 All site work was undertaken with respect to Health and Safety provision. Hard hats, high-visibility vests and steel toe-capped boots were worn by all staff at all times.

4.4 Archive

- 47 The site archive is currently held at the offices of NPS Archaeology. Upon completion of the project, the documentary archive will be prepared and indexed following guidelines obtained from the relevant museum and relevant national guidelines (ClfA 2014c). The archive, consisting of all paper elements created during recording of the archaeological site, including digital material, will be deposited with Norfolk Museums Service.
- 48 Subject to written consent and donation by the landowner, all archaeological finds recovered by the current work will be deposited with Norfolk Museums Service.
- 49 A summary form of the results of this project has been completed for Online Access to the Index of archaeological investigationS (OASIS) under the reference norfolka1-201837 (Appendix 10), and this report will be uploaded to the OASIS database.
- 50 The contents of the site archive is summarised in Table 1.

Item	No. Evaluation	No. Excavation
Contexts	45	79
Files/paper record sheets	50	85
Plan and section sheets	9	8
Photographs	25 b+w, 43 digital	23 b+w, 33 digital

Finds	Sum of Qty	Sum of Qty
Animal bone	2	2
Ceramic Building Material	7	20
Flint – Struck		1
Pottery	2	23
Stone	1	
Fired Clay		2
Clay Tobacco Pipe		13
Glass	1	4
Mortar		2

Table 1. Site archive quantification

5.0 RESULTS

- 51 This section presents the results of the 2015 excavation and monitoring integrated with the results of the 2015 evaluation trench and monitoring (Boyle 2015).
- 52 A complete stratigraphic matrix correlating the results of the excavation and evaluation trench has been prepared and grouped using the Harris Matrix Composer program to produce a consistent account of the archaeological sequence.
- 53 All artefact data from the two phases of work have been fully integrated with the context information and a detailed descriptive text produced.

Context nos. 1-45 were issued during the evaluation and monitoring stage of the project and contexts 49 -127 during the excavation and monitoring stage.

Group 1 Medieval Pits

- 54 The earliest detectable activity at the site was represented by a cluster of four pits **55 57 59 61** located in the south-east part of the development area.
- 55 As only the surfaces of these features were exposed at building formation level, their excavation was limited to characterising their backfilling material and obtaining any dating material present in their upper fills.
- 56 As far as could be ascertained these features cut geological deposits with two pits **59 61** being intercutting.
- 57 These sub-circular pits measured between c. 2.5 – 3.0m across and were filled with mid-brown sand silts with small quantities of flint pebbles including occasional medium-sized examples, along with rare charcoal flecks. Pit **55** yielded a fragment of animal bone, pit **58** two pieces of fired clay, and pit **61** two mortar fragments.
- 58 Small quantities of pottery sherds retrieved from upper fills **56 58 60** of three of these pits suggest the features probably date to the 14th century.



Plate 3. Medieval rubbish pits 55 57 59 61 with modern disturbance in foreground, looking west

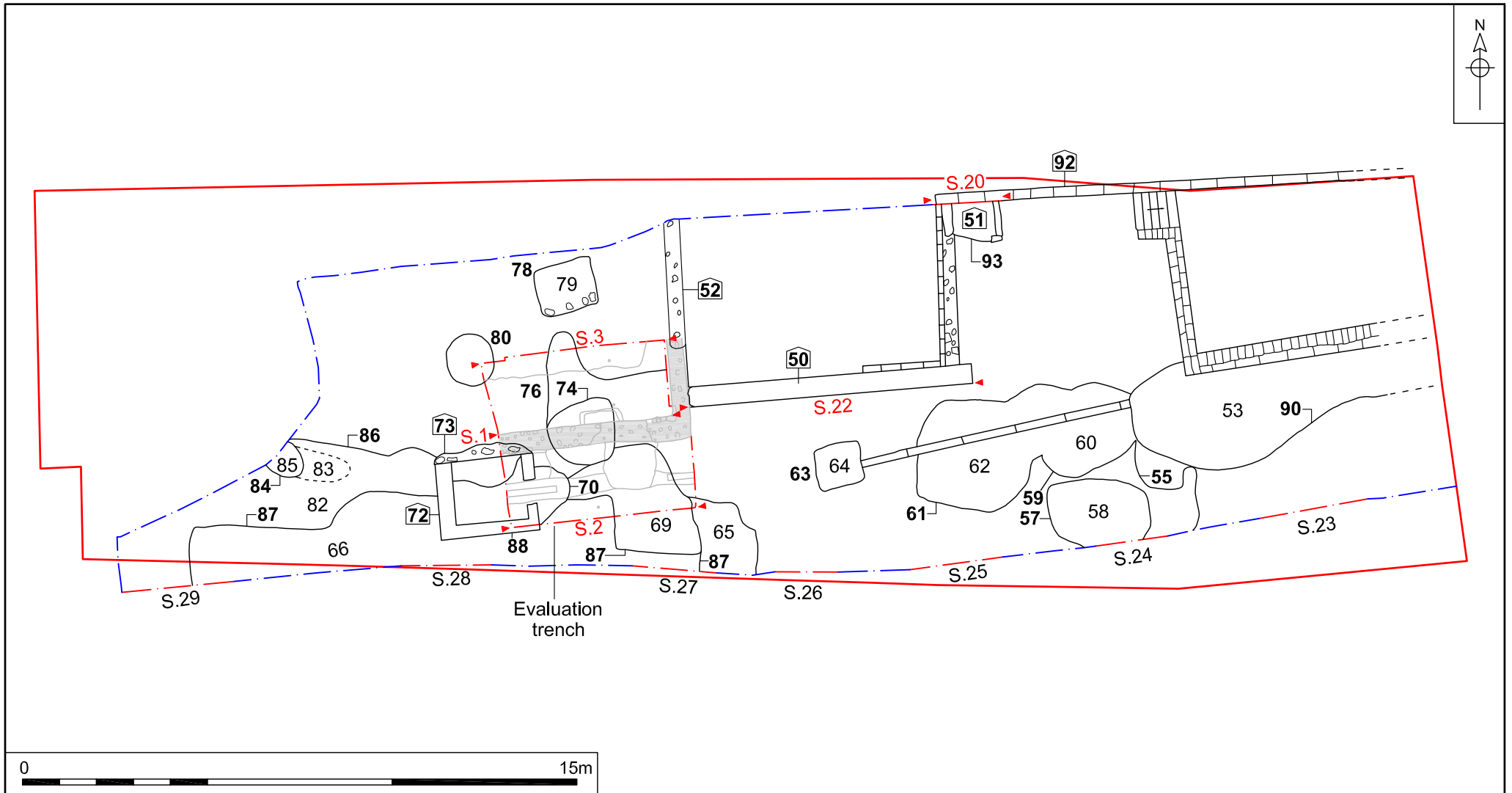


Figure 3. Post excavation plan. Scale 1:150

- 59 The position of these pits in relation to the current Magdalen Street frontage is probably significant.
- 60 Pit **55**, nearest of this group to the street, was located some 6.50m west of the modern pavement, with the western-most pit some 13.5m from the street. This would allow sufficient space for a modest building to have occupied an area east of these pits, placing these pits to the rear of any such building.
- 61 It is typical to find pits in the back plots of medieval properties, where they might have had a number of distinct functions, including waste disposal- a use often ascribed to such features, but in many cases perhaps identifying the final infilling of a feature created for some other purpose.
- 62 No trace of a structure of this date was recorded on the site, but the area between the features and the east end of the site had been quite disturbed by modern intrusions, and a large cellar truncated the rest of the area adjacent to the frontage to the north had also probably obliterated any remains.

Group 2 Post-Medieval Extraction Pits

- 63 The next activity at the site in chronological sequence was the excavation of two large pits. These features were located towards the west end of the development area, beginning some 18m from the street frontage and extending beyond the limits of excavation to both south and west. The larger of the two extended a maximum of c. 3.5m onto the site from the south.
- 64 Again, the surface of these features were exposed at building formation level and were therefore only sample excavated, to characterise their upper fills and obtain any dating material they may have contained.
- 65 As far as could be ascertained, the larger of these features **86** cut geological deposits, and was in turn cut by the smaller example **87**.
- 66 The most extensive fill exposed in pit **86** was a charcoal flecked, mid-brown silt-sand containing a small quantity of flint pebbles and chalk fragments **82**.
- 67 Two dumps of degraded mortar were also apparent as the last fills of the pit. One, a pale brown sandy mix **65** occupied the western side of this feature with a small deposit of loose, pale grey lime mortar **83** recorded near the western extent of the pit present within the excavation area.
- 68 Finds from the larger pit **86** were all retrieved from **82** and comprised three brick fragments, one dated to the 14th-15th centuries, the other two post-medieval, also recovered were a piece of post-medieval roof tile and two pottery sherds, one unidentified and one of 17th-18th century date.
- 69 The smaller in area of these two pits, **87**, measured c. 13.75m from east to west and a minimum of c. 2.0m north – south.
- 70 Two fills of pit **87** were sample excavated. The earliest and most extensive fill **66** comprised mid to dark brown chalk and charcoal-flecked, ashy, sandy silt with rare mortar fragments, flint pebbles and pieces of CBM.
- 71 Two post-medieval roof tile fragments and a single pottery sherd of 16th to 18th century date were recovered from this waste material.

72 During the evaluation phase of archaeological work this pit was hand-augered to the depth of geological chalk, indicating the base of either **87** or the pit it truncated, **86**, was at a depth of c. 3.60m OD. This figure equates to the feature being c. 1.60m deep.

73 A thin layer of quite compact white chalk **69** overly the deposit described above. While this material was probably a dump of waste in the eastern side of the pit, it may have represented a now truncated surface, perhaps an attempt to consolidate soft material beneath.

74 The relatively large size and depths of these intercutting features suggests they may have originally been dug for mineral extraction, then later backfilled with a mixture of domestic rubbish and waste building materials in the 17th century.



Plate 4. Post-medieval quarry pits 86 87, looking east

75 After the medieval waste pits and putative building described in Group 1 had gone out of use, a substantial dump or mound of material **100** seems to have been introduced to the south-eastern portion of the development area.

76 This deposit reached a maximum thickness of 0.75m close to the south-eastern corner of the site before quickly reducing in depth and disappearing some 20m to the west.

77 This material sealed the pits, and was in turn sealed by the dumping and ground raising activity of Group 5 discussed below. It is suggested that **100**, a pale, orange-brown, silt-sand was waste material generated either by extraction pits **86 87** described previously, or perhaps from similar features on the adjoining plot to the south.

Group 3 Other Post-Medieval Pitting

78 An eclectic group of four, much smaller post-medieval pits **70 76 78 80** than those of Group 2 were recorded towards the west end of the site.

79 The semi-circular shaped portion of pit **70** exposed cut the Group 2 extraction pits and was cut in turn by an element of Structure 1 (see Group 4 below).

80 The exposed extent of pit **70** measured c. 1.50m north – south and c. 1.25m east – west.

- 81 The unexcavated feature was filled with a charcoal-flecked dark brown silt-sand **71** with occasional medium-sized flint stones. No artefacts to refine the dating of this probable rubbish pit were recovered.
- 82 An amorphous-shaped pit **76** had been dug in the south-east corner of Structure 1 (see Group 4 below) before the introduction of a probable floor preparation deposit **11** had taken place.
- 83 This feature measured c. 3.25m east – west and between c.1.25m and c. 2.50m north – south. The extant fill **77** of the unexcavated pit was a charcoal-flecked, mid-brown loam with occasional flint pebbles.
- 84 Three fragments of post-medieval vessel glass, a single pottery sherd dating to between the 16th and 18th centuries and a residual sherd of medieval pottery were retrieved from the fill.
- 85 This relatively large pit may originally have been dug for mineral extraction, possibly in association with the building of Structure 1.
- 86 A circular pit **80** with a diameter of approximately 1.25m was also sealed by floor preparation deposit **11**, present within the extent of Structure 1.
- 87 The upper fill of unexcavated pit **81** was dark grey-brown sand-silt with rare charcoal fleck and flint pebbles. A single sherd of post-medieval pottery dating to the 17th century was recovered from this deposit. The function of the pit is uncertain.
- 88 The final feature of this Group, **78**, was also sealed by **11**. This virtually square 1.60m by 1.50m feature was filled with pale grey lime mortar **79** which had been rammed hard; with medium to large flint stones lining the southern edge.
- 89 This feature may have functioned as a pad or base related to activities within Structure 1 or possibly, given it was sealed by **11**, with its construction.

Group 4 Post-Medieval Structure 1

- 90 Following the infilling of large pits described in Group 2, a masonry structure (Structure 1), partially overlying these pits was built.
- 91 The remains of this structure comprised a room or internal space bounded by two walls with accompanying foundations **02=73**, **52**.
- 92 Both of these structural elements were primarily recorded during the first phase of archaeological investigation, having being present in the evaluation trench and recorded as context **02**. The feature descriptions changed little as result of the present work, therefore the description is reproduced below with appropriate alterations.
- 93 A wall and footing **02=73** aligned W-SW to E-NE extended beyond the excavation limits to the west. The wall turned to the N-NW at its eastern extent **02=52**. The two lengths of the wall appeared to form the corner of a building, the interior of which would have occupied part of the north-west corner of the excavation area.
- 94 The wall and foundation measured between 0.55m and 0.60m wide and survived to a maximum height of at least 0.95m. The section aligned N-NW – S-SE was at least 6.0m long and the W-SW to E-NE element at least 7.0m long.



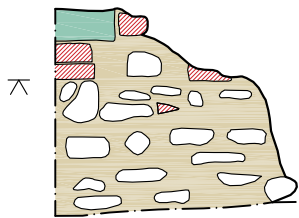
Plate 5. Structure 1, looking south-east



Plate 6. North facing elevation of wall 02

- 95 The wall and foundation were chiefly constructed from undressed flint cobbles laid in rough courses bonded by cream lime mortar. A relatively small number of whole and broken red bricks were also, it would appear, randomly incorporated into the build. A dressed stone block used in building the wall was positioned close to the south-east corner of the structure. This stone, of pale cream colour with a fine grained texture, was identified in the field as probably Caen stone.

Section 1



North facing

Key  Limestone

 Mortar

 Brick

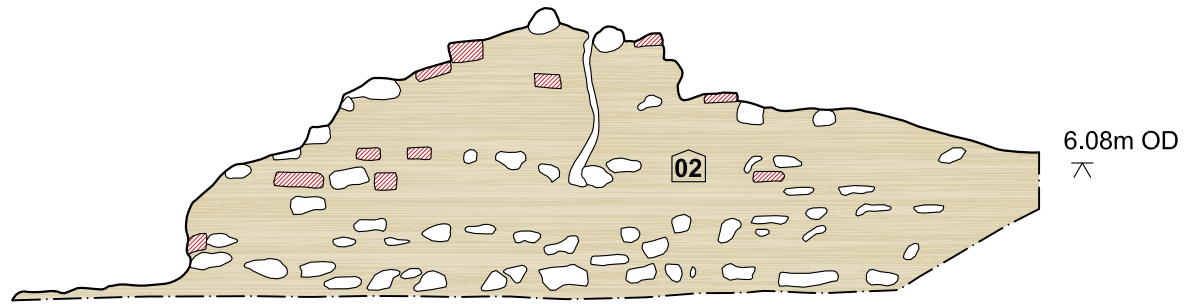


Figure 4. North facing elevation of wall **02**. Scale 1:25

- 96** The upper part of the north-facing wall elevation showed traces of a thin (5mm) lime and sand render coat, the lower level of which probably indicated a contemporary floor height of c. 5.90m OD. A construction cut **01** recorded on the south side of the wall indicated the foundation had been cut from a level of about 5.64m OD. The lowest level of the rendering also coincided with a thickening of the lower wall and the use of generally larger flints, probably signifying the transition from wall to foundation. The southern, external, aspect of the wall was not coated.
- 97** Examination of three bricks used in this wall and foundation indicates all were probably re-used. Aside from varying in date from late medieval to post-medieval, all three showed traces of mortar suggestive of incorporation in earlier structures. Their sporadic use in the build lends weight to this conclusion.
- 98** The Caen-stone block was also reused, perhaps originating as *spolia* from a higher status medieval building.
- 99** Following construction of the foundation and walls, a layer **11** (illustrated in plan) was put down inside the building- perhaps as preparatory levelling for a floor or work surface. This material consisted of pale brown clay-silt containing lenses of crushed chalk, charcoal flecks and flint pebbles. Two pottery sherds of late 14th-16th and 16th-18th century were recovered from this deposit. Two pieces of animal bone and fragments of CBM dating to late medieval and post-medieval periods were also retrieved from deposit **11**.
- 100** A glass shard from a 19th century bottle is an intrusive artefact introduced to the trench during the mechanical excavation. Hand-augering indicated deposit **11** was 0.22m deep and directly overlay geological deposit **24**.
- 101** After the setting-down of **11**, a sub-rectangular, concave chalk pad **07** was bonded to the north-facing elevation of wall **02**. This feature measured 1.16m long x 0.36m wide. The saucer-shaped chalk element of the pad **08** was filled with pale brown sandy mortar **09**. The composite feature may have served as a base for steps or as a threshold from the inside of the building to a doorway to the southern exterior.
- 102** The remnant of a foundation for a small sub-square structure **88** abutted the south face of wall **02=73** to the west of **07**. Only pale grey crushed lime mortar **72** remained within the 2.75m x 2.10m x 0.30m wide construction cut **88**. A 0.70m wide break in the build on the east side represented a doorway.
- 103** The backfill **89** of the structure yielded a single pottery sherd of late 18th-19th century date, thought likely to be intrusive, and an assemblage of clay tobacco pipe fragments dating to c. 1660-1680. The pipes probably provide the best evidence for dating abandonment of the structure. The backfill of the feature consisted of a chalk and charcoal-flecked, dark brown sandy silt with occasional brick rubble and mortar fragments probably deriving from the features demolition.
- 104** This addition to Structure 1 truncated pits **86 87 70**, supports the suggestion the structure post-dated these pits.
- 105** The building represented by **02=73, 52** appears to be a relatively substantial structure, with the capability to have supported a two-storey building. No indication for this buildings possible function was suggested from the archaeological record however.

106 Following the demolition of Structure 1 there was an episode of local ground raising which appears to have buried any of its surviving upstanding remains.

Group 5 Ground-Raising following abandonment of Structure 1

107 Following the abandonment of Structure 1, its internal ground level increased to a level approximately coinciding with the top of the remnants of the largely demolished walls (c. 6.60m OD).

108 The earliest of these infilling deposits **19** was notably different in character to those overlying it, in that it was essentially a soil. This dense, sometimes green tinged, pale brown clay-silt contained patches of crushed chalk and charcoal fleck, probably represents an abandonment period prior to demolition when organic debris had accumulated. This material may have derived from either keeping animals in the building or using the space to dump nightsoil or animal dung.

109 Subsequent to the accumulation of **19**, a series of layers containing material likely to be debris derived from demolition of the structure were recorded.

110 A substantial deposit **18** adjacent to the remains of the eastern wall **52** of the building consisted of layers of crushed and degraded mortar interspersed with layers of pale, grey-brown clay. Charcoal and CBM fragments were sparsely present with most of the flints reused.

111 A layer of charcoal-rich clay-silt **21** overlain by a dump of orange sand **16** were deposited next, before another sizeable deposit of pale buff, crushed mortar with rare flint cobbles and CBM fragments **17** accumulated within the footprint of the building.

112 At this time the areas of the plot to the east and south of the building appear to become a dumping ground, with dumped material serving to raise the ground level from c. 5.60m OD to around 6.30m OD at the east end of the site and to approximately 6.50m-6.60m OD at the western end.

113 The vast majority of the twenty-two individual deposits identified during the excavation as contributing to this ground raising consisted of domestic refuse deposits **99 102 104 107 110 112 114 117 118 -124 126-7** and of these, most contained burning debris in the form of charcoal and ash.

114 The remaining dumps **105 106 109 111 125** included in this group were either waste building or demolition materials in the form of mortar, stones, CBM or chalk or the aforementioned mixed with domestic refuse.

115 Three pits **95 97 115**, all identified only in section, had been cut at various times within this phase of ground raising, and contained similar material to that through which they were cut.

116 Eight deposits **27 - 31 34 43 44** recorded during the projects evaluation and monitoring stages were identified as contributing to this same phase of activity. These deposits displayed similar characteristics to those recorded during the excavation, consisting chiefly of domestic refuse, often rich in fire waste **28 - 31 34 44**, interspersed with fewer deposits of waste building materials **27 43**.

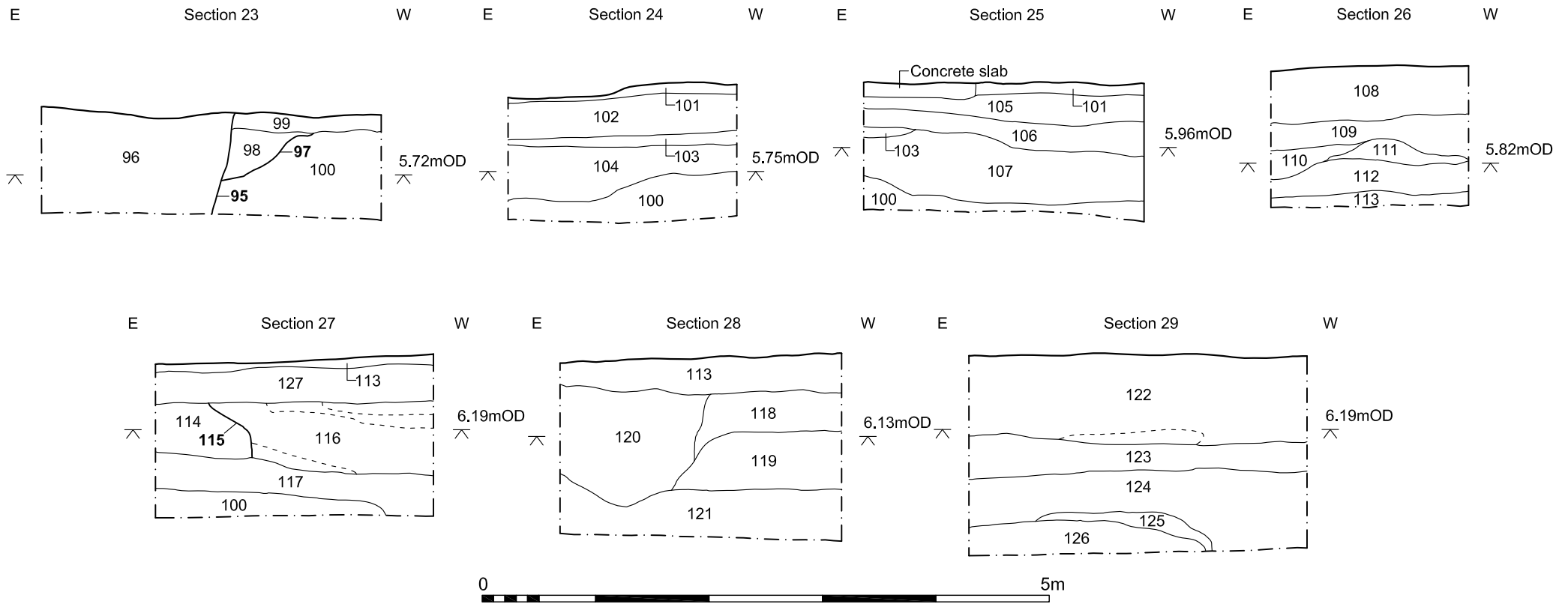
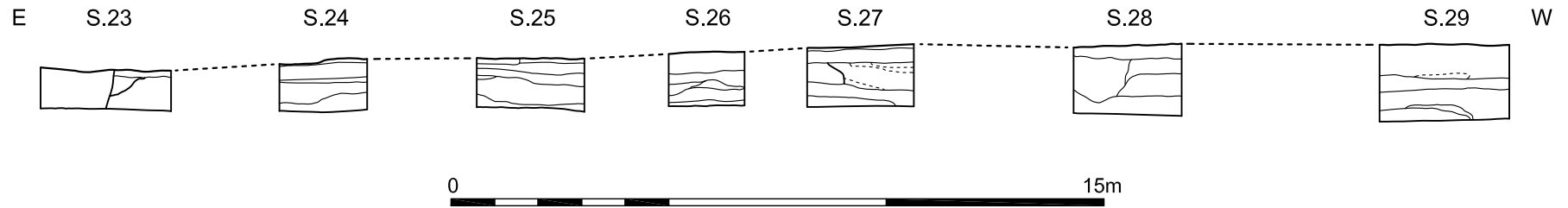


Figure 7. North facing baulk sections showing Group 5 ground-raising deposits and associated features. Scale (top) 1:150 and (bottom) 1:50

- 117 It cannot be proven whether this seemingly systematic dumping of material was actively encouraged with the aim of raising the ground level in the vicinity, or that as perhaps a derelict plot it was merely a convenient place for the local disposal of waste. Nevertheless together, these deposits raised the ground level by an average of around a metre before a cellar (Structure 2), and presumed associated building above it, was constructed immediately to the east of the previous position of Structure 1.

Group 6 Post-Medieval Structure 2

- 118 The cellar associated with Structure 2 was recorded during the evaluation and monitoring phase of the work as context **23** and a general description and interpretation was presented in the evaluation report (Boyle 2015). Much of this still stands, but as new information regarding the stratigraphic position and dating of the structure resulted from the excavation and monitoring phase, a revised account is presented here.
- 119 The 7.50m east – west x 4.50m north–south rectangular cellar was positioned immediately adjacent to the north edge of the development area, its west wall approximately coinciding with the east wall of Structure 1.
- 120 An original build had evidently been modified and consolidated in relatively recent times. A red brick lining added to the internal faces of the cellar had been cement rendered, this obscuring most elements of the original structure. The cellar was c. 1.60m deep and floored with green and yellow quarry tiles arranged in a chequerboard pattern.
- 121 Some elements of the original build were available for inspection however, and they are described and discussed below.



Plate 7. Structure 2, looking east

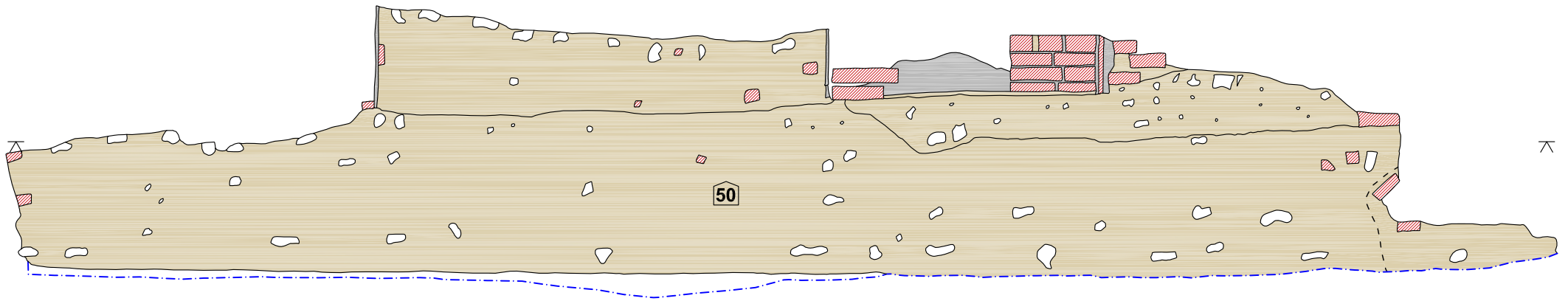
The South Wall

- 122** The south wall **50** of the cellar was mainly constructed from randomly coursed undressed flint nodules up to c. 0.15m across. These flints were interspersed with occasional whole and broken red bricks arranged in no particular pattern. A single piece of fine limestone had also been incorporated into the build near to the west end. As mentioned previously the north face of the wall had been clad in modern brick but once the ground raising deposits (Group 5) through which the cellar had been cut were reduced, the upper c. 1.10m portion of the south face of the original build was extant and available for inspection.
- 123** The rough, unfinished nature of the south elevation of the cellar wall left no doubt that the wall had been constructed against the south side of a pre-excavated cut, providing proof of the pre-existence of the ground raising deposits discussed under Group 5.
- 124** Two different types of mortar bonded the flint and brick. Generally, a pale orange-brown mix bonded the lower part of the extant build, whereas the upper portion (above c. 6.50m – 6.60m OD) used pale grey lime-based mortar.
- 125** The structure **50** survived to a maximum height of c. 7.10m OD. This value matches the height of the top of the fully surviving opposite or north wall **25** of the cellar. The recesses, which housed and provided support for the floor joists forming the roof of the cellar were still in existence atop north cellar wall **25**, indicating that the south wall **50**, although damaged, survived to approximately its original height in places.
- 126** The south wall **50** featured two windows, which would have measured c. 1.20m wide x 0.40m high, positioned just below the floor level of the assumed structure above. These windows would have allowed light into the cellar from the south. The windows had latterly been blocked, apparently at the same time as the relining of the cellar walls in red brick had occurred.



Plate 8. South facing elevation of wall 50

Section 22



South facing

Key  Concrete  Mortar  Brick



Figure 8. South facing elevation of wall 50. Scale 1:25

The North Wall

- 127 The north wall of the cellar **25** served to revet the northern side of the plot, now constituting the development area, beneath the southern extent of Wall Lane.
- 128 The wall was built of undressed flint cobbles arranged in roughly horizontal courses interspersed with small areas of red brick bonded by an off-white lime mortar. The feature appeared more neatly constructed than south wall **50**, but did not extend beyond the bounds of the east and west walls of the cellar.
- 129 When the internal faces of the cellar were refaced in modern times, this wall had been added to by at least three brick-built buttresses as added bracing against collapse of the thoroughfare immediately to the north.



Plate 9. South facing elevation of wall 25

The Eastern and Western Walls-Structure 2

- 130 During the evaluation and monitoring phase the eastern and western walls of the cellar were either obscured by the modern internal cladding and external deposits, or largely destroyed before a full record could be made during the second phase of works.
- 131 Enough survived of the eastern wall **91** however to provide an account of at least some of its characteristics.
- 132 The original wall was approximately 0.20m thick, 4.40m long and c. 1.60m high and constructed against a pre-excavated cut.
- 133 The building materials were undressed flints less than 0.15m across interspersed with occasional fragments of red brick. The bonding material was a pale grey lime mortar. Two examples of ceramic building material were recovered from the wall. One proved to be a probable late medieval brick fragment, with adhered mortar indicative of re-use, the other was a floor brick likely to be of 18th-19th century date.

- 134 The feature was later re-faced internally with modern red bricks in line with rest of the cellar.

Other Masonry Elements Associated With Structure 2

- 135 The remains of two post-medieval masonry structural elements **20 36 40** were recorded during the evaluation and monitoring phase of the work with a general description and interpretation presented in the subsequent evaluation report (Boyle 2015). New information provided by the excavation and monitoring phases regarding the stratigraphic position and dating of the structure has been added to a revised account presented here.
- 136 The remains of two post-medieval masonry structures were recorded in the north- and south-facing sections of the evaluation trench.(Figs 5 and 6)
- 137 The southern-most of the two builds was situated near the south-west corner of the development area. This was aligned east – west and consisted of what was interpreted as a foundation **40** in a construction trench **39**, supporting a brick-built wall **36** in cut **35**.
- 138 Approximately 1.30m of the wall foundation **40** was exposed, where it was composed of randomly arranged flint cobbles and pieces of red brick bonded by a pinkish cream lime mortar. The foundation trench **39** cut post-medieval deposit **44**.
- 139 Wall **36** was constructed of pale orange-pink brick bonded by a hard, slightly bluish, off-white mortar, and this wall extended beyond the west limit of excavation. The part of the wall observed appeared to form the base of a recess, possibly a doorway. A brick taken from this structure was of 16th-18th century date.
- 140 A construction **20**, of undressed flint cobbles and red brick bonded by coarse, off-white mortar with chalk inclusions, was recorded in a cut **45** in the side of the evaluation trench in its north-west corner. The brick, a dark orange-red, very sandy and hard-fired fabric dated to not later than 18th century, but may have been re-used.
- 141 The structure, a wall or wall foundation, was exposed for 1.80m, and may have extended beyond the excavation limits to the west. Stratigraphically, the structure cut post-medieval dumped deposit **16**.
- 142 Both of the wall foundations described above shared a very similar alignment to the cellar (Structure 2) and stratigraphically belonged to the same phase of activity at the site. It appears likely they represent sub-structure remains belonging to a demolished building associated with the cellar.

Group 7 Post-Medieval Barrel Vault

- 143 A north – south aligned, red brick and flint lined vaulted barrel cellar **51** was immediately adjacent to the east of cellared Structure 2. The west wall of this arched feature was bonded to the east wall **91** of Structure 2 and the bases of the two cellars were approximately concordant at a height of c. 5.80m OD.
- 144 The feature was c. 1.20m wide, c. 1.10m high and though a c. 2.0m north to south length survived, it is thought likely to have been longer when intact. The vault extended beyond excavation limits to the north for an estimated distance of c. 1.0m: thus the vaulted north end lay beneath Wall Lane.



Plate 10. Vaulted cellar 51, looking north

- 145 Six bricks used in this features construction were retained for analysis. Four were considered to be of 15th to early 16th century date but must have been re-used, as two were more typical of 18th-19th century manufacture.
- 146 The vault was filled with a mixture of brick rubble, degraded lime mortar and a mid-brown, sandy silt soil **94**, this material deriving from the collapse of the feature some time prior to the excavation.
- 147 The portion of the feature beneath the Lane was not excavated due to health and safety concerns.
- 148 Although the entrance to the vault did not survive, it is assumed that it was accessed from an opening in the east wall of the larger cellar to the west (Structure 2).
- 149 The vault was probably an addition to the larger feature.

Section 20

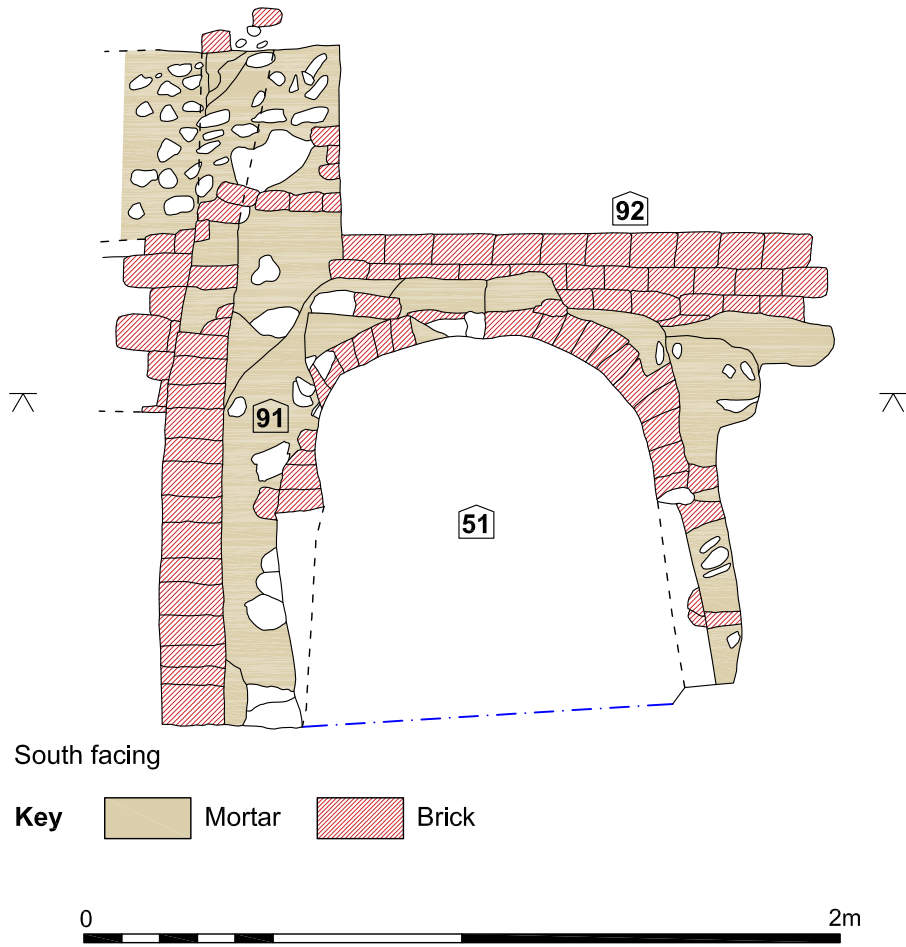


Figure 9. South facing elevation of vaulted cellar 51.
Scale 1:25

Group 8 Modern Features and Deposits

- 150** Modern features and deposits at the site comprised remains of service trenches connected to the recently demolished building, disturbance created during the demolition works, a street frontage cellar and other minor intrusions.
- 151** Some of the discoveries included in this group have already been dealt with during the evaluation and monitoring phase. These include a cellar **23** situated adjacent to the Magdalen Street frontage, demolition waste **14 15** and services **33 42** associated with the recently demolished building occupying the site.
- 152** Additional modern features recorded during the excavation and monitoring phase included three modern pit-like features **74 84 90**, a soakaway **63** with associated ceramic drainage pipe, and surface deposits resulting from disturbance during the recent demolition works **101 108 113**. The pit-like features are described below.
- 153** Sub-circular pit **74** had a diameter of c. 1.75m and was possibly recorded as pit **05** during the site evaluation. The pit cut all features and deposits with which it was related, and was probably responsible for the partial destruction of wall **02**.
- 154** The upper fill **75** of this probable waste disposal pit consisted of a dark brown silt-sand with occasional mortar, charcoal and CBM fragments. A single sherd of pottery dating to 15th-16th century was redeposited in the feature.
- 155** A small sub-circular pit **84** with a minimum diameter of c. 1.0m from north-west to south-east truncated the upper fills of extraction pit **86**.
- 156** The upper fill of the pit **85** was a dark brown silt-sand with modern brick fragments.
- 157** A large modern intrusion **90** adjacent to the Magdalen Street frontage and cellar **22** was created during the recent demolition works. The c. 7.50m by c. 3.0m area of disturbance was filled with broken bricks and cement mixed with mid brown silt-sand **53**.

6.0 ARCHAEOLOGICAL FINDS

6.1 Introduction

- 158 All finds were washed, dried, marked, and bagged for inclusion in the site archive, with the exception of shell and burnt flint which was not retained. Finds were recorded by count and weight, and data was entered onto a Microsoft Excel spreadsheet. Each material type was considered separately and is presented below organised by material and chronology.
- 159 Appendix 2a contains a list of finds in context number order. Table 2 summarises the entire finds assemblage recovered during the excavation and evaluation.

Find type	No.	Wt (g)
Pottery	25	828
CBM	29	14723
Fired clay	5	220
Clay Tobacco Pipe	13	110
Glass	5	362
Flint	1	22
Stone	1	844
Animal bone	4	204

Table 2. Quantification of finds

6.2 Pottery

Introduction

- 160 The assemblage comprises 25 sherds (828g) of pottery, recovered from 11 contexts (Appendix 4). Table 3 provides a quantification by fabric.

Description	Fabric	Date range	No	Wt/g	Eve	MNV
Local medieval unglazed	LMU	11th-14th c.	5	62	0.13	4
Late medieval & transitional	LMT	15th-16th c.	3	104	0.21	3
Glazed red earthenware	GRE	16th-18th c.	6	402		6
Iron-glazed blackwares	IGBW	16th-18th c.	1	34	0.28	1
Cologne/Frechen stoneware	GSW4	16th-17th c.	1	42		1
Tin glazed earthenwares	TGE	16th-18th c.	1	2		1
West Norfolk Bichrome	WNBC	17th c.	1	42	0.08	1
Speckle-glazed Ware	SPEC	L.17th-18th c.	1	12	0.10	1
English stonewares	ESW	17th-19th c.	2	84	1.00	2
Refined white earthenwares	REFW	L.18th-20th c.	2	31		2
Yellow Ware	YELW	L.18th-19th c.	1	9		1
Unidentified	UNID		1	4		1
<i>Totals</i>			25	828	1.80	24

Table 3. Pottery quantities by fabric

Methodology

- 161 Quantification was carried out using sherd count, weight and estimated vessel equivalent (eve). The minimum number of vessels (MNV) within each context was also recorded, but cross-fitting was not attempted unless particularly distinctive vessels were observed in more than one context. A full quantification by fabric, context and feature is available in archive. All fabric codes were assigned from the author's post-Roman fabric series. Medieval and later wares were identified following Jennings (1981). Methods follow MPRG recommendations (MPRG 2001) and form terminology follows MPRG classifications (1998). The results were input directly onto an MS Access database, which forms the archive catalogue.

Medieval (11th–14th c.)

- 162 Five sherds of four vessels in local medieval unglazed wares were recovered. These included a small base with possible thumbing at one break, perhaps from a jug, and rimsherds of two jars, one simple everted and the other slightly thickened (cf Jennings 1981, no. 306).

Late medieval (M.14th–16th c.)

- 163 Three sherds of LMT were recovered, a thickened everted pipkin rim (cf Jennings 1981, no. 433), a base fragment in a fabric similar to LMU, and a rim/handle of a jug with a slightly everted tapered rim and wide strap handle. All three had partial or full green glaze externally.

Post-medieval wares (16th–18th c.)

- 164 Local redwares (GRE, IGBW, WNBC, SPEC) predominated. These included several base fragments of GRE, one of which was probably from a dripping pan, whilst the others were probably hollow wares or bowls. Two rim fragments in IGBW and SPEC were both from mugs with black or brown glaze. A WNBC rim/handle from a cauldron with a collared rim and rod handle was also recovered.
- 165 One small body fragment of tin glazed earthenware was found. It had white glaze on both surfaces and hand-painted blue decoration internally, suggesting that it was from a bowl or dish.
- 166 A body sherd from a Frechen stoneware bottle was decorated with an applied medallion comprising a shield.

Modern wares (18th–19th c.)

- 167 Five sherds of modern wares were recovered. These comprise a fragment of a brown stoneware mug (18th c.), a stoneware bottle rim (19th–E.20th c.), two base fragments of transfer-printed white earthenware (19th/20th c.), and a body sherd of yellow ware (19th/20th c.). One of the transfer-printed sherds has a printed Hanley maker's mark on the base (incomplete), with the pattern name ('Trellis').

Unidentified

- 168 One small body sherd in a buff-coloured fine sandy ware with a grey core appears to have traces of white and possibly red slip on the external surface. There is a single tiny spot of yellow glaze. It is similar in appearance to Bourne D wares and may be of late medieval date, but imported slip-painted wares also occur in the early medieval period and the possibility that the sherd is from this period cannot be ruled out.

Pottery by site phase

169 A summary of the assemblage by pot period and site phase is provided in Table 4.

Pot period	Site phase			
	Med	PMed	Modern	Unph.
Medieval	4	1		
Late medieval	1	1	1	
Post-medieval		5		6
Modern		1		4
Unknown		1		
<i>Totals</i>	5	9	1	10

Table 4. Pottery types present by phase (sherd count)

170 The largest group was from the post-medieval phase. The unphased material was all unstratified and will not be considered further.

171 The majority of stratified pottery was recovered from pits, but no feature contained more than three sherds.

Period 1 (medieval)

172 Three pits in Group 1 produced five sherds of pottery between them, comprising four sherds of LMU including two jar rims, and a base fragment of LMT. These were recovered as samples from the upper fills, as the pits were not fully excavated.

Group 1: Pit 56 contained a base fragment of LMU. Pit 58 contained a base fragment of LMT. Pit 60 contained two sherds of a jar with simple everted rim and one sherd of a jar with thickened everted rim. 14th c.?

Period 2 (post-medieval)

173 Nine sherds were recovered from Groups 2–4, from four pits, a wall foundation and a layer. Residual sherds of medieval and late medieval date were recovered, and there was a modern sherd in the wall foundation which was presumably intrusive. The majority of pottery of post-medieval date comprised local redwares and there was one unidentified sherd.

Group 2: Pit 66 contained a rim fragment of an IGBW mug. Pit 82 contained one UNID sherd and a rim fragment of a SPEC mug. 17th–18th c.?

Group 3: Pit 77 contained a residual sherd of LMU and a body fragment of GRE. Pit 81 contained a rim/handle of a WNBC cauldron. 17th c.?

Group 4: Layer 11 produced a rim fragment of LMT and a body sherd of GRE. 16th c.? Wall foundation fill 88 contained a L. 18th–19th-century yellow ware body sherd which is likely to be intrusive.

Period 3 (modern)

174 A pit in Group 8, assigned to this phase, contained an abraded rim/handle of an LMT jug.

Group 8: Pit 75 contained an abraded but large fragment of an LMT jug. 15th/16th c.+

Summary and discussion

175 This is a small assemblage which spans several centuries. Apart from the large group of unstratified material, most of the pottery was recovered from pits, but each

of these contained only 1–3 sherds. Nevertheless, some pits appear to be of medieval date, whilst the majority contained post-medieval wares. The assemblage is unremarkable in terms of the city, with all identifiable vessels paralleled in the Norwich corpus (Jennings 1981).

6.3 Ceramic Building Material and Fired Clay

Introduction

- 176 CBM fragments totalling 29 pieces (14,723g), and representing 25 objects, were collected from 11 contexts (Appendix 5). Five fragments (220g) of fired clay were recovered from two contexts (Appendix 6).

Methodology

- 177 The assemblage was quantified (count and weight) by fabric and form. Fabrics were identified on the basis of macroscopic appearance and main inclusions. The width, length and thickness of bricks and floor tiles were measured, but roof tile thicknesses were only measured when another dimension was available. Form terminology follows Drury (1993). Mortar was present on much of the CBM and has been recorded where it occurred. The results were input directly into an MS Access database, which forms the archive catalogue.

The CBM assemblage

- 178 Table 5 provides a summary of the CBM quantities by type and form.

Type	Form	Code	No	Wt (g)	MNO
Roofing	Plain roof tile: late/post-medieval	RTP	4	218	4
Walling	'Early' brick	EB	5	3779	5
	'Later' brick	LB	12	6369	8
		LB?	4	3221	4
	Wall tile	WT	1	30	
Flooring	Late brick/Floor brick (paviour)	LB/FB	2	1087	2
Unknown	Unidentified	UN	1	19	1
<i>Totals</i>			29	14723	3

Table 5. CBM quantities by form (MNO = minimum number of objects)

Roofing

- 179 Four fragments of post-medieval plain roof tile were recovered from layer **11**, and pit fills **66** and **82**. One was in a fine sandy fabric with grog tempering (fsg), and three were in fine sandy micaceous fabrics with red clay pellets (fsmcp). The fragment from **11** had mortar on the base and may have been re-used.

Walling

- 180 Table 6 shows the quantities of bricks by fabric.

Fabric	code	EB	LB	LB?
estuarine clays	est	5		
fine sandy, few other inclusions	fs		2	
medium sandy, few other inclusions	ms		1	

Fabric	code	EB	LB	LB?
ms with coarse rounded quartz	mscq		1	4
ms with flint	msf		1	
fs with ferrous inclusions	fsfe		2	
fs with grog and ferrous inclusions	fsgfe		5	

Table 6. Bricks by fabric (fragment count)

- 181** A wide variety of fabrics suggests that bricks were sourced from a number of local production sites.
- 182** Bricks were largely recovered as samples from walls and other features, and for this reason a number of fragments could be measured in two or three dimensions.
- 183** Five estuarine clay bricks were recovered. This type is dated to the ?later 13th to 15th centuries in Norwich (Drury 1993; 2000). Most fragments are in the typical pinkish purple and yellow fabrics of the earliest types. Where it was possible to determine the base impressions, all have straw impressions. Two bricks could be measured, one from wall **2**, measuring 110 x 52mm, and one from pit fill **82**, measuring >220 x 120 x 60mm.
- 184** Sixteen fragments of twelve 'later bricks' in red-firing fine and medium sandy fabrics were recovered from six contexts. Lengths of fifteen bricks were recorded (211–267mm), twenty-two widths were measurable (104–122mm); and 31 thicknesses (43–68mm). Table 7 shows the sizes of individual bricks for which measurements could be recorded.

Period	Group	context	Context type	form	L	W	T
Post-med	4	52	N-S wall	LB			50
	7	51	barrel vault	LB?		120	49
				LB?		115	51
				LB?		118	57
				LB?			50
			LB			60	
Modern	8	20	masonry	LB	293	118	52
		36	structure	LB	222	112	56

Table 7. Late brick sizes (forms based on Drury 1993, 165)

- 185** Fragments of four red bricks in a medium sandy red-firing fabric with coarse quartz and occasional ferrous inclusions were collected from Group 7 barrel vault **51**. Although classified as 'LB?', they have some characteristics of early bricks, such as a lack of uniformity in sizing, relatively large width measurements, and straw impressions all over the base. It is likely that they belong to a transitional phase between the two types and may date to the 15th or early 16th century. The thin brick recovered from Group 4 wall **52** may also date to this period, although the mortar on it contains carbonised material, which usually indicates a later post-medieval date. However, one other brick from **51** was 60mm thick and in a fine sandy ferrous fabric more typical of the 18th/19th century.

- 186** The brick from Group 8 masonry **20** was also relatively thin and quite long, and had a diagonal skintling mark on the stretcher, both suggesting a date no later than the 18th century and probably somewhat earlier. The brick from Group 8 structure **36** is within the range for 16th-18th-century bricks from the city. It has a thin grey render, possibly cementitious, on one header.
- 187** Two other small fragments of medium sandy bricks were recovered from pit fill **82** in Group 2 and are of post-medieval date.
- 188** Evidence for re-use of all bricks, both 'early' and 'later' types, was commonly seen in the form of mortar on broken edges and possibly the use of more than one mortar type on a single brick.
- 189** A fragment of wall tile was recovered as an unstratified find **49**. It is a tin-glazed 'delftware' tile with part of a hand-painted scene, 8mm thick and probably of 17th/18th-century date. The scene includes some straight lines and may show a structure, but not enough is present to determine the image. The corner contains a 'spider's head' motif.

Flooring

- 190** Two fragments of post-medieval later/floor bricks were in the same fine sandy fabric with poorly mixed orange and cream clays and occasional flints (fsxf). A fragment from **51** was 108mm wide and 42+mm thick, with substantial wear on the base and a patch of mortar on the struck surface. The other fragment, from wall **91**, was 110 x 48mm and had mortar on all surfaces. The thickness of the latter may indicate an early date, but pavours were often deliberately thinner than contemporary wall bricks and an 18th/19th-century date seems more likely.

Unidentified

- 191** One fragment, 8mm thick, in a cream fabric with coarse angular red grog inclusions and pinkish purple surfaces was of uncertain form. At one end, the fragment splayed out into what appeared to be part of another surface running at right-angles across the end. The fragment could be part of an air brick or similar form. It was recovered from pit fill **77** in Group 3.

Fired Clay

- 192** Two overfired fragments (35g) in a hard, silty fabric were recovered from pit fill **58** in Group 1. The fragments may be burnt pieces of early brick.
- 193** Three fragments (185g) in a soft, pinkish fabric with fine sand and chalk inclusions were abraded and of uncertain type. The largest fragment appeared to have one flattish surface and one relatively flat with a 'puddled' appearance. It measured 36mm thick. A curving hole running through it, 10mm in diameter, could be the impression left by a withy, or it may be a worm hole. They were found in Group 1 pit fill **62**.

Building Material by Site Phase

- 194** Table 8 shows the distribution of building materials by site period and group.

Period	Group	EB	LB?	LB	LB/FB	RTP	WT	UN	FC
Medieval	1								5
Post-med	2	1		2		3			

Period	Group	EB	LB?	LB	LB/FB	RTP	WT	UN	FC
Medieval	1								5
	3							1	
	4	3		7		1			
	6	1			1				
	7		4	1	1				
Modern	8			3					
Unstratified							1		

Table 8. Distribution of building materials by type, site period and group

- 195 The majority of fragments of CBM were recovered from contexts assigned to the Post-medieval period but fired clay was only recovered from the Medieval phase.

Discussion

- 196 This is a small assemblage, but it includes examples of several brick types of both medieval and post-medieval date. Earlier bricks appear to have been re-used in some of the later structures. Most of the bricks and tiles recovered during this fieldwork can be paralleled on contemporary sites throughout the city.
- 197 Of most interest is the small group of red bricks with strawed bases, from barrel vault **51**, which appear to represent a transitional phase between Drury's 'early' and 'later' bricks, having some characteristics of both types.

6.4 Clay Tobacco Pipe

- 198 Thirteen fragments of twelve tobacco pipes were recovered (Appendix 7). All were in white-firing clays, sometimes with grey/black fumed patches.
- 199 The fragments were quantified by count and weight. Bore diameters of each stem and bowl/stem fragment were recorded, and bowl forms were noted, along with other characteristics such as heel shape and evidence for milling.
- 200 The pipe fragments were recovered from two contexts, one of which was unstratified **49**, and the other structure fill **89**. However, the fragments appear similar, with several having quite thick stems and bore diameters between 2.7–3.3mm. Three bowls were present in 89, all of the same type with oval heels, partly milled rims and thick stems. The bowl forms are typical of the period c.1660–80, and the bore diameters could also fall within this date range or earlier.

6.5 Glass

- 201 Five fragments of three bottles were collected (Appendix 8).
- 202 Layer 11 contained a fragment of a light green mould-blown bottle base. The base was slightly convex and had the letters B R B around the edge. At the base angle, there was a partial word: [B]ARNSLEY. This suggests that the fragment was probably part of a codd bottle made by Rylands of Barnsley, and is most likely of late 19th-century date.
- 203 A base fragment of an early 'onion-shaped' wine bottle in green denatured glass was an unstratified find **49**. It has a shallow domed kick. It is likely to be of 17th/18th-century date.

- 204** Three joining fragments of a bottle or small vessel neck in thin, uncoloured glass were recovered from pit fill **77**. The form is uncertain, but the fragments are probably post-medieval.

6.6 Stone

- 205** A fragment of fine-grained cream-coloured limestone (844g) was recovered from wall **2**. The fragment has small areas of two flat faces at near-right-angles to each other, but there is no obvious tooling on either. Patches of coarse lime mortar were adhering to both faces. The fragment appears to be re-used in a flint and mortar wall which also contained brick, but is otherwise un-datable.

6.7 Flint

- 206** A large, roughly circular flake of brownish-black flint was found in pit fill **56**. It measures c.50 x 50mm. There is a hinge fracture opposite the bulb of percussion and a small area of cortex to one side. There is minimal or only accidental retouch. It is possible that the piece represents medieval construction waste rather than prehistoric activity.

6.8 Animal Bone

- 207** Four fragments of animal bone were recovered from three contexts (Appendix 9).
- 208** Layer **11** contained a fragment of a large *Bos* distal metapodial, the shaft of which had been roughly chopped, together with a fragment of distal right femoral epiphysis of a smaller, juvenile *Bos*.
- 209** Two incomplete thoracic vertebrae of large mammals, again most likely *Bos*, were recovered from pit fill **56** and as an unstratified find **49**. The latter had been sawn through longitudinally and the former was sawn diagonally across the body. Both vertebrae had unfused epiphyses.
- 210** The contexts and condition of all four bone fragments suggest a post-medieval or modern date for the fragments.

7.0 DISCUSSION AND CONCLUSIONS

Discussion

- 211 The archaeological excavation and monitoring carried out by NPS Archaeology at 150-152 Magdalen Street, Norwich recorded natural geological deposits at a height of c.5.30m-5.40m OD.
- 212 The earliest features recorded at the site were a group of four waste pits (Group 1) of probable 14th century date, clustered between c. 6.50m and 13.50m from the east end of the development area.
- 213 The next events in the chronological sequence were the digging of a number of pits (Groups 2 and 3) at the western end of the plot, the finds assemblage recovered from these features suggesting a 17th century date for their disuse and infilling.
- 214 The pits of Groups 2 and 3 were stratigraphically post-dated by the remains of a masonry structure (Group 4, Structure 1) that occupied part of the north-west portion of the site. The datable masonry elements of this build showed clear evidence of re-use and so could not provide a reliable date for the structure. However, artefact evidence recovered from floor preparation and probable final occupation deposits, coupled with stratigraphic relationships to earlier Group 2 and 3 pits and subsequent Group 5 dumping, support a probable 17th century date for its use.
- 215 Following the abandonment and demolition of Structure 1 (Group 4), seemingly towards the end of the seventeenth century, the dumping of waste material (Group 5) then raised the ground level in the vicinity by around a metre. The majority of unstratified finds **49** retrieved from this material during the monitoring of mechanical excavation date to 16th-18th centuries, providing some indication for the period when this material was deposited.
- 216 Following the campaign of dumping that raised the ground level as described above, a further masonry building was then constructed on the site (Structure 2, Group 6). Many of the materials used in the various elements of this build, including most of those used for an adjoining barrel vault (Group 7), were evidently reclaimed from a variety of sources. On balance, an 18th century date for construction seems most likely.

Conclusions

- 217 The waste pits of Group 1, interpreted as evidence of 14th century occupation of the site, were probably associated with a timber-built dwelling occupying the Magdalen Street frontage. No trace of this postulated structure survived, but as previously highlighted considerable modern truncation has occurred in this portion of the site.
- 218 The date of these pits broadly coincides with completion of the adjacent city wall in perhaps the mid-14th century, and perhaps this prime location immediately inside the Magdalen Gate was occupied soon after completion of the wall here.
- 219 Two pits **86 87** and perhaps a third, **76**, (Groups 2 and 3) were large enough to have originally served as mineral extraction pits, before being later backfilled with waste material.
- 220 The presence of these pits would indicate that the corresponding area of the site was open up to and including at least part of the 17th century before the construction

of Structure 1 (Group 4) for which the mineral may feasibly have been intended to be used.

- 221** The two Grade 2 listed properties fronting onto Magdalen Street situated immediately to the south of the site (146–148 Magdalen Street.) have 17th century ranges to the rear (See *NHER 44345*, Section 3.2 HER Data, this report).
- 222** On this basis, it would seem reasonable to suggest that the construction of Structure 1 might reflect this local development trend, appearing to have been built at a similar time and in a relatively similar position relative to the plot.
- 223** The remains of the putatively dated 18th century Structure 2 (Group 6) would appear to coincide with at least the western part of a building illustrated on Hochstetter's 1789 map of Norwich (Fig. 2) raising the possibility that they represent the same building.
- 224** The eastern portion of this same building would also have incorporated cellar **22**, recorded adjacent to the street frontage in the earlier phase of works.
- 225** The 1905 First Edition Ordnance Survey map (not illustrated) may well show this same building prior to its demolition in the 1960s.
- 226** Maps of the area also indicate Wall Lane (or its predecessor) has been maintained as a route way since at least 1696 (Cleer in Frostick 2002). It is suggested that an internal route way was kept clear for access in the Middle Ages (See *NHER 384*, Section 3.2 HER Data) raising the possibility that the open space may have been maintained for several hundred years.
- 227** Although vaulted cellar **51** had been inserted beneath Wall Lane, nothing was discovered during the work to contradict this hypothesis.

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Appendix 1a: Context Summary (Evaluation and Monitoring)

Context	Category	Cut Type	Fill Of	Description	Period	Group
01	Cut	Construction		Construction cut for wall [02]	Post-medieval	4
02	Masonry	Wall	1	Flint and mortar wall with brick	Post-medieval	4
03	Cut	Service trench		Service trench	Modern	8
04	Deposit		3	Fill of service trench	Modern	8
05	Cut	Pit		Modern disturbance ?	Modern	8
06	Deposit		5	Fill of modern disturbance	Modern	8
07	Cut	Construction		Base for step?	Post-medieval	4
08	Deposit		7	Chalk pad	Post-medieval	4
09	Deposit		7	Mortar associated with [07]	Post-medieval	4
10	Deposit			Mortar rich dump	Post-medieval	4
11	Deposit			Clay silt layer	Post-medieval	4
12	Deposit			Mixed dump	Post-medieval	2
13	VOID			VOID		
14	Deposit			Demolition waste make-up	Modern	8
15	Deposit			Layer of demolition waste	Modern	8
16	Deposit			Sand levelling layer	Post-medieval	5
17	Deposit			Mortar rich demolition waste	Post-medieval	5
18	Deposit			Demolition waste make-up layer	Post-medieval	5
19	Deposit			Clay silt layer	Post-medieval	5
20	Masonry		45	Red brick and flint structural element	Modern	6
21	Deposit			Dump of waste material	Post-medieval	5
22	Masonry			Cellar	Post-medieval	8
23	Masonry			Cellar	Post-medieval	6
24	Deposit			Brown clay silt	Geological	0
25	Masonry			Wall adjacent to western cellar	Post-medieval	6
20	Deposit			Surface soil and demolition rubble	Modern	8
27	Deposit			Dump of demolition rubble	Post-medieval	5
28	Deposit			Dump of demolition rubble and soil	Post-medieval	5
29	Deposit			Dump of cinders	Post-medieval	5
30	Deposit			Silty make-up layer	Post-medieval	5
31	Deposit			Dump of demolition rubble and soil	Post-medieval	5
32	Cut	Service trench		Service trench	Modern	8
33	Deposit		32	Backfill of service trench	Modern	8
34	Deposit			Clay silt make-up layer	Post-medieval	5
35	Cut	Construction		Construction cut for red brick structure	Modern	6

Context	Category	Cut Type	Fill Of	Description	Period	Group
36	Masonry		35	Red brick structure	Modern	6
37	VOID			VOID		
38	VOID			VOID		
39	Cut	Construction		Construction cut for structural element	Modern	6
40	Masonry		39	Flint and mortar structural element with brick	Modern	6
41	Cut	Service trench		Service trench	Modern	8
42	Deposit		41	Backfill of service trench	Modern	8
43	Deposit			Mortar dump	Post-medieval	5
44	Deposit			Charcoal-rich dump	Post-medieval	5
45	Cut	Construction		Red brick foundation	Modern	6

Appendix 1b: Context Summary (Excavation and Monitoring)

Context	Category	Cut Type	Fill Of	Description	Period	Group
49	Deposit			U/S Finds		
50	Masonry			East west cellar wall	Post-medieval	6
51	Masonry		93	Barrel vault	Post-medieval	7
52	Masonry			north – south wall	Post-medieval	4
53	Deposit		90	Pit fill	Modern	8
54	Deposit			Geology	Geological	0
55	Cut	Pit		Pit	Medieval	1
56	Deposit		55	Pit fill	Medieval	1
57	Cut	Pit		Pit	Medieval	1
58	Deposit		57	Pit fill	Medieval	1
59	Cut	Pit		Pit	Medieval	1
60	Deposit		59	Pit fill	Medieval	1
61	Cut	Pit		Pit	Medieval	1
62	Deposit		61	Pit fill	Medieval	1
63	Cut	Soakaway		Modern soakaway	Modern	8
64	Deposit		63	Backfill of soakaway	Modern	8
65	Deposit		86	Pit fill	Post-medieval	2
66	Deposit		87	Pit fill	Post-medieval	2
67	VOID			VOID		
68	VOID			VOID		
69	Deposit		87	Pit fill	Post-medieval	2
70	Cut	Pit		Pit	Post-medieval	3
71	Deposit		70	Pit fill	Post-medieval	3
72	Masonry	Wall foundation	88	Wall foundation	Post-medieval	4
73	Masonry	Wall	1	East – west wall	Post-medieval	4
74	Cut	Pit		Pit	Modern	8
75	Deposit		74	Pit fill	Modern	8
76	Cut	Pit		Pit	Post-medieval	3
77	Deposit		76	Pit fill	Post-medieval	3
78	Cut	Pit		Pit	Post-medieval	3
79	Deposit		78	Pit fill	Post-medieval	3
80	Cut	Pit		Pit	Post-medieval	3
81	Deposit		80	Pit fill	Post-medieval	3
82	Deposit		86	Pit fill	Post-medieval	2
83	Deposit		86	Mortar dump	Post-medieval	2
84	Cut	Pit		Pit	Modern	8
85	Deposit		84	Pit fill	Modern	8
86	Cut	Pit		Pit	Post-medieval	2
87	Cut	Pit		Pit	Post-medieval	2
88	Cut	Wall foundation		Wall foundation	Post-medieval	4

Context	Category	Cut Type	Fill Of	Description	Period	Group
89	Deposit		88	Backfill of structure	Post-medieval	4
90	Cut	Pit		Pit	Modern	8
91	Masonry	Wall		Wall	Post-medieval	6
92	Masonry	Wall		Wall	Post-medieval	8
93	Cut	Barrel vault		Barrel vault	Post-medieval	7
94	Deposit			Fill of vault	Post-medieval	7
95	Cut	Pit		Pit	Post-medieval	5
96	Deposit		95	Pit fill	Post-medieval	5
97	Cut	Pit		Pit	Post-medieval	5
98	Deposit		97	Pit fill	Post-medieval	5
99	Deposit			Dump	Post-medieval	5
100	Deposit			Extraction pit waste	Post-medieval	2
101	Deposit			Demolition rubble	Post-medieval	5
102	Deposit			Make-up layer	Post-medieval	5
103	Deposit			Gravel surface	Post-medieval	5
104	Deposit			Make-up layer	Post-medieval	5
105	Deposit			Make-up layer	Post-medieval	5
106	Deposit			Make-up layer	Post-medieval	5
107	Deposit			Make-up layer	Post-medieval	5
108	Deposit			Make-up layer	Modern	8
109	Deposit			Make-up layer	Post-medieval	5
110	Deposit			Make-up layer	Post-medieval	5
111	Deposit			Make-up layer	Post-medieval	5
112	Deposit			Make-up layer	Post-medieval	5
113	Deposit			Demolition waste	Modern	8
114	Deposit			Make-up layer	Post-medieval	5
115	Cut	Pit		Pit	Post-medieval	5
116	Deposit		115	Pit fill	Post-medieval	5
117	Deposit			Make-up layer	Post-medieval	5
118	Deposit			Make-up layer	Post-medieval	5
119	Deposit			Make-up layer	Post-medieval	5
120	Deposit			Make-up layer	Post-medieval	5
121	Deposit			Make-up layer	Post-medieval	5
122	Deposit			Make-up layer	Post-medieval	5
123	Deposit			Make-up layer	Post-medieval	5
124	Deposit			Make-up layer	Post-medieval	5
125	Deposit			Make-up layer	Post-medieval	5
126	Deposit			Make-up layer	Post-medieval	5
127	Deposit			Make-up layer	Post-medieval	5

Appendix 1b: Feature Summary

Period	Category	Total
Medieval	Pit	4
Post-medieval	Structure	2
	Pit	9
	Cellar	2
Modern	Pit	3
	Drain	1

Appendix 2a: Finds by Context (Evaluation and Excavation Combined)

Context	Material	Qty	Wt	Period	Notes
02	Ceramic Building Material	1	1,232g	Medieval	Brick fragment
02	Stone	1	848g	Medieval	Caen stone
11	Animal Bone	2	123g	Unknown	
11	Ceramic Building Material	1	83g	Medieval	Brick fragment
11	Ceramic Building Material	2	63g	Post-medieval	Brick fragments
11	Ceramic Building Material	1	40g	Post-medieval	Roof tile fragment
11	Glass	1	94g	Post-medieval	Bottle fragment
11	Pottery	1	4g	Post-medieval	GRE
11	Pottery	1	11g	Med./Post-Med.	LMT
20	Ceramic Building Material	1	3,110g	Post-medieval	Complete brick
36	Ceramic Building Material	1	2,550g	Post-medieval	Complete brick
49	Animal Bone	1	48g	Unknown	
49	Ceramic Building Material	1	30g	Post-medieval	Wall tile fragment
49	Clay Tobacco Pipe	6	46g	Post-medieval	Stems
49	Glass	1	258g	Post-medieval	Bottle base
49	Pottery	9	526g	Post-medieval	
49	Pottery	1	27g	Modern	Trellis pattern - Hanley, Stoke on Trent
50	Stone	1	844g	Medieval?	
51	Ceramic Building Material	6	4,387g	Post-medieval	Brick fragment
52	Ceramic Building Material	4	2,284g	Med./Post-Med.	Brick & fragments
56	Animal Bone	1	25g	Unknown	
56	Flint – Struck	1	21g	Unknown	
56	Pottery	1	19g	Medieval	
58	Fired Clay	2	35g	Unknown	
58	Pottery	1	16g	Medieval	
60	Pottery	3	32g	Medieval	
62	Fired Clay	3	185g	Unknown	
66	Ceramic Building Material	2	166g	Post-medieval	Roof tile fragment

Context	Material	Qty	Wt	Period	Notes
66	Pottery	1	34g	Post-medieval	
75	Pottery	1	77g	Post-medieval	
77	Ceramic Building Material	1	19g	Post-medieval	
77	Glass	3	13g	Post-medieval	Vessel glass
77	Pottery	1	12g	Medieval	
77	Pottery	1	8g	Post-medieval	
81	Pottery	1	42g	Post-medieval	
82	Ceramic Building Material	1	123g	Medieval	Brick fragment
82	Ceramic Building Material	3	41g	Post-medieval	
82	Pottery	2	17g	Post-medieval	
89	Clay Tobacco Pipe	7	66g	Post-medieval	Bowls & stems
89	Pottery	1	9g	Post-medieval	
91	Ceramic Building Material	2	1,019g	Medieval	Brick fragment

Appendix 2b: Finds Summary (Evaluation and Excavation Combined)

Period	Material	Total
Medieval	Ceramic Building Material	5
	Pottery	6
	Stone	1
Medieval?	Stone	1
Med./Post-Med.	Pottery	1
Post-medieval	Ceramic Building Material	22
	Clay Tobacco Pipe	13
	Glass	5
	Pottery	17
Modern	Pottery	1
Unknown	Animal Bone	4
	Fired Clay	5
	Flint – Struck	1

Appendix 3: Historical Periods

Period	Date From	Date To
Prehistoric	-500,000	42
Early Prehistoric	-500,000	-4,001
Palaeolithic	-500,000	-10,001
Lower Palaeolithic	-500,000	-150,001
Middle Palaeolithic	-150,001	-40,001
Upper Palaeolithic	-40,000	-10,001
Mesolithic	-10,000	-4,001
Early Mesolithic	-10,000	-7,001
Late Mesolithic	-7,000	-4,001
Late Prehistoric	-4,000	42
Neolithic	-4,000	-2,351
Early Neolithic	-4,000	-3,001
Middle Neolithic	-3,500	-2,701
Late Neolithic	-3,000	-2,351
Bronze Age	-2,350	-701
Early Bronze Age	-2,350	-1,501
Beaker	-2,300	-1,700
Middle Bronze Age	-1,600	-1,001
Late Bronze Age	-1,000	-701
Iron Age	-800	42
Early Iron Age	-800	-401
Middle Iron Age	-400	-101
Late Iron Age	-100	42
Roman	42	409
Post Roman	410	1900
Saxon	410	1065
Early Saxon	410	650
Middle Saxon	651	850
Late Saxon	851	1065
Medieval	1066	1539
Post-medieval	1540	1900
Modern	1900	2050
World War One	1914	1918
World War Two	1939	1945
Cold War	1945	1992
Unknown	--	--

after English Heritage Periods List, recommended by Forum on Information Standards in Heritage available at: <http://www.fish-forum.info/inscript.htm>

Appendix 4: Pottery Summary

Context	Fabric	Type	No.	Wt/g	Form	Rim	Notes	Spot date
11	LMT	R	1	12	PK	THEV		L.14-16
11	GRE	D	1	5			or DUTR	16-18
49	GRE	B	1	162			Contains plaster	16-18
49	GRE	B	1	125	DD?			16-18
49	GRE	B	1	53				16-18
49	GRE	B	1	49				16-18
49	GSW4	D	1	42				16-17
49	TGE	D	1	2				16-18
49	ESW	D	1	2	MG?			18?
49	ESW	R	1	82	BT	BD		19+
49	REFW	B	1	27			Partial TP maker's mark incl. Reg No 216365, pattern: TRELIS, part of roundel HANLE[Y]..	L.19-E.20
49	REFW	B	1	4				L.19-20
56	LMU	B	1	19			small vessel, micaceous	11-14
58	LMT	B	1	16			fabric as LMU	L.14-16
60	LMU	R	2	12	JR	SEV		11-13
60	LMU	R	1	19	JR	THEV		13-14
66	IGBW	R	1	34	MG	UPPL		16-18
75	LMT	RH	1	76	JG	UPTAP		15-16
77	LMU	U	1	12				11-14
77	GRE	D	1	8			or DUTR	16-18
81	WNBC	RH	1	42	CA	COLL		17-18
82	SPEC	R	1	12	MG?	UPPL		17-18
82	UNID	D	1	4			sim to BOUD but poss earlier?	LMed?
89	YELW	D	1	9				L.18-19

Key: Fabrics – see text, DUTR – Dutch-type redware; Type: R – rim; D – decorated body sherd; U – undecorated body sherd; B – base; H – handle. Form: PK – pipkin; DD – dripping dish/pan; MG – mug; BT – bottle; JR – jar/cooking pot; JG – jug; CA – cauldron. Rims: THEV – thickened everted; BD – beaded; SEV – simple everted; UPPL – upright plain; UPTAP – upright tapered everted; COLL – collared.

Appendix 5: Ceramic Building Material

Context	Fabric	Form	No.	Wt./g	Min. No.	Abr.	Length	Width	Height	Mortar	Glaze	Comments	Date
02	est	EB	1	1158	1			110	52	thick white fsc, incl on break		yellow with grey core, strawed base	14-15th C
11	est	EB	1	83	1	+						yellow	14-15th C
11	fs	LB	2	63	2	+				1 with white fsc			P-med
11	fsg	RTP	1	41	1					fs white on base			P-med
20	mscq	LB	1	2973	1		293	118	52	thick msc cream upper & lower		diagonal skintling mark	P-med
36	fsfe	LB	1	2505	1		222	112	56	fs white/grey all over		thin grey render on one header	P-med
49	tge	WT	1	30	1				8	thin white	W	HP blue, spider's head corner motif, plaster on surface	18th c
52	est	EB	1	1944	1	+	>220	120	60	buff fs		sand/straw base, pink	13-15th C
52	fsgfe	LB	5	231	1	+			50	fscca all over		orange	15th C+
51	mscq	LB?	1	458	1	+		115	51	fs white		dk red, strawed base, occ Fe	15th C?
51	mscq	LB?	1	551	1	+		118	57	fs white		dk red, strawed base, occ Fe	15th C?
51	mscq	LB?	1	646	1				50			dk red, strawed base, occ Fe	15th C?
51	mscq	LB?	1	1566	1			120	49	thick msccq		dk red, strawed base, occ Fe	15th C?
51	fsfe	LB	1	569	1				60	thick grey msca		dk red	19th C+
51	fsxf	LB/FB	1	556	1			108	42+	patch fs on unworn surface		orange, worn base	18th C+
66	fsmcp	RTP	2	165	2	+						buff	P-med
77	wfg	UN	1	19	1							cream with common coarse angular red grog, pink surfaces, frag with right angled edge	P-med
82	est	EB	1	122	1	+						pink, strawed	14-15th C
82	msf	LB	1	5	1	+							P-med

Context	Fabric	Form	No.	Wt./g	Min. No.	Abr.	Length	Width	Height	Mortar	Glaze	Comments	Date
82	ms	LB	1	23	1	+						?whitewash on reduced surface	P-med
82	fsmcp	RTP	1	12	1	+						orange	P-med
91	fsfx	LB/FB	1	53.1	1	+		110	48	fsc white on all surfaces		orange	P-med
91	est	EB	1	472	1	+				msc all over		frag from rubble wall, includes EB & lump of buff ?mortar	Late med?

Appendix 6: Fired Clay

Context	Fabric	Type	No.	Wt./g	Colour	Surface	Impressions	Abr.	Notes
58	silty		2	35	orange/black				2 near-vit lumps, poss burnt frags of EB?
62	fsc		3	185	pinkish	1 flattish, puddled	poss curving withy 10mm diam	+	fairly dense, 1 piece 36mm thick

Appendix 7: Clay Tobacco Pipe

Context	Frag.	No.	Wt. (g)	Bore diam.	Abrasion	Notes	Date
49	stem	1	14	3.1		thick stem	
49	stem	1	9	2.9		thick stem	
49	stem	1	8	3.1		thick stem	
49	stem	1	6	2.7		thick stem	
49	stem	1	4	3.1			
49	stem	1	4	3.1		patchy black areas	
89	stem	1	6	3.3			
89	stem	1	8	3.1		patchy black areas	
89	stem	1	2	3.4			
89	bowl & stem	2	21	3.0		thick stem, oval heel, partly milled rim	c.1660-80
89	bowl & stem	1	13	2.8		thick stem, oval heel, partly milled rim	c.1660-80

Context	Frag.	No.	Wt. (g)	Bore diam.	Abrasion	Notes	Date
89	bowl & stem	1	15	2.8		thick stem, oval heel, partly milled rim	c.1660-80

Appendix 8: Glass

Context	Type	Colour	No.	Wt./g	Notes	Date
11	bottle	Lt green	1	94	mould-blown base fragment, moulded B B R on base edge, and '[B]ARNSLEY' at base angle	
49	bottle	green	1	256	complete base with shallow kick - onion bottle	
77	bottle	Uncol.	3	12	frags of neck	19th C?

Appendix 9: Animal bone

Context	Species	Part	No.	Wt. (g)	MNI	Notes
11	Bos	distal metapodial	1	83	1	chopped
11	Bos	distal R femur	1	70	1	incomplete epiphysis, unfused
49	Bos	thoracic vertebra	1	49		sawn longitudinally through centre, unfused epiphyses
56	large mammal	thoracic vertebra	1	26		sliced diag through body, unfused epiphyses

Appendix 10: OASIS Report Summary

OASIS DATA COLLECTION FORM: England

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OASIS ID: norfolka1-201837

Project details

Project name	150-152 Magdalen Street, Norwich, Norfolk
Short description of the project	In January 2015 NPS Archaeology carried out an archaeological trial trench evaluation and archaeological monitoring of demolition works ahead of redevelopment at 150-152 Magdalen St, Norwich. The work was conducted on behalf of and funded by the client, Mr Oliver Tookman. The plot is located on the inside of the medieval city wall, a scheduled monument. One evaluation trench c. 4.0m x 4.0m in area was excavated at the rear of the plot from the Magdalen Street frontage. Two walls belonging to a probable early post-medieval building were identified in the trench. Structural elements probably associated with two late post-medieval buildings were also recorded, along with dumped deposits deriving from both demolition events and domestic waste disposal. Two large post-medieval cellars were revealed during archaeological monitoring at the site; at least one the cellars may have remodelled an earlier structure.
Project dates	Start: 12-01-2015 End: 14-01-2015
Previous/future work	Not known / Not known
Any associated project reference codes	135762 - HER event no.
Type of project	Recording project
Site status	None
Current Land use	Industry and Commerce 3 - Retailing
Monument type	DRAIN Modern
Monument type	WALL Post Medieval
Monument type	CELLAR Post Medieval
Significant Finds	POT Post Medieval
Significant Finds	GLASS Post Medieval
Significant Finds	CBM Post Medieval
Significant Finds	CBM Medieval
Significant Finds	ANIMAL BONE Uncertain
Significant Finds	STONE Medieval
Investigation type	""Part Excavation"", ""Watching Brief""

Prompt National Planning Policy Framework - NPPF

Project location

Country England
 Site location NORFOLK NORWICH NORWICH 150-152 Magdalen Street, Norwich
 Study area 0.05 Hectares
 Site coordinates TG 2313 0964 52.6380498552 1.29812339924 52 38 16 N 001 17 53 E Point
 Height OD / Depth Min: 7.00m Max: 7.00m

Project creators

Name of Organisation NPS Archaeology
 Project brief originator Norfolk Historic Environment Service
 Project design originator NPS Archaeology
 Project director/manager Michael J Boyle
 Project supervisor NPS Archaeology

Project archives

Physical Archive recipient Norfolk Museums Service
 Physical Contents "Animal Bones","Ceramics","Glass","Worked stone/lithics"
 Digital Archive recipient NPS Archaeology
 Digital Contents "other"
 Digital Media available "Images raster / digital photography","Images vector","Spreadsheets","Text"
 Paper Archive recipient Norfolk Museums Service
 Paper Contents "other"
 Paper Media available "Context sheet","Plan","Report","Section"

Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)
 Title Archaeological Trial Trench Evaluation and Archaeological Monitoring at 150-152 Magdalen St, Norwich, Norfolk
 Author(s)/Editor(s) Boyle, M.
 Other bibliographic details 2015/1335
 Date 2015
 NPS Archaeology

Issuer or
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Place of issue or
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Entered by A. Crowson (andrew.crowson@nps.co.uk)

Entered on 30 January 2015

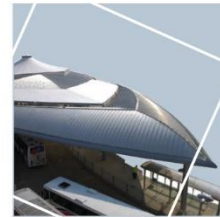
Appendix 11: Archaeological Specification

01-04-14-2-1335



nps archaeology

**Archaeological Excavation
150-152 Magdalen Street, Norwich
Written Scheme of Investigation**



Prepared for
Oliver Tookman

February 2015



www.nps.co.uk

Location	150-152 Magdalen Street, Norwich
District	Norwich City
Client	Oliver Tookman

DOCUMENT CHECKLIST		
Project Manager	Niall Oakey	
Completed by	Niall Oakey	24/02/2015
Reviewed by	David Adams	24/02/2015
<i>Issue 1</i>		

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01-04-14-2-1335

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Archaeological excavation Written Scheme of Investigation

1. Introduction

- 1.1 A proposal to redevelop 150-152 Magdalen Street, Norwich (TG 2313 0964) has required a programme of archaeological works. This has included monitoring of the demolition of the buildings and the removal of the footings or foundations, followed by archaeological evaluation to assess the potential effects of the proposals on the archaeological resource. Subsequent to the results of the evaluation, it has been determined that archaeological excavation initially should take place of those archaeological deposits affected by lowering of the site to formation levels for foundation testing, with possible further excavation of deposits that may be affected by groundworks for the finalised foundation designs and services.
- 1.2 The site lies immediately within the northern stretch of the medieval city walls, close to the former site of Magdalen Gate. From the earliest maps (e.g. Cleer, 1696) buildings are portrayed on the Magdalen Street frontage of the plot and the site was identified as of high potential for the presence of archaeological remains from the medieval period onwards. An archaeological evaluation took place in January 2014 comprising one evaluation trench measuring c. 4.0m x 4.0m excavated at the rear of the plot from the Magdalen Street frontage. Two walls belonging to a probable post-medieval building were identified in the trench. Structural elements probably associated with two late post-medieval buildings were also recorded, along with dumped deposits deriving from both demolition events and domestic waste disposal. Two large post-medieval cellars were revealed during archaeological monitoring at the site; at least one of the cellars may have remodelled an earlier structure (see figure at end of this document).¹
- 1.3 Given the potential of the site and the results of the evaluation Norfolk Historic Environment Service (NCCHEs) have requested that archaeological excavation is carried out. Dr Ken Hamilton has issued a generic excavation brief, but has also stated that “archaeological excavation must extend to the depth of proposed ground disturbance” (email to Oliver Tookman dated 18th February 2015). Initially this will be to formation level of the proposed foundations, but Dr Hamilton noted that “if the foundations require a greater depth of excavation than that proposed, the excavation must extend to the depth of actual ground disturbance. Excavation should include all services, soakaways etc.”
- 1.4 Deposits on the site have the potential to contribute to further study of regional medieval research topics involving “development of towns, changes in their internal layouts and housing densities and their roles as centres of supply and demand”.² These topics are relevant to later periods and the site also may provide information on zoning of mercantile and manufacturing activities.
- 1.5 In order to comply with that requirement Mr Oliver Tookman has requested that NPS Archaeology provide this Written Scheme of Investigation for undertaking an appropriate programme of archaeological works to fulfil the requirements of the *Generic Brief for Archaeological Excavation* issued by NCCHEs.
- 1.6 The foundation design comprises a raft, but the design cannot be finalised until the load-bearing qualities of the ground are established by plate test. This test will be preceded by lowering of the ground level over the whole site for installation of a compacted stone sub-base.

¹ Boyle, M., 2015 *Archaeological Trial Trench Evaluation and Archaeological Monitoring at 150-152 Magdalen Street, Norwich, Norfolk*, NPS Archaeology Report 2015/1335

² Medlycott, M., 2011 *Research and Archaeology Revisited: A Revised Framework for the East of England*, East Anglian Archaeology Occasional Paper 24, 70

2. Aims

2.1 The Programme of Archaeological Work is required to recover information relating to the extent, date, phasing, character, function, status and significance of the archaeological resource across the site.

2.2 The aims of the archaeological work may be summarised as follows:

- i. To establish the presence or absence of archaeological remains within the area.*
- ii. To determine the extent, condition, nature, quality and date of any archaeological remains occurring within the area.*
- iii. Ensure that any archaeological features discovered are identified, sampled and recorded.*
- iv. To establish, as far as possible, the extent, character, stratigraphic sequence and date of archaeological features and deposits, and the nature of the activities which occurred at the site during the various periods or phases of its occupation.*
- v. To establish the palaeoenvironmental potential of subsurface deposits by ensuring that any deposits with the potential to yield palaeoenvironmental data are sampled and submitted for assessment to the appropriate specialists.*
- vi. To explore evidence for social, economic and industrial activity.*
- vii. To produce an assessment report and updated project design.*

3. Method Statement

3.1 Introduction

3.1.1 A four-stage strategy will be undertaken to record archaeological deposits threatened with removal on the proposed development site. The stages may be summarised as follows.

- i. Archaeological Monitoring.* Due to the potential for previously unidentified archaeological remains to exist, all works related to the lowering of ground levels will be monitored. If archaeological features and deposits are encountered and these are deemed to be of significance they will be identified and isolated for archaeological excavation.
- ii. Archaeological Excavation.* Machine and manual excavation will be employed to investigate the presence, condition, character and date of any subsurface archaeological deposits and features identified during the initial strip and threatened with destruction. Any archaeological contexts identified will be recorded and excavated to the depth threatened by ground lowering in order to determine function, form and relative date. A second phase of excavation may arise after final design of foundations and services.
- iii. Post-fieldwork Processes.* The drawn and written stratigraphic/structural record will be cross-referenced and analysed to provide a synthesis of the results of the work. The cleaning and cataloguing of any artefactual and ecofactual materials recovered will be carried out throughout the duration of the fieldwork. The finds will be cleaned, marked and packaged in accordance with the archive requirements of the Norfolk Museums Service.
- iv. Report and Archive.* The report will describe the results of the trial trenching with data presented in tabular, graphic and appendix form. Copies of the reports will be submitted to the client and to NCCHEs.

3.1.2 The procedures and methodology for each of the stages outlined above are described in detail below.

3.2 Archaeological Monitoring

3.2.1 It is estimated that between 600mm and 1000mm depth of deposits will need to be removed from the whole site in order to reach the formation level required (Oliver Tookman *pers*

comm). The evaluation suggests that post-medieval structures, together with demolition-derived and other dumped deposits, may be affected by this operation.

- 3.2.2 The site area will be mechanically stripped under constant archaeological supervision by a machine fitted with a toothless ditching bucket. Machining will be halted at the top of the first archaeological horizon or on reaching the required formation level (whichever is higher) and the exposed horizons manually cleaned. All exposed surfaces and spoil will be screened with a metal detector.
- 3.2.3 Spoil from machine stripping will be scanned with metal detector used by an experienced operator.

3.3 Excavation

- 3.3.1 The area/s proposed for excavation will be laid out and agreed with the client and NCCHEs prior to any works commencing. Excavation will take place with a clear site after enabling works have taken place
- 3.3.2 A pre-excavation plan of the stripped area will be made. Once the plan is complete excavation to the required formation levels will be undertaken by hand.
- 3.3.3 Spoil from the excavation areas will stockpiled in a suitable location (to be agreed), with turf and topsoil kept separate from subsoil and excavated material. It is not a requirement that excavation areas will be backfilled.
- 3.3.4 If excavation depths exceed 1.2m, or the excavation sides are considered too unstable to provide safe working conditions, the excavation edges will be locally stepped.
- 3.3.5 Exposed archaeological features and deposits will be excavated by hand and screened by metal detector. Spoil from hand-excavated features will be scanned with metal detector used by an experienced operator.
- 3.3.6 All artefacts and ecofacts will be collected and, where possible, related to the context from which they derived. All retained materials will be stored in stable conditions until arrangements for their processing and analysis are made.
- 3.3.7 Detailed strategies for levels of sampling of buried soils, structures, pits, post-holes and ditches will be determined on site. Allowance will be made for total recovery where appropriate; percentage sampling will apply in areas of complex stratified deposits are encountered. Buried soils will be sampled by sieving to determine artefact densities. In general, the following feature/deposit sampling strategy will be employed wherever site conditions allow in accordance with the document *Standards for Field Archaeology in the East of England* (Gurney 2003):

linear features	10%, with all slots at least 1m wide
non-linear features (pits and postholes)	Exposed features half-sectioned
structures	100%
post-trenches/slots	100% (including longitudinal sections)
burials	100%
buried soils	100% (with 2mm mesh sieving)

Where required features and deposits will be totally excavated

- 3.3.8 All archaeological deposits, features and layers will be recorded using NPS Archaeology's *pro forma* recording system. The records will include full written, graphic and photographic elements with site and context numbering compatible with the Norfolk Historic Environment Record numbering system. Plans will be made at suitable scales, depending on the complexity of the archaeological deposits and the level of detail required. Typically the scales used will be 1:50, 1:20 and 1:10. Sections will be drawn at scales of 1:10 and 1:20 depending on the detail considered necessary. A photographic record in black and white and digital will

be maintained of all archaeological deposits, layers and features to record their characteristic and relationships. Digital photographs will also be taken to record the pre-excavation condition of the site, the progress of the excavation and the appearance of the site following the completion of the excavation.

- 3.3.9 If any human remains or burials are encountered which must be removed an application for a Licence for the Removal of Human Remains will be made in compliance with Section 25 of the Burial Act, 1857. No human remains will be removed until permission has been granted in writing by The Ministry of Justice, in line with the recent review of the Burial Law and Archaeology. Human remains will be screened from public view during the course of the excavation. Backfilling of any graves or excavation areas containing human remains that are not excavated will be done manually to ensure that the remains are appropriately protected from any damage or disturbance.
- 3.3.10 Soil samples with the potential to contain palaeoenvironmental materials will be collected if suitable deposits are encountered. Standard 40 litre bulk soil samples, column or monolith samples and Kubiena tins will be collected from such deposits as appropriate, in consultation with the English Heritage Regional Advisor for Archaeological Science and other consultant environmentalists. In all instances, sampling procedures will follow the guidelines set out in the document *Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation* (English Heritage 2002). Full written, graphic and photographic sample records will be made using NPS Archaeology's pro forma recording system.
- 3.3.11 Samples with the potential to contain evidence of industrial processes will be collected from suitable deposits.
- 3.3.12 Should any waterlogged material such as timbers or organic artefacts and ecofacts be encountered they will be recorded, removed from site and kept in suitable and stable conditions until arrangements for their analysis can be arranged.
- 3.3.13 NPS Archaeology supports the OASIS project. An online record will be initiated immediately prior to the start of fieldwork and completed when the final report is submitted to Norfolk Historic Environment Service.

3.4 Post-Fieldwork Processing

- 3.4.1 The purpose of this phase is to ensure that all elements of the site record are cross-referenced and compatible with each other for the post-excavation assessment and reporting phases.
- 3.4.2 The drawn, photographic and written stratigraphic and structural records will be cross-referenced and, if appropriate, entered into an archaeological database. Information from the excavation will be added to develop an overall site project database that will be used as the basis for interpretation of the results and the production of project reports and any publication.
- 3.4.3 The cleaning and cataloguing of any artefactual and ecofactual materials recovered will be undertaken on completion of the excavation. All retained materials will be cleaned, marked and packaged in accordance with the requirements of the Norfolk Museums and Archaeology Service. Finds data will be stored on a database to allow summary listings of artefacts by category and context to provide basic quantification.
- 3.4.4 An archive structured in accordance with guidelines laid out in *Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation* (Brown 2007) will be created.

3.5 Assessment

- 3.5.1 On completion of all stages of the fieldwork and the post-excavation processing, an assessment of the archive (including written, drawn, photographic and artefactual elements) will be undertaken in line with the recommendations set out in the document *Management of Research Projects in the Historic Environment* (MoRPHE) (2006). This assessment will summarise the stratigraphic, artefactual and environmental evidence and evaluate both its significance and potential to address the research aims of the project. The assessment will involve detailed work on the different archive elements and the production of catalogues, illustrative material and specialist reports. The results of the evaluation and excavation will be incorporated into an assessment with the results of the evaluation.
- 3.5.2 A stratigraphic Harris matrix and accompanying text sections will be prepared where appropriate in order to establish the stratigraphic sequence and phasing of the archaeological remains.
- 3.5.3 An assessment of the finds data stored on the finds database will be undertaken in line with the procedures set out in the document *Standards and Guidelines for the collection, documentation, conservation and research of archaeological materials* (Chartered Institute for Archaeologists 2001).
- 3.5.4 The finds assessment will start upon completion of the finds processing and will involve the identification and description of the artefactual materials by the relevant specialists. In general, the following strategies will be employed in the analysis of the artefactual materials recovered:
- *Pottery*. Analysed to determine date and tabulated by context unit.
 - *Worked flint*. Sorted and tabulated by context unit.
 - *Metal artefacts*. Assessed for dating and significance, catalogued by context unit and where necessary conserved in accordance with *UK Institute of Conservators Guidelines*.
 - *Faunal Remains*. Sorted and tabulated by context unit. Assessed for the potential for further analysis and for sieving for the recovery of smaller bird and fish bones.
 - *Human Remains*. Analysed by context unit and grave/family Group identified where feasible
 - *Environmental Samples*. Processed and assessed for content and significance.
 - Other categories of artefacts or ecofacts will be analysed in a similar fashion.
- 3.5.5 Classes of artefacts that are considered appropriate for use as dating evidence will be analysed to a level to establish a site chronology. Descriptive catalogues for each category of material will be prepared, detailing attributes of the assemblage such as the range and variety of types, composition, and date. This data will be presented in tabular, graphic and appendix form. The potential of all categories of artefactual materials will be assessed in relation to both the excavation's stated research objectives and wider regional research objectives. This assessment will be undertaken by relevant specialists, who will recommend the artefact Groups or categories that warrant more detailed analysis
- 3.5.6 An assessment of artefact conservation requirements will be undertaken in conjunction with the Conservation Department at Norwich Castle Museum. This assessment will identify the range and condition of finds requiring treatment and the appropriate conservation methodology and analytical techniques to be employed. Metal objects that require X-radiography in order to complete their analysis will also be identified. In all instances, conservation assessment procedures will follow the frameworks set out in the documents *Excavated Artefacts and Conservation* (UKIC *Conservation Guidelines No 1*, 1988) and *A Strategy for the Care and Investigation of Finds* (Ancient Monuments Laboratory 1995). Conservation of those finds identified by the Conservation Assessment as requiring treatment will be undertaken by the Conservation Department at Norwich Castle Museum.
- 3.5.7 Environmental samples taken during the course of the excavation will be assessed in relation to the project's stated research objectives. Bulk soil samples taken during the excavation will

be processed employing manual flotation/bulk sieving methods and the flots scanned to assess potential. Pollen samples will be treated by standard methods and slides scanned to assess pollen grain abundance and state of preservation. Animal bone from selected contexts will be scanned to assess condition and species representation. Any other environmental samples taken will be assessed using recognised procedures for the particular category of material. The assessment of environmental material in all instances will follow the guidelines set out in the document *Environmental Archaeology and Archaeological Evaluations (Association for Environmental Archaeology Working Papers No 2, 1995)*.

- 3.5.8 The report will present data in tabular, graphic and appendix form. A list of archive components generated by the work will also be included in the report. Copyright of the reports will be retained by NPS Archaeology.
- 3.5.9 The stages of assessment set out above also will result in an Updated Project Design that will provide details of the tasks required to carry the works to appropriate publication.
- 3.5.10 Multiple copies of the report will be produced as appropriate and presented to Mr Oliver Tookman and NCCHEs. A Norfolk Historic Environment Record form will accompany the assessment report and will include a reference to the archive and the intended place of archive deposition.
- 3.5.11 Following discussions and consideration of the results of the assessment report and Updated Project Design, the task list and a timetable for publication, if appropriate, will be agreed. **These tasks will require additional costs and these will be agreed once the Updated Project Design has been approved by NCCHEs.**
- 3.5.12 All archaeological materials, excepting those covered by the *Treasure Act, 1996*, will remain the property of the landowners. NPS Archaeology will seek to reach a formal agreement with the landowners for the donation of the finds to the Norfolk Museums Service.

4. Timetable

- 4.1 The timetable for fieldwork assumes that there are no major delays to the work programme caused by vandalism, repeated plant breakdown, restricted access, programme changes by the Client or major periods of adverse weather conditions.

5. Staffing

- 5.1 The project will be co-ordinated by a Project Officer who will be dedicated to the project throughout its duration. The Project Manager will assume responsibility for all aspects of the project including finance, logistics, standards, health and safety, and liaison with the client and curators. The Project Officer will have substantial experience in archaeological evaluation and post-excavation analysis.
- 5.2 Other members of staff involved in the project will be the Experienced Excavators and Finds Co-ordinator. Experienced Excavator staff will have experience in excavation and experience with NPS Archaeology's *pro forma* or similar systems. The Project Officer and/or Experienced Excavator staff will be experienced metal detector users.
- 5.3 NPS Archaeology staff associated with the project will be as follows:

Senior Management	
Archaeology Manager	Jayne Bown BA, MifA
Project Manager	Niall Oakey MA BA
Project Staff	
Project Officer	Mick Boyle
Finds Co-ordinator	Rebecca Sillwood
Experienced Excavators	To be nominated

- 5.4 NPS Archaeology reserves the right, because of its developing work programme, to change its nominated personnel at any time. This will be in consultation with the client and NCCHEs. A Project Officer and two experience excavators will be assigned to the project initially. The timescale and ultimate size of the team is dependent upon the results of initial site stripping.
- 5.5 The analysis of artefactual and ecofactual materials will be undertaken by NPS Archaeology staff or nominated external specialists. Nominated NPS Archaeology and external specialists and their areas of expertise are as follows:

Specialist	Research Field
Sue Anderson	Post-Roman Pottery, Ceramic Building Material, Human remains
Andy Barnett	Metal-detectorist, Numismatic Items
Tom Baxter-Campbell	Metal-detectorist
Julie Curl	Faunal Remains
Fran Green	Palaeo-environmental Analysis
Debbie Forkes	Conservation
Val Fryer	Macrofossil analysis
Andrew Peachey	Prehistoric and Roman Pottery, worked flint
Penelope Walton Roger	Burial accompaniments (grave goods)

6. General Conditions

- 6.1 NPS Archaeology will not commence work until a written order or signed agreement is received from the Client. Where the commission is received through an Agent, the Agent is deemed to be authorised to act on behalf of the Client. NPS Archaeology reserve the right to recover unpaid fees for the service provided from the Agent where it is found that this authority is contested by said Client.
- 6.2 NPS Archaeology would expect information on any services crossing the site to be provided by the client.
- 6.3 A 7.4 hour working day is normally operated by NPS Archaeology, although their agents may work outside these hours.
- 6.4 NPS Archaeology would expect the client to arrange suitable access to the site for its staff, plant and welfare facilities on the agreed start date.
- 6.5 NPS Archaeology would expect any information concerning the presence of TPO's and/or, protected flora and fauna on the site to be provided by the client prior to the commencement of works and accept no liability if this information is not disclosed. No excavation will take place within 8m or canopy width (whichever is the greater) of any trees within or bordering the site.
- 6.6 NPS Archaeology shall not be held responsible for any delay or failure in meeting agreed deadlines resulting from circumstances beyond its reasonable control. Such circumstances would include without limitation; long periods of adverse weather conditions, flooding, repeated vandalism, ground contamination, delays in the development programme, unsafe buildings, conflicts between the archaeological excavation method and the protection of flora and fauna on the site, disease restrictions, and unexploded ordnance.
- 6.7 Whether or not CDM regulations apply to this work, NPS Archaeology would expect the client to provide information on the nature, extent and level of any soil contamination present. Should unanticipated contaminated ground be encountered during the works, excavation will cease until an assessment of risks to health has been undertaken and on-site control measures implemented. NPS Archaeology will not be liable for any costs related to the collection and analysis of soils or other assessment methods, on-site control measures, and the removal of contaminated soil or other materials from site.
- 6.8 Should any disease restrictions be implemented for the area during the excavation, fieldwork will cease and staff redeployed until they are lifted. NPS Archaeology will not be liable for

any costs related to on-site disease control measures and for any additional costs incurred to complete the fieldwork after the restrictions have been removed.

- 6.9 NPS Archaeology will not accept responsibility for any tree surgery, removal of undergrowth, shrubbery or hedges or reinstatement of gardens. NPS Archaeology will endeavour to restrict the levels of disturbance of to a minimum but wishes to bring to the attention of the client that the works will necessarily alter the appearance of any landscaped gardens.

7. Quality Standards

- 7.1 NPS Archaeology fully endorses the Chartered Institute for Archaeologists *Code of Practice* and the *Code of Practice for the Regulation of Contractual Arrangements in Field Archaeology*. All staff employed or subcontracted by NPS Archaeology will be employed in line with The Chartered Institute for Archaeologists *Code of Practice*.

- 7.2 NPS Archaeology operates under a recognised Quality Management System and is accredited with BS EN ISO 9001:2008, the International Standard Model for Quality Assurance.

- 7.3 The guidelines set out in the document *Standards for Field Archaeology in the East of England* (Gurney 2003) will be adhered to. Provision will be made for monitoring the work by Norfolk Historic Environment Service in accordance with the procedures outlined in the document *Management of Archaeological Projects* (English Heritage 1991). Monitoring opportunities for each phase of the project are suggested as follows:

- at completion of site stripping
- during excavation
- during post-fieldwork analysis
- upon completion of the archive
- upon receipt of the assessment report

- 7.4 A further monitoring opportunity will be provided at the end of the project upon deposition of the integrated archive and finds with the Norfolk Museums Service.

- 7.5 NPS Archaeology operates a Project Management System. Most aspects of this project will be co-ordinated by a Project Officer who is responsible for the successful completion of the fieldwork and reporting. The Project Manager retains responsibility for the delivery of this project. The Archaeology Manager has responsibility for all of NPS Archaeology's work and ensures the maintenance of quality standards within the organisation.

8. Health and Safety

- 8.1 NPS Archaeology will ensure that all work is carried out in accordance with NPS Property Consultants Limited's Health and Safety Policy, to standards defined in *the Health and Safety at Work, etc Act, 1974* and *The Management of Health and Safety Regulations, 1992*, and in accordance with the health and safety manual *Health and Safety in Field Archaeology* (SCAUM 2007).

- 8.2 A risk assessment will be prepared for the fieldwork. All staff will be briefed on the contents of the risk assessment and required to read it. Protective clothing and equipment will be issued and used as required.

- 8.3 NPS Archaeology will provide copies of NPS Property Consultants Limited's Health and Safety policy on request.

9. Insurance

9.1 NPS Archaeology's Insurance Cover is:

Employers Liability	£5,000,000
Public Liability	£50,000,000

Appendix 12: Evaluation Report

Report number 2015/1335



nps archaeology

**Archaeological Trial Trench Evaluation and
Archaeological Monitoring at 150–152 Magdalen St,
Norwich, Norfolk**

ENF 135762



Prepared for

Oliver Tookman



Michael Boyle BSc ACIfA

February 2015

www.nps.co.uk

PROJECT CHECKLIST		
Project Overview	David Adams	
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Graphics Completed	David Dobson	30/01/2015
Edit Completed	Andrew Crowson	29/01/2015
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Location:	150–152 Magdalen St, Norwich, Norfolk
District:	Norwich City Council
Grid Ref.:	TG 2313 0964
Planning Ref.:	08/01337/F
HER No.:	ENF 135762
OASIS Ref.:	201837
Client:	Oliver Tookman
Dates of Fieldwork:	12–14 January 2015

Summary

In January 2015 NPS Archaeology carried out an archaeological trial trench evaluation and archaeological monitoring of demolition works ahead of redevelopment at 150–152 Magdalen St, Norwich. The work was conducted on behalf of and funded by the client, Mr Oliver Tookman.

The plot is located on the inside of the medieval city wall, a scheduled monument. One evaluation trench measuring c. 4.0m x 4.0m was excavated at the rear of the plot from the Magdalen Street frontage. Two walls belonging to a probable post-medieval building were identified in the trench. Structural elements probably associated with two late post-medieval buildings were also recorded, along with dumped deposits deriving from both demolition events and domestic waste disposal.

Two large post-medieval cellars were revealed during archaeological monitoring at the site; at least one of the cellars may have remodelled an earlier structure.

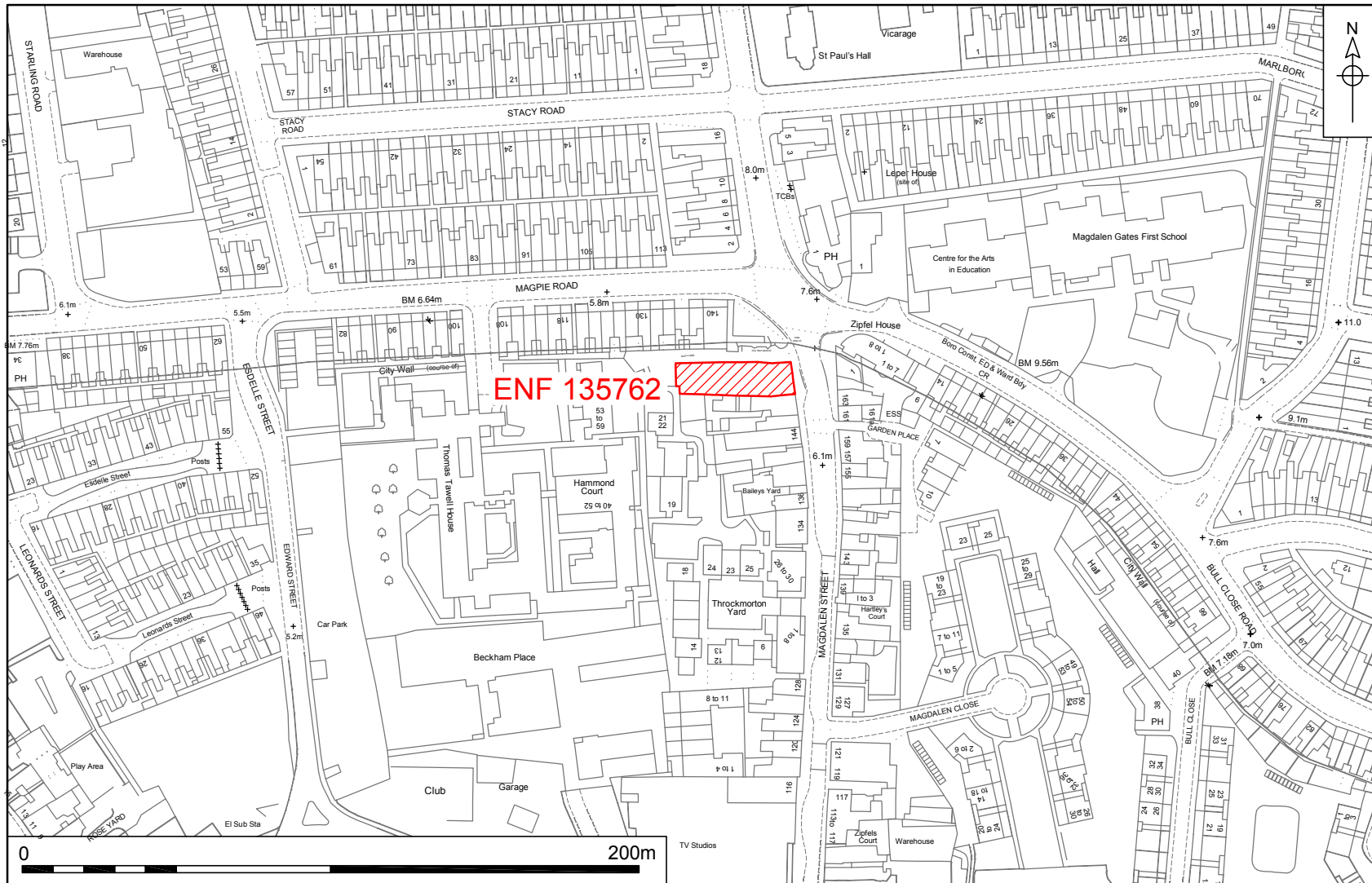
1.0 INTRODUCTION

A proposal to redevelop 150–152 Magdalen St, Norwich (TG 2313 0964) and construct two small shop units, three houses and five flats required a programme of archaeological monitoring on the demolition of the existing buildings and the removal of the foundations. An archaeological evaluation to assess the potential effects of the proposals on the archaeological resource was also required.

The site was formerly occupied by a relatively modern flat-roofed, two-storey building, most recently a furniture shop, fronting Magdalen St. A group of adjoining buildings ran back from the street along Wall Lane, perpendicular to Magdalen St and parallel to remains of the city wall (Figure 1).

The 0.05ha site lies immediately within the medieval city wall, close to the former site of Magdalen Gate (Plate 1). There is therefore high potential for archaeological remains from the medieval period onwards to be present on the site.

Given the potential of the site, Norfolk Historic Environment Service (NHES) required that an archaeological evaluation be carried out to inform planning decisions. NHES also required archaeological monitoring of other works associated with the development.



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Figure 1. Site location. Scale 1:2000

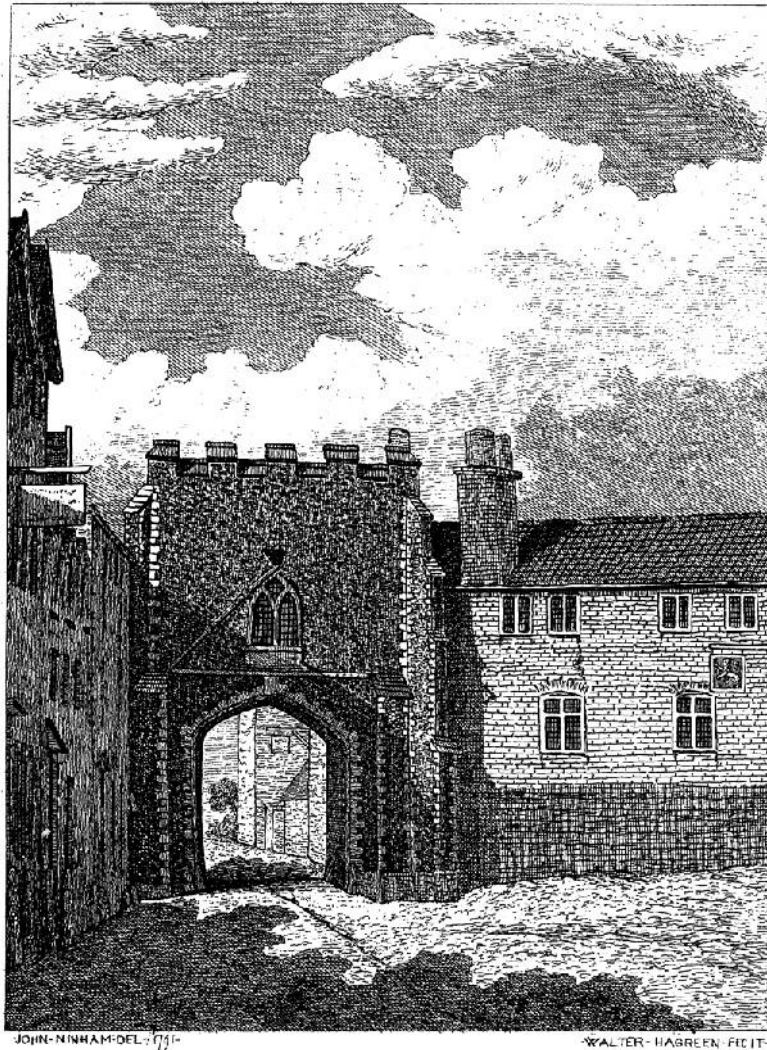


Plate 1. Magdalen Gate, 1791, by John Ninham

This work was undertaken to fulfil planning requirements set by Norwich City Council (planning ref. 08/01337/F). The work was conducted in accordance with a Project Design and Method Statement prepared by NPS Archaeology (WSI ref 01-04-14-2-1335).

Mr Oliver Tookman commissioned and funded NPS Archaeology to carry out a programme of archaeological works to fulfil the requirements of the *Generic Brief for the Monitoring of Works Under Archaeological Supervision and Control*, and the *Generic Brief for Archaeological Evaluation by Trial Trenching*, issued by NHES.

The programme of work was designed to assist in defining the character and extent of any archaeological remains within the proposed redevelopment area, following the guidelines set out in *National Planning Policy Framework* (Department for Communities and Local Government 2012). The results will enable decisions to be made by the Local Planning Authority about the treatment of any archaeological remains found.

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

2.0 GEOLOGY AND TOPOGRAPHY

The solid geology at the site is chalk formed c. 71–94 million years ago in the Cretaceous Period when the local environment was dominated by warm chalk seas. There is also the potential for overlying superficial deposits comprising river terrace deposits of sand and gravel formed up to 3 million years ago in the Quaternary Period when the local environment was dominated by rivers.¹

Hand-augering deposits below the archaeological horizons in the evaluation trench revealed superficial geological deposit **24**. Consisting of mid-brown clay silts with chalk inclusions, this deposit was found to be c. 0.60m deep near to the north edge of the trench and up to 2.00m deep close to the south end. Augering indicated the upper horizon of **24** lay at 5.35m OD. This material was interpreted as filling a geological hollow or undulation in the surface of the chalk.

The development area is relatively level and lies at an elevation of c. 7.00m OD.

The site is bounded by Magdalen St to the east, and to the north is separated from the east-west aligned medieval city wall by a narrow thoroughfare known as Wall Lane. The river Wensum is situated 250m to the south.

¹ <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

3.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

A search was made of all NHER records within a 100m radius of the development site. This produced a total of 22 records. The more relevant results of this search are summarised below along with details of previous archaeological work in the vicinity. Sites referred to in the following text with the prefix NHER are cited from Norfolk Historic Environment Record (NHER) and all data are copyright of Norfolk Historic Environment Service/Norfolk County Council.

3.1 NHER Records

NHER 384

Norwich's city walls were built around 1294–1343 and no houses were built outside the wall until 1779–89. The walls included a number of towers, such as the Boom Towers, Cow Tower and Black Tower. The west Boom Tower contains an 18th-century coke oven. The Black Tower was traditionally the residence of the Constable and was also used for plague victims in the 16th century.

The walls also incorporated several gates. The site at 150–152 Magdalen St is situated immediately to the west of the former Magdalen Gate (NHER 26134) on the north edge of the medieval city. During the English Civil War, three of the city's gates (St Augustine's, Conesford and Bishop's) were blocked-up with earth. Research into the defences shows that the Boom Towers, like the rest of the walls, gradually fell out of practical use, becoming monuments in the landscape, valued for their picturesque character and historical interest. The inside of the walled circuit was deliberately kept open for access in the Middle Ages.

NHER 26592

In 2001, an archaeological evaluation followed by a strip, map and sample excavation was carried out at 167–171 Magdalen St. The site lies immediately to the east of the former Magdalen Gate and the line of the city wall crosses the site.

Traces of a probable ditch predating the city wall were identified, possibly representing an earlier defensive line for the city. The city wall was found to be constructed upon the backfilled ditch and to maintain the same alignment as the ditch. In addition to the city wall, the foundations of what appeared to be a tower were recorded in the east of the site. The site was extensively truncated by 19th–20th-century activity. A demolished cellar and its associated backfilling occupied much of the excavated area.

NHER 26155

In 1957, City Engineers' operations in the back yard of 134 Magpie Road revealed part of the city wall.

NHER 420

Two pieces of post-medieval pottery and an 18th-century clay pipe bowl were recovered when a sewer trench was dug through what was thought to be part of the city's medieval defensive ditch in 1979.

NHER 628

It is recorded that a leper hospital, dedicated to St Leonard, was situated close to the site outside Magdalen Gate. It is believed to have been founded by 1335, and was not suppressed during the 16th century.

NHER 566

It is known from documentary evidence that the Church of St Margaret Fyebriggate in Combusto stood close to Magdalen Gate, and the discovery of a graveyard just to the south (NHER 148, NHER 780) confirmed its location. Although the foundation date of the church is unclear, it is known that it was demolished in 1547 when the parish was united with St Paul's.

NHER 148/780

The site of the churchyard of the medieval church of St Margaret in Combusto (NHER 566) (first reference AD 1254, redundant by 1468) is situated approximately 75m south of the site at 150–152 Magdalen St.

Excavations in 1987 discovered 436 human burials, a large proportion of which were male. This is attributed to the fact that St Margaret's was known as *St Margaret ubi sepeliunter suspensi* ('where those who have been hanged were buried'), and assumes fewer women than men were hanged. A number of skeletons were found in groups buried face down, which is highly unusual in a Christian cemetery. Metal finds and mineralised fragments of cloth from the skeletons suggest a date range from the 11th/12th century to the mid–late 15th century. A further 600 disarticulated and semi-articulated skeletons were also recovered. Several pieces of dressed limestone from the original church were located in a cellar wall at the street frontage. No evidence of Saxon occupation was noted, but a 9th-century copper alloy disc brooch with a backward-facing animal was found during the levelling of the site.

In the 19th and 20th centuries the site was covered by the Norwich Institute for the Blind. No trace of the old church was found, and it was probably destroyed by the massive cellars of the Institute, itself demolished in 1973 for a shop development.

Excavations in 1973 and a watching brief in the 1980s noted human remains and evidence of 13th–14th-century buildings, and a possible fire destruction layer, followed by re-planned 16th–17th-century structures.

NHER 265

Sherds from a 16th-century jug were recovered during restoration and renovation work at 137 Magdalen St in 1974.

NHER 44345

The two properties 146–148 Magdalen St are immediately adjacent to the site to the south. These Grade 2 listed three-storey buildings have 17th-century ranges to the rear with refaced late 19th-century shop fronts.

NHER 48293, 48186, 26356, 51416 and 26355 are further examples of post-medieval houses and shops in the vicinity of the site.

NHER 53677, 54309 and 49022 are the locations of World War Two air-raid shelters in the area.

3.2 Cartographic Evidence

Perhaps the earliest reliable map incorporating the site at Magdalen St is Cleer's 1696 Map of the City of Norwich (Frostick 2002, 21). This map, although rather schematic, at least indicates a building on the site at that time, though no informative detail is discernible. A track or path is also visible leading directly southwest from the site across open ground, appearing to end at Botolph Street close to the medieval church of St Augustine. The inside of the walled circuit formed by the city wall is shown to be open as a lane.

Hochstetter's map of 1789 (Frostick 2002, 60) shows a long and relatively narrow building running back from Magdalen St and parallel to the city wall. A small thoroughfare is again visible between the building and the city wall, and there is what appears to be a yard immediately adjacent to the south aspect of the structure.

The 1905 First Edition Ordnance Survey map shows a very similar scene to that depicted in 1789, raising the possibility that the same building is illustrated.² There is still a large area of relatively open ground to the west at this time.

² <http://www.historic-maps.norfolk.gov.uk/mapexplorer/>

4.0 METHODOLOGY

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

The Brief required that an experienced archaeologist monitor all ground disturbance works related to the demolition of the buildings, particularly the removal of any concrete slabs or foundations. The monitoring was to be carried out in accordance with the Chartered Institute for Archaeologists' *Standard and Guidance for an Archaeological Watching Brief*³ and guidelines set out in *Standards for Field Archaeology in the East of England* (Gurney 2003).

The Brief stated that the evaluation should consist of a single trench measuring 4.0m x 4.0m positioned as close to the road frontage as possible, although, its final location may be determined by surface or below ground obstructions and all Health and Safety considerations. The trench was set out by NPS Archaeology and CAT-scanned prior to excavation.

Due to a large proportion of the street frontage being occupied by a large deep cellar there was insufficient space to place the trench between the cellar and gable of the adjoining property. It was therefore decided to place the trench approximately 20.0m west of the street frontage in an area where underground services could also be avoided.

Machine excavation was carried out under constant archaeological supervision by a hydraulic 360° excavator equipped with a toothless ditching bucket.

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

All archaeological features and deposits were recorded using NPS Archaeology pro forma. Trench locations, plans and sections were recorded at appropriate scales. Monochrome and digital photographs were taken of all relevant features and deposits where appropriate.

The temporary benchmark used during the course of the work was transferred from an Ordnance Survey Spot Height with a value of 7.60m OD, located at the junction of Magpie Road and Magdalen Street, adjacent to the Artichoke public house.

Site conditions were good, with the work taking place in fine weather.

³ <http://www.archaeologists.net/sites/default/files/node-files/CIfAS&GWatchingbrief.pdf>

5.0 RESULT

Figures 2, 3

This section summarises the archaeologically significant features and deposits recorded in the evaluation trench. The features are presented in four periods (Periods 1-4) in chronological order. What is interpreted as a geological deposit **24** was recorded at a height of c. 5.35m OD. Its presence was established by hand auger at the base of the evaluation trench (auger holes 1-3). The deposit consisted of a mid-brown clay silt with occasional small pieces of chalk.

5.1 Period 1: Post-Medieval Structure

Figures 3, 4, Plates 2, 3, 4

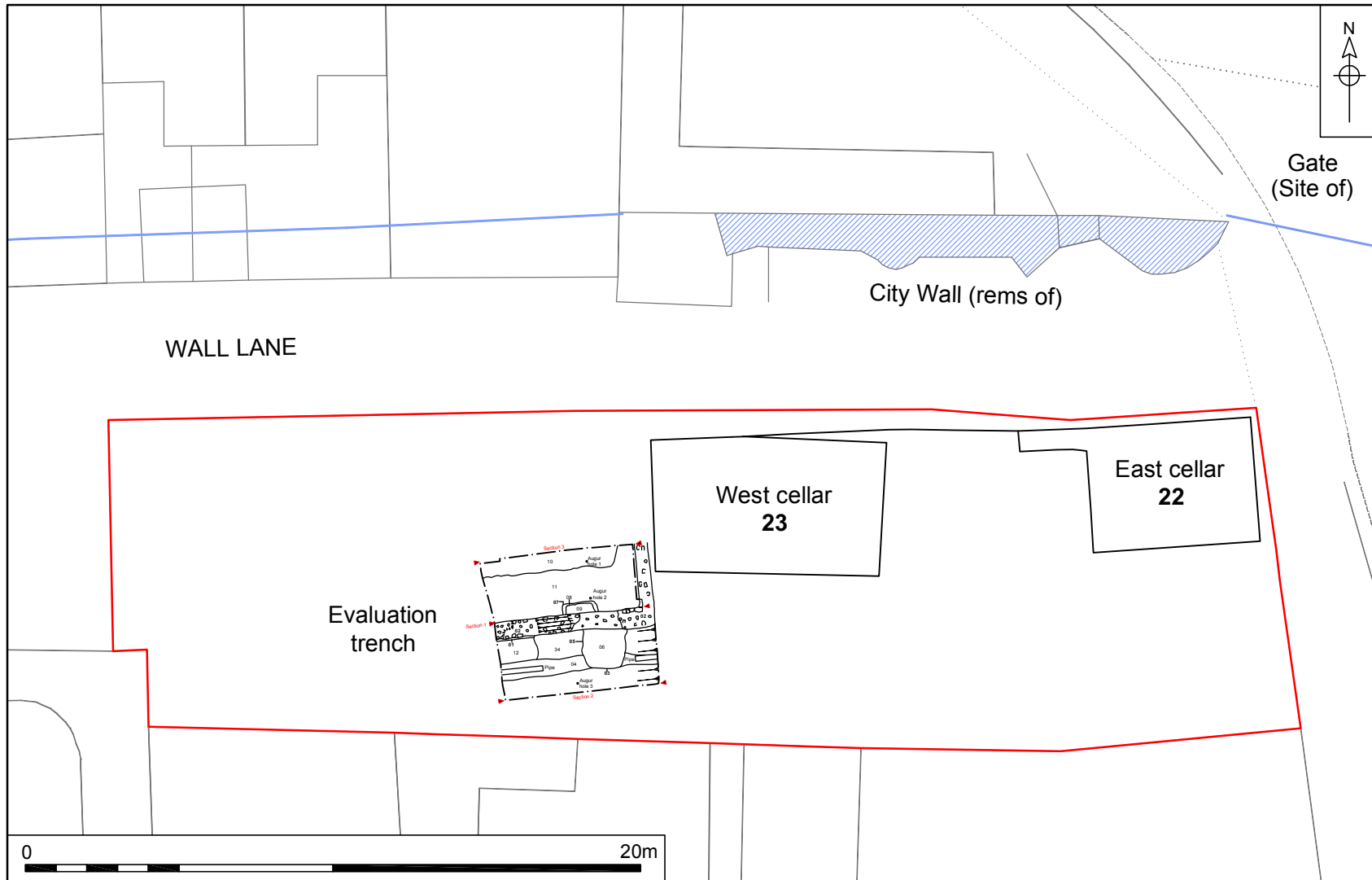
The earliest deposit (other than geological deposits) recorded by the evaluation was a layer or dump of material **12** recorded in plan. This consisted of mid-grey brown silt with lenses of dark grey silt containing pieces of lime mortar, flecks of red ceramic building material (cbm) and charcoal.

A wall and footing **02** aligned east–west cut deposit **12** and extended beyond the excavation limits to the west. The wall turned to the north at the east edge of the trench and was recorded in construction cut **01**. The two lengths of the wall appeared to form the corner of a building, the interior of which would have occupied the north half of the evaluation trench.



Plate 2. North-facing elevation of wall **02**

The wall measured between 0.55m and 0.60m wide and survived to a maximum height of at least 0.95m. The section aligned north–south was at least 2.70m long and the east–west element at least 5.20m long.



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Figure 2. Site plan. Scale 1:200

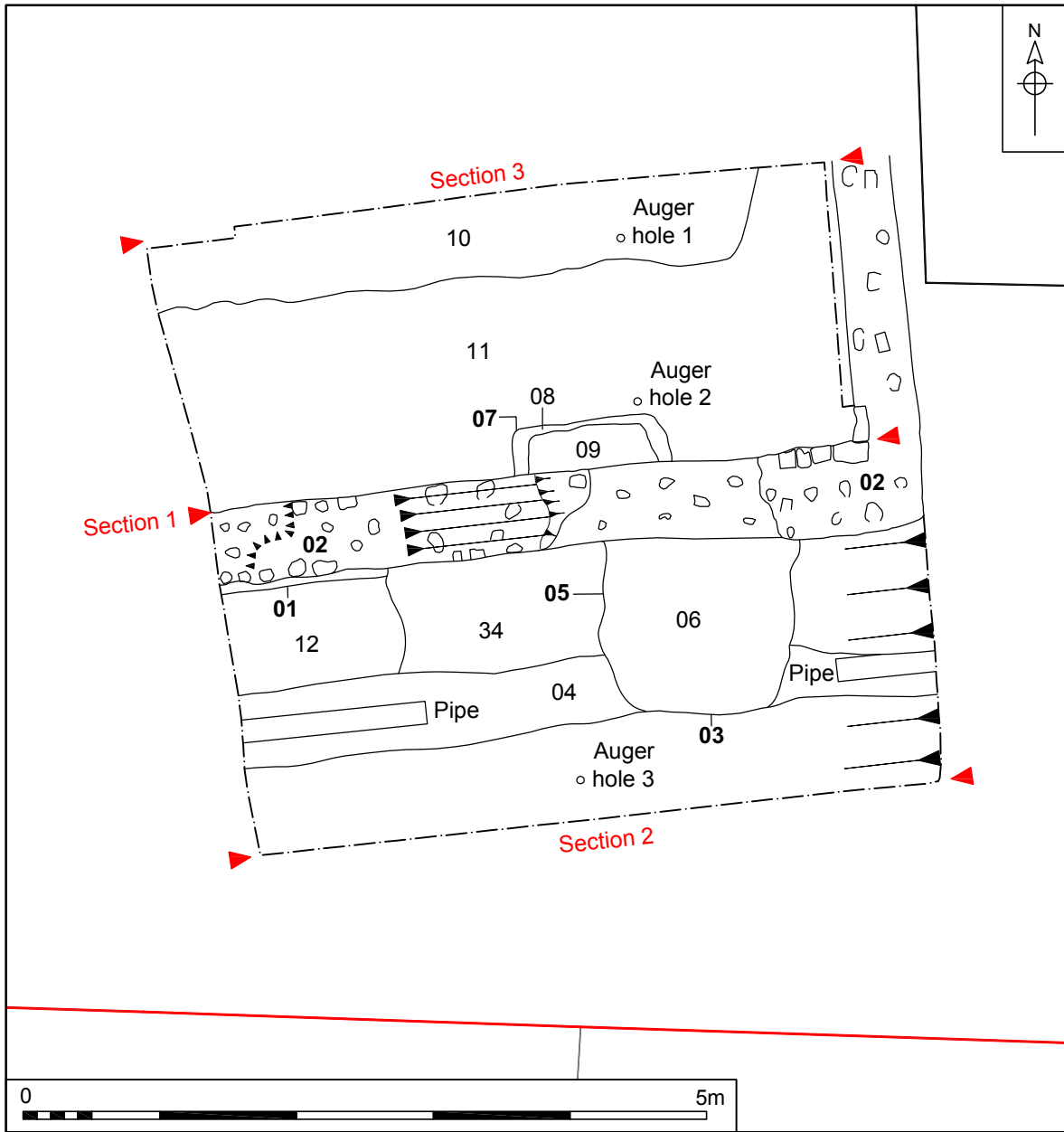
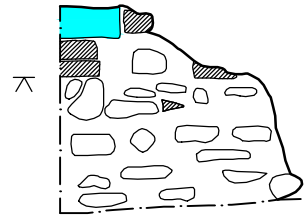



Figure 3. Plan of Evaluation Trench. Scale 1:50

Section 1



North facing

Key  Limestone  Brick

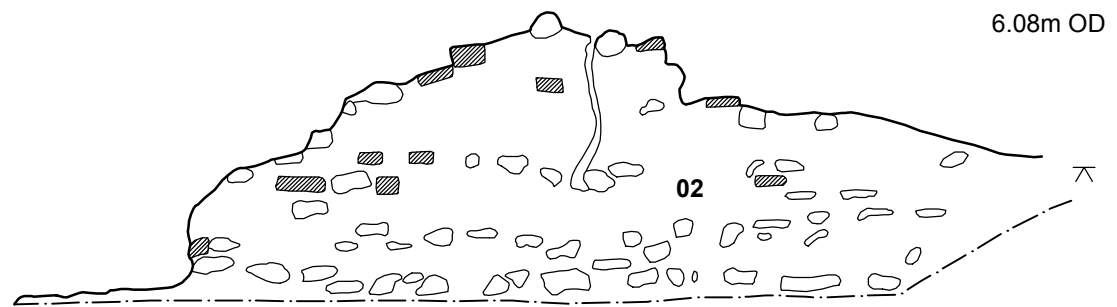


Figure 4. North facing elevation of wall **02**. Scale 1:25



Plate 3. Evaluation Trench looking southeast



Plate 4. South-facing section of Evaluation Trench

The wall and its foundation were constructed chiefly from undressed flint cobbles laid in rough courses bonded with a cream lime mortar. A relatively small number of whole and broken red bricks were also, randomly it appeared, incorporated into the build. A dressed stone block had been used in building the wall, positioned close to the southeast corner of the structure. This stone, of pale cream colour with a fine grained texture, was identified in the field as probably Caen stone.

The upper part of the north-facing wall elevation showed traces of a thin (5mm) lime and sand render coat, the lower level of which probably indicated the contemporary floor height. The lowest level of the rendering also coincided with a thickening of the lower part of the wall and the use of generally larger flints, probably signifying the transition from wall to foundation.

The bricks used in the construction of the wall and foundation are medieval in date, but given their sporadic use are likely to have been reused. The Caen-stone block is likely to be reused, perhaps *spolia* from a higher status medieval building.

A likely source for the stone is the nearby St Margaret in combusto, a medieval church recorded as redundant by 1468 and demolished in 1547 (see Section 3.0). During excavation of the graveyard in 1987 (HER 148/780) several pieces of dressed limestone from the original church were located in a cellar wall on the Magdalen St frontage. In view of this evidence, a mid-16th-century date would seem credible for the building remains located at 150–152 Magdalen St.

Following construction of the foundation and walls, a layer **11** (illustrated in plan) was laid down inside the building possibly as preparatory levelling for a floor or work surface. This material consisted of pale brown clay silt containing lenses of crushed chalk, charcoal flecks and flint pebbles. Two pottery sherds of 16th-century date were recovered from the deposit. Two pieces of animal bone and a fragment of medieval brick were also retrieved from deposit **11**. A small quantity of late post-medieval cbm and glass are thought to be intrusive artefacts introduced to the trench during the mechanical excavation. Hand augering indicated deposit **11** was 0.22m deep and directly overlay geological deposit **24**.

After the emplacement of **11**, a sub-rectangular, concave chalk pad **07** was bonded to the north-facing elevation of wall **02**. This feature measured 1.16m long x 0.36m wide. The saucer-shaped chalk element of the pad **08** was filled with pale brown sandy mortar **09**. The composite feature may have served as a base for steps from the inside of the building to a doorway to the southern exterior.

5.2 Period 2: Post-Medieval Dump Deposits

Figures 5, 6

The post-medieval building represented by wall **02** was evidently demolished at some point, and subsequently it appears that a sequence of dumps occurred internally and externally to the south of the structure. Because of the presence of wall **02** there was no stratigraphic link between deposits to its north and those to its south. The nature of the deposits in the building's interior in the north half of the trench varied. The earliest deposit in this sequence, **19**, consisted essentially of substantial soil dumps, whereas the dumped deposits above **19** (**18**, **21** and **16**) were of demolition rubble, degraded ash and fire waste, and coarse orange sand respectively.

In the south part of the trench, the dumped deposits outside the post-medieval building **02** also varied in composition. A mid-grey silt soil deposit **34** overlay **12** and was the earliest deposit recorded in the dump sequence here; it was present at the base of the trench and overlain by a series of layers of demolition waste, fire waste and other soils **27**, **28**, **29**, **30**, **31**, **43** and **44**. This latter group of dumped deposits may represent deliberate efforts to raise the ground level in the area, or perhaps simply provided a convenient location for waste disposal.

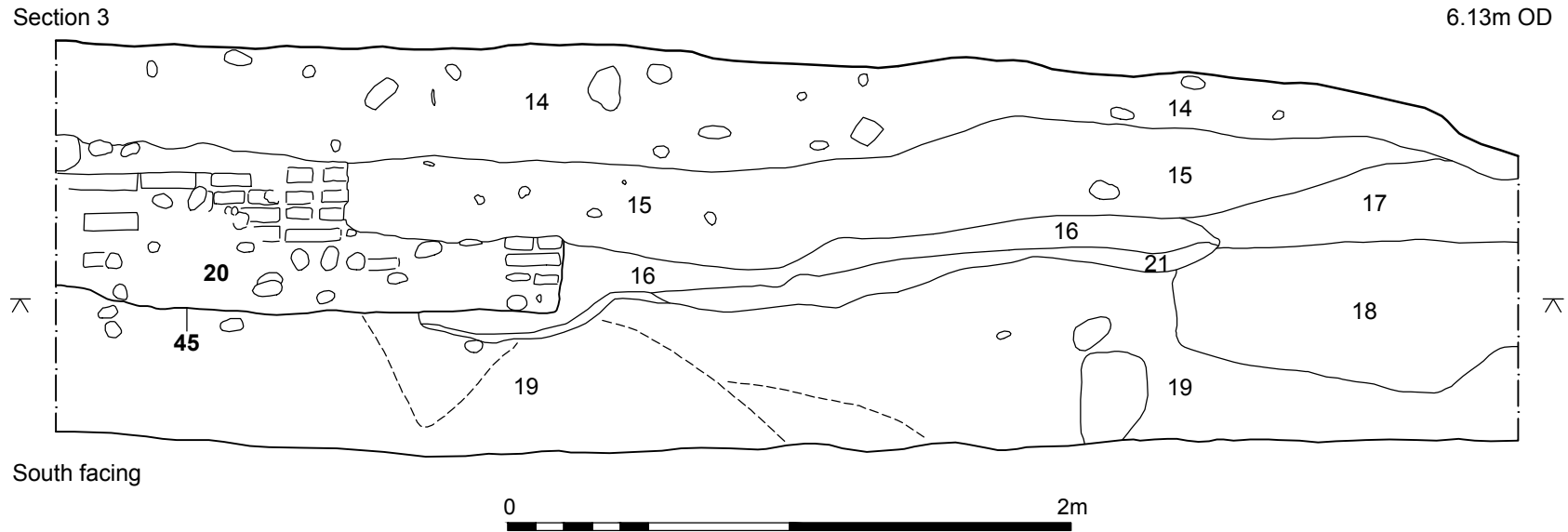


Figure 5. South facing section of Evaluation Trench. Scale 1:25

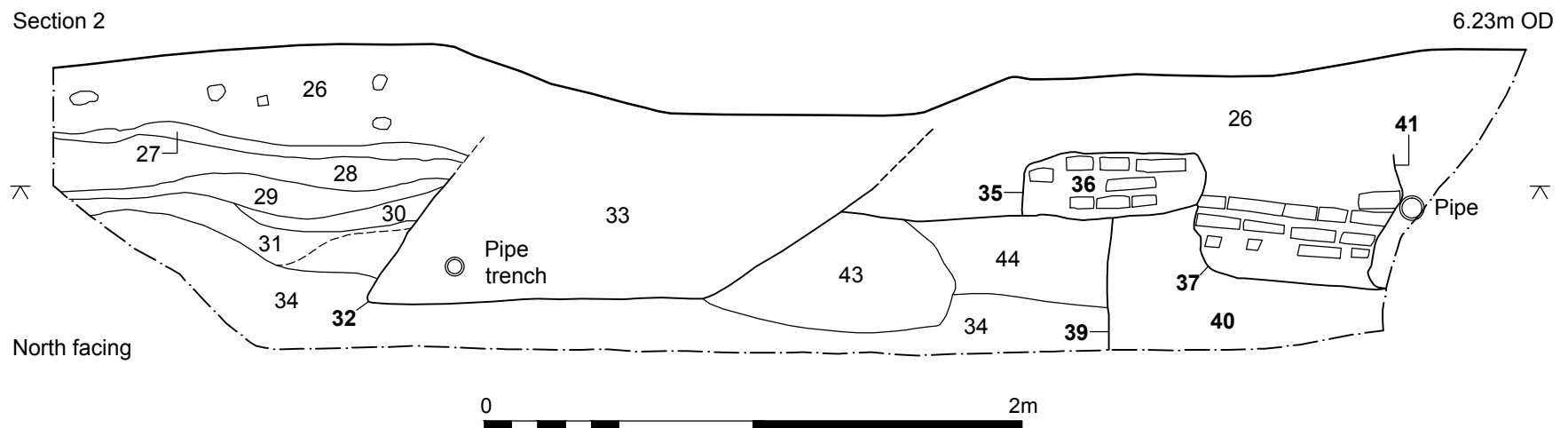


Figure 6. North facing section of Evaluation Trench. Scale 1:25

5.3 Period 3: Late Post-Medieval Structural Elements

Figures 5, 6

The remains of two demolished late post-medieval structures were recorded in the north- and south-facing sections of the evaluation trench. Probably the earlier of the two constructions was situated near to the southwest corner of the trench. The feature was aligned east–west and consisted of what was interpreted as a foundation **40** in a construction trench **39**, supporting a brick-built wall **36** in cut **35**.

Approximately 1.30m of the wall foundation **40** was visible, in which it was composed of randomly arranged flint cobbles and pieces of red brick bonded by a pinkish cream lime mortar. The foundation trench **39** cut post-medieval deposit **44**.

The wall **36** was constructed of pale orange-pink brick bonded by a hard, slightly bluish, off-white mortar, and extended beyond the west limit of excavation. The part of the wall observed appeared to form the base of a recess, probably a doorway. A tentative 18th–19th-century date has been assigned to the structure.

A construction **20**, of undressed flint cobbles and red brick bonded by coarse, off-white mortar with chalk inclusions, was recorded in a cut **45** in the side of the evaluation trench in its northwest corner. The brick, a dark orange-red, very sandy and hard-fired fabric, is probably Victorian in date. The construction, probably a wall, was visible for 1.80m, and may have extended beyond the excavation limits to the west. Stratigraphically, the structure cut post-medieval dumped deposit **16**.

Two large deposits of degraded mortar containing flints and cbm **15** and **17** were thought likely to be debris derived from demolition of the building represented by structural elements **20** and **45**.

5.4 Period 4: Modern Features

5.4.1 Drains

Three modern, or possibly 19th-century trenches containing ceramic pipes **03**, **32** and **41** were recorded in the south half of the trench. Drain **03** spanned the length of the trench from east–west, drain **32** was oriented northeast–southwest towards the east end of the trench, and north–south aligned drain **41** had been cut through wall **35** close to the west edge of the trench.

5.4.2 Dumped deposits

Material sealing the area of the evaluation trench was very loose and mixed, probably due to being heavily disturbed during the recent demolition of the furniture shop. The deposits **14** and **26** essentially consisted of demolition waste in a matrix of brown and grey sandy silts.

5.4.3 Pit/disturbance

A modern pit or possibly disturbance **05** truncated the southeast part of the evaluation trench down to its base. The feature measured c. 1.40m x 2.00m and was filled with mid-grey brown clay silt containing mortar, cbm and pieces of ceramic drain pipe. The position of the cut feature coincided approximately to where post-medieval wall **02** had at some point in time been destroyed. This coincidence raises the possibility that the wall had survived until very recently, perhaps up to the time of the demolition of the most recent buildings on the site.

5.5 Monitoring of Demolition Works

Plates 5, 6, 7, 8

Demolition of existing buildings revealed the presence of two large cellars on the site. The smallest of these **22** occupied the northeast corner of the site fronting onto both Magdalen St and Wall Lane. The rectangular-shaped structure measured 5.50m east–west x 4.00m north–south x c. 3.80m deep. Constructed in red brick, the cellar was accessed via steps in the northwest corner leading up to the west. This cellar had at some point been divided by an approximately central east–west wall; cavities in the brickwork indicated the positions of floor joists, showing that the cellar had once been over two levels.



Plate 5. Cellar **22** looking north



Plate 6. Cellar **22** looking southeast

The north wall of the cellar, facing Magdalen St, had white glazed tiles extending down from the pavement surface at a slight angle to approximately where the floor of the upper storey would have been. This presumably identifies the position of a hatch to receive goods into the cellar from the street, with the tiles helping smooth entry.

The largest cellar **23** was located adjacent to the north edge of the site 6.50m west of cellar **22**. This rectangular structure measured 7.50m east–west x 4.50m north–south and, to judge from cavities in the brickwork indicating floor joist positions, would have been approximately 1.60m deep. The cellar walls were constructed of red bricks with a rendered face and it was floored with green and yellow quarry tiles arranged in a chequerboard pattern.



Plate 7. Cellar **23** looking east

An area of c. 5.00m x 1.00m of the upper brickwork of the north cellar wall had fallen away during the demolition works, revealing an earlier wall **25** against which it had been built. The earlier wall was built of undressed flint cobbles interspersed with red brick bonded by an off-white lime mortar. The feature was more neatly constructed than the post-medieval wall **02** and may represent the north wall of an earlier cellar.



Plate 8. South-facing elevation of wall 25

6.0 THE ARTEFACTUAL MATERIAL

By Rebecca Sillwood

All finds were processed and recorded by count and weight, and a Microsoft Excel spreadsheet was produced outlining broad dating. Each category was considered separately and is included below organised by material. A full list of all finds by context can be found in Appendix 2a.

6.1 Pottery

Two pieces of pottery (15g) were recovered from the site, both from layer **11**.

The first piece is a rim sherd from a late medieval/transitional ware vessel (11g) in light grey fabric with orange margins, and glazed externally and patchy internally with speckled copper green glaze. This may very likely be part of a rim from a pipkin, as the piece shows similarities with those illustrated in Jennings (1981, 65, fig. 25, no. 433). This transitional ware dates from the mid-15th through to the later 16th century.

The second piece is a body sherd (4g) of glazed red earthenware, in hard orange fabric with orange glaze internally and heavily sooted externally. Nothing can be said about the type of vessel this may be from as it is too small and has no diagnostic features. This ware was present in Norwich from the 16th century through to the 18th century.

Both pieces of pottery were common types of tableware in Norwich, and span the period from the 15th to the 18th century. Their date ranges coincide in the 16th century, and context dependent this could intimate a date for deposit **11**.

6.2 Ceramic Building Material

Seven items of cbm (7,078g) were recovered from four contexts, including two complete bricks, four fragments and one roof tile fragment. Two brick fragments are medieval, whilst the rest of the assemblage is of post-medieval date.

The two medieval brick pieces are from wall **02** and layer **11**, and consist of one comparatively large piece (1,232g), with mortar covering at least two surfaces, and a smaller more abraded fragment (83g). Both pieces are pale beige in colour, with poorly mixed estuarine sands in the fabric. The larger piece has a grey reduced core. Both are vegetable tempered. The mortar on the larger piece is white with some larger chalk and flint inclusions. No dimensions are measureable on either piece, and the smaller fragment has no definite surfaces.

Two complete post-medieval bricks were also recovered from structures **20** and **36**. The brick from **20** measures 235 x 119 x 53mm. The brick from **36** measures 220 x 112 x 60mm. The earlier of the two bricks (from **36**) is smaller and thicker. It is pale orange-pink in colour, and is more roughly made than the other example. Off-white mortar covers 75% of the brick surfaces. One of the short ends is covered in thin grey render. The larger, thinner brick is dark orange-red, very sandy and hard-fired, and is probably a good Victorian red brick. Some mortar is also present on this piece, which is off-white and coarse with chalk inclusions. Two smaller pieces of red brick were also recovered from layer **11**.

A single small piece of plain roof tile (40g) was collected from layer **11**.

6.3 Stone

A splinter of Caen stone was recovered from wall **02**. The piece has two finished surfaces, where tooling is visible, but much of the piece is rough and is clearly broken from a larger block. The fragment is probably medieval.

6.4 Glass

The base and a small amount of the body of a post-medieval bottle was recovered from layer **11**. The bottle is pale aqua-green and has the embossed letters '[B]ARNSLEY REDF' around the base, probably for the Redfearns glass factory in Barnsley. The base is also embossed with letters, probably a 'B' and two further letters although they are rather worn and cannot be readily deciphered. The piece probably dates to the later 19th century, possibly into the 20th century.

6.5 Animal Bone

Two fragments of animal bone were recovered from layer **11**. The pieces are likely to be cattle limb bone fragments.

6.6 Finds Conclusions

The finds from 150–152 Magdalen St consist of material from the medieval and post-medieval periods. The only probable medieval context on the site is wall **02**, in which the brick fragment and worked Caen stone were both found.

The other contexts contain mixed later medieval and post-medieval material, with the earliest pottery and brick fragments found in associated with later material, and therefore they are probably residual items.

The cbm shows little other than the presence of buildings in the area from the medieval period through to the 18th–19th centuries.

7.0 CONCLUSIONS

The evaluation recorded geological deposits **24** at a depth of c. 5.35m OD, corresponding to broadly c. 1.50m below the current post-demolition ground level in the area of the evaluation trench. An early archaeological deposit at the site, represented by layer **11**, lay at 5.35m OD–5.57m OD. The values presented here are based on the results of hand augering.

The key archaeological findings of the site relate to masonry structures revealed in the evaluation trench, in particular an east-west aligned wall **02**. Dating this wall has proved problematic, with limited artefact evidence to support a date, combined with its partial survival and non-diagnostic construction. At earliest it is considered to be pre-industrial (Ken Hamilton *pers comm*). This building incorporated reused stone, with one possible source for this suggested to be the church of St Margaret (NHER 566) located approximately 75m to the south of the site, documented as disused from 1468 onwards. A further source for building materials would have been the adjacent city wall. The building, of which **02** probably forms a southern element, had a return at its east end, perhaps having previously defined the western limit for construction of cellar **23**.

It is possible that more of wall **02** survives, perhaps in similarly reduced form, to the west of the evaluation trench. The building represented by **02** appears to be a relatively substantial structure, with the capability to have supported a two-storey structure. No indication of a possible function for this building was suggested by the archaeological record.

Based on what is understood of the deposit sequence at the site, the construction of two large cellars **22** and **23** (of 19th century date?) will have removed any archaeological remains to the depth of geological deposits at their locations.

Cartographic evidence indicates that the evaluated land plot at 150–152 Magdalen Street has been occupied from at least 1696. Given the location of the plot as the first immediately inside a gate of the medieval city wall, it would seem plausible the site was occupied earlier than this.

Maps of the area also indicate Wall Lane (or its predecessor) has been maintained as a route way since 1696. It is claimed that an internal circuit was kept clear for access in the Middle Ages (see Section 3.0), and it seems therefore plausible that the open space may have been maintained for several hundred years.

Recommendations for mitigation work (if required based on the evidence presented in this report) will be made by Norfolk Historic Environment Service.

Acknowledgements

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The project was managed on behalf of NPS Archaeology by David Adams.

Ken Hamilton monitored the project on behalf of NHES. Anj Beckham of NHES supplied the HER data.

The finds were processed by Louise Weetman and recorded and reported on by Rebecca Sillwood.

This report was illustrated by David Dobson and edited by Andrew Crowson.

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Appendix 1a: Context Summary

Context	Category	Cut Type	Fill Of	Description	Period
1	Cut	Construction		Construction cut for wall [02]	Post-medieval
2	Masonry	Wall	1	Flint and mortar wall with brick	Post-medieval
3	Cut	Service trench		Service trench	Modern
4	Deposit		3	Fill of service trench	Modern
5	Cut	Modern disturbance?		Modern disturbance?	Modern
6	Deposit		5	Fill of modern disturbance	Modern
7	Cut	Construction		Base for step?	Post-medieval
8	Deposit		7	Chalk pad	Post-medieval
9	Deposit		7	Mortar associated with [07]	Post-medieval
10	Deposit			Mortar rich dump	Post-medieval
11	Deposit			Clay silt layer	Post-medieval
12	Deposit			Mixed dump	Post-medieval
13				VOID	
14	Deposit			Demolition waste make-up	Modern
15	Deposit			Layer of demolition waste	Late Post-medieval
16	Deposit			Sand levelling layer	Post-medieval
17	Deposit			Mortar rich demolition waste	Late Post-medieval
18	Deposit			Demolition waste make-up layer	Post-medieval
19	Deposit			Clay silt layer	Post-medieval
20	Masonry		45	Red brick and flint structural element	Late Post-medieval
21	Deposit			Dump of waste material	Post-medieval
22	Masonry			Cellar	Post-medieval
23	Masonry			Cellar	Post-medieval
24	Deposit			Natural deposit of brown clay silt	
25	Masonry			Wall adjacent to western cellar	Unknown
26	Deposit			Surface soil and demolition rubble	Modern

Context	Category	Cut Type	Fill Of	Description	Period
27	Deposit			Dump of demolition rubble	Post-medieval
28	Deposit			Dump of demolition rubble and soil	Post-medieval
29	Deposit			Dump of cinders	Post-medieval
30	Deposit			Silty make-up layer	Post-medieval
31	Deposit			Dump of demolition rubble and soil	Post-medieval
32	Cut	Service trench		Service trench	Modern
33	Deposit		32	Backfill of service trench	Modern
34	Deposit			Clay silt make-up layer	Post-medieval
35	Cut	Construction		Construction cut for red brick structure	Late Post-medieval
36	Masonry		35	Red brick structure	Late Post-medieval
37				VOID	
38				VOID	
39	Cut	Construction		Construction cut for structural element	Late Post-medieval
40	Masonry		39	Flint and mortar structural element with brick	Late Post-medieval
41	Cut	Service trench		Service trench	Modern
42	Deposit		41	Backfill of service trench	Modern
43	Cut	Service trench		Service trench	Post-medieval
44	Deposit		43	Backfill of service trench	Post-medieval
45	Cut	Construction		Construction cut for red brick structure	Late Post-medieval

Appendix 1b: OASIS Feature Summary

Period	Category	Total
Post-Medieval	Wall	1
	Chalk pad	1
Late Post-Medieval	Wall	2
	Cellar	2
Modern	Drain	3

Appendix 2a: Finds by Context

Context	Material	Qty	Wt	Period	Notes
2	Ceramic Building Material	1	1,232g	Medieval	Brick fragment
2	Stone	1	848g	Medieval	Caen stone
11	Animal Bone	2	123g	Unknown	
11	Ceramic Building Material	1	83g	Medieval	Brick fragment
11	Ceramic Building Material	2	63g	Post-medieval	Brick fragments
11	Ceramic Building Material	1	40g	Post-medieval	Roof tile fragment
11	Glass	1	94g	Post-medieval	Bottle fragment
11	Pottery	1	4g	Post-medieval	GRE
11	Pottery	1	11g	Med./Post-Med.	LMT
20	Ceramic Building Material	1	3,110g	Post-medieval	Complete brick
36	Ceramic Building Material	1	2,550g	Post-medieval	Complete brick

Appendix 2b: OASIS Finds Summary

Period	Material	Total
Medieval	Ceramic Building Material	2
	Stone	1
Med./Post-Med.	Pottery	1
Post-medieval	Ceramic Building Material	5
	Glass	1
	Pottery	1
Unknown	Animal Bone	2

Appendix 3: OASIS Summary Report

OASIS DATA COLLECTION FORM: England

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OASIS ID: norfolka1-201837

Project details

Project name	150-152 Magdalen Street, Norwich, Norfolk
Short description of the project	In January 2015 NPS Archaeology carried out an archaeological trial trench evaluation and archaeological monitoring of demolition works ahead of redevelopment at 150-152 Magdalen St, Norwich. The work was conducted on behalf of and funded by the client, Mr Oliver Tookman. The plot is located on the inside of the medieval city wall, a scheduled monument. One evaluation trench c. 4.0m x 4.0m in area was excavated at the rear of the plot from the Magdalen Street frontage. Two walls belonging to a probable early post-medieval building were identified in the trench. Structural elements probably associated with two late post-medieval buildings were also recorded, along with dumped deposits deriving from both demolition events and domestic waste disposal. Two large post-medieval cellars were revealed during archaeological monitoring at the site; at least one the cellars may have remodelled an earlier structure.
Project dates	Start: 12-01-2015 End: 14-01-2015
Previous/future work	Not known / Not known
Any associated project reference codes	135762 - HER event no.
Type of project	Recording project
Site status	None
Current Land use	Industry and Commerce 3 - Retailing
Monument type	DRAIN Modern
Monument type	WALL Post Medieval
Monument type	CELLAR Post Medieval
Significant Finds	POT Post Medieval
Significant Finds	GLASS Post Medieval
Significant Finds	CBM Post Medieval
Significant Finds	CBM Medieval
Significant Finds	ANIMAL BONE Uncertain
Significant Finds	STONE Medieval
Investigation type	""Part Excavation"", ""Watching Brief""

Prompt National Planning Policy Framework - NPPF

Project location

Country England
 Site location NORFOLK NORWICH NORWICH 150-152 Magdalen Street, Norwich
 Study area 0.05 Hectares
 Site coordinates TG 2313 0964 52.6380498552 1.29812339924 52 38 16 N 001 17 53 E Point
 Height OD / Depth Min: 7.00m Max: 7.00m

Project creators

Name of Organisation NPS Archaeology
 Project brief originator Norfolk Historic Environment Service
 Project design originator NPS Archaeology
 Project director/manager Michael J Boyle
 Project supervisor NPS Archaeology

Project archives

Physical Archive recipient Norfolk Museums Service
 Physical Contents "Animal Bones","Ceramics","Glass","Worked stone/lithics"
 Digital Archive recipient NPS Archaeology
 Digital Contents "other"
 Digital Media available "Images raster / digital photography","Images vector","Spreadsheets","Text"
 Paper Archive recipient Norfolk Museums Service
 Paper Contents "other"
 Paper Media available "Context sheet","Plan","Report","Section"

Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)
 Title Archaeological Trial Trench Evaluation and Archaeological Monitoring at 150-152 Magdalen St, Norwich, Norfolk
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