

**‘CASTLEGATE’  
23-27 HIGH STREET  
BEDFORD**

**ASSESSMENT OF POTENTIAL AND UPDATED  
PROJECT DESIGN**

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*The figures are bound at the back of the report.*



## Preface

Every effort has been made in the preparation of this document to provide as complete an assessment as possible, within the terms of the brief and project design. All statements and opinions in this document are offered in good faith. Albion Archaeology cannot accept responsibility for errors of fact or opinion resulting from data supplied by a third party, or for any loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in this document.

## Acknowledgements

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The watching brief on groundworks was undertaken by Matt Smith (Archaeological Supervisor), Christiane Meckseper and Jeremy Oetgen. Recording of no. 27 High Street was completed by Ian Turner (Archaeological Supervisor). Excavation of the car stackers was supervised by Christiane Meckseper with investigation and recording carried out by the following staff: Dave Ingham (Project Officer), Ian Beswick, Joanne Archer and Ian Turner (Archaeological Supervisors), Anthony Clifton-Jones, Liz Davis, Adam Williams (Assistant Supervisors), Siân Ellis, Mick Garside, Phil Henderson and Kathy Pilkinton (Archaeological Technicians). Processing of the ecofact samples was undertaken by Sharon Gerber-Parfitt (Archaeological Technician). Drew Shotliff (Operations Manager) was responsible for monitoring and quality control.

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### **Structure of the report**

Following the introduction (Section 1), Section 2 presents the original research objectives of the project. Section 3 provides a provisional summary of the results of the fieldwork. In the subsequent section, the various types of evidence (data) are discussed individually (Section 4). The potential of the data to address the original research objectives is discussed in Section 5. Section 6 describes the research objectives for analysis, with the means of achieving them set out in the updated project design (Section 7). Section 8 represents a bibliography. Three appendices detail the method statements and resourcing for the completion of the analysis, publication and archiving.

### **Key terms**

<i>Albion</i>	Albion Archaeology
<i>BCC's AO</i>	Bedfordshire County Council's Archaeological Officer
<i>BLARS</i>	Bedfordshire & Luton Archives and Records Service
<i>Client</i>	Barrow Ltd.
<i>HER</i>	Historic Environment Record
<i>IFA</i>	Institute of Field Archaeologists
<i>Procedures Manual</i>	<i>Procedures Manual Volume 1 Fieldwork</i> , 2 <sup>nd</sup> Edition, 2001. Albion Archaeology



## **Non-Technical Summary**

*Planning permission has been granted by Bedford Borough Council for the conversion of an existing building at 23–27 High Street, Bedford, into residential flats and commercial units. This work involves some demolition of existing structures and the building of new structures and car parking (planning permission 05/1383/FUL).*

*Condition no.20, attached to the permission, required the implementation of a programme of archaeological work. Albion Archaeology has been commissioned by Barrow Ltd to undertake the archaeological work required to discharge this condition. In addition to this, Albion Archaeology has also recorded parts of a listed building within the development, at 27 High Street.*

*Archaeological investigations, consisting of the excavation of the foundations for four car stacking lifts, were undertaken in the summer of 2006. A watching brief on any ground disturbance and exposure of internal structural features during the building conversion had begun in October 2005 and continued throughout 2006. Building recording at 27 High Street was undertaken in March 2006.*

*This document presents an assessment of the results of the archaeological investigations which have taken place in the development area. The excavations uncovered remains within the outer bailey of Bedford Castle. The castle once occupied c. 3.5 hectares of land, between High Street and Newnham Road.*

*In terms of the periods represented by the features, the most significant findings were early medieval occupational and industrial activity associated with the outer castle bailey and possible remains of the castle rampart. A middle Saxon boundary ditch, pre-dating the main outer bailey defences, was also uncovered. The ditch could provide evidence for the development of this area before the building of Bedford Castle. The excavations also included the remains of cellars of post-medieval buildings along the northern edge of Castle Lane.*

*The recording undertaken during the building conversion revealed that traces of post-medieval or possibly medieval structures still survive within the fabric of the existing buildings.*

*The data recovered from the investigations has the potential to address a number of local, national and regional research agendas. Therefore, in order to enable discharge of the planning condition, the project must deliver publication of the results in the county-based archaeological journal and the deposition of the project archive with Bedford Museum. The methodologies and resources required to complete the project are detailed in this document.*



## 1. INTRODUCTION

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### 1.1 *Planning Background*

Planning permission was granted by Bedford Borough Council for the conversion of an existing building at 23-27 High Street, Bedford, into residential flats and commercial units. The work involved some demolition of existing structures and the building of new structures, including car parking installations (planning permission 05/1383/FUL).

Condition no.20, attached to the permission, required the implementation of a programme of archaeological work.

The Archaeological Officer (AO) of Bedfordshire County Council issued a Brief (BCC 2005a) for a three-stage programme of archaeological investigation, consisting of:

- archaeological field evaluation
- appraisal of the results of the evaluation and formulation of an appropriate mitigation strategy
- implementation of an agreed programme of investigation and recording in accordance with the mitigation strategy.

The AO issued a further Brief (BCC 2005b) specifying the requirements of an archaeological field evaluation of the car parking installations (car stackers) to be undertaken concurrently with a programme of continuous observation of ground reduction and piling operations.

Albion Archaeology was commissioned by Barrow Ltd. to undertake the archaeological work required to discharge the condition. As certain construction works were already underway, an archaeological watching brief was carried out on groundworks in accordance with an interim method statement, which was approved by the AO on 17<sup>th</sup> October 2005. A full project design was subsequently prepared Albion Archaeology (2006a) to cover monitoring and recording of further groundworks and for trial excavation of the car stacker locations. This was approved by the AO on 3<sup>rd</sup> May 2006.

Trial excavation of Car Stacker 1 was undertaken on 8<sup>th</sup>–12<sup>th</sup> May 2006. It was demonstrated that archaeological deposits of medieval date survived *c.* 0.75m below the present ground level. A sondage through these deposits suggested that undisturbed natural strata lay more than 1.2m below the surface. The archaeological deposits were potentially of national importance (because of their locations within the area once occupied by the outer bailey of Bedford Castle) and certainly of regional importance (due to their location within the important medieval town of Bedford).

At the site monitoring meeting, the AO agreed that evaluation of Car Stackers 3–4 would not be appropriate, as it would compromise the integrity of the remains for subsequent investigation. Furthermore, due to the depth of excavation required and the need to support the standing buildings, it was agreed that a narrow machine-dug trench could be excavated at the perimeter of each stacker, to enable installation of





steel shuttering. This would enable hand excavation and recording of the largest possible area within the footprint of each car stacker base. The agreed methodology and programme of works was set out in writing in a supplementary method statement (Albion Archaeology 2006b).

The development site also contains a listed building, located at no. 27 High Street. Parts of the original timber frame of this building were temporarily exposed during the development and Bedford Borough Council's Conservation Officer required these structures to be recorded. Albion Archaeology undertook this work on behalf of the Client. Although initiated under listed building consent procedures, this record will contribute to our knowledge of the historical development of the site and it is, therefore, appropriate to include it in the analysis stage of the programme of archaeological works.

## 1.2 **Site Location**

The site is located on the north side of the River Great Ouse within the historic core of Bedford. Its boundaries are formed by High Street to the west, Castle Lane to the south, existing buildings fronting the High Street to the north and open car parking to the east (Figure 1). It comprises an area of *c.* 0.16 hectares and is centred on Grid Reference TL 510663 4970702.

The site consists of fairly level ground and is situated at an average height of 26m OD. At the time of the fieldwork, it contained existing buildings to the west and an open, tarmac-covered car parking area to the east. The underlying geology is formed by river-borne alluvium and gravels overlying Oxford clay and cornbrash limestone.

## 1.3 **Archaeological Background**

The archaeological and historical background of the area has been summarised comprehensively as part of the Extensive Urban Survey (Albion Archaeology 2002) undertaken for English Heritage and Bedfordshire County Council. This indicates that, within Bedford, there is a high potential for recovery of archaeological remains dating from the Saxon, medieval and post-medieval periods. Prehistoric and Roman remains are also possible, but relatively few finds of these periods have been made so far within the town centre.

The site lies within the bounds of the northern *burh* of Saxon Bedford. The first definite reference to Bedford occurs in the treaty drawn up by Alfred and Guthrum in AD878, which places Bedford on the frontier between Wessex and Danelaw and it is most likely that Bedford originated as an 8<sup>th</sup>-century, Mercian frontier town. The settlement on the north bank of the River Great Ouse had already acquired the status of *burh* (borough) by AD915, when King Edward the Elder established a second *burh* south of the river. The existence of at least five mints shows that the town became an important trading centre in the 10<sup>th</sup> and 11<sup>th</sup> century.

Some time after the Norman Conquest, probably during the reign of William II (1087–1100), a motte and bailey castle was established overlooking the town's river crossing. The remains of the castle, which is estimated to have covered a total area of *c.* 3.5ha (see Figure 1), are potentially of national importance and the motte (Castle Mound) is a scheduled ancient monument (SAM 20412). Apart from the mound,



which survives as an earthwork up to 7m high, and a small earthwork to the north of the mound (a possible remnant of outer rampart on the north-eastern corner), there are no visible remains of the castle.

Previous archaeological investigations at the rear of 29–41 High Street, to the north of the development area, recorded the line of the western defences of the outer bailey of Bedford Castle, including the possible location of the outer bailey ditch (Steadman 1999). The investigation also uncovered several areas of late Saxon activity in the form of pits, ditches and timber structures sealed beneath the rampart and truncated by the outer bailey ditch.

Excavations to the east of the site, in 1969-73, revealed numerous Saxon features, including two hall-like structures (Baker *et al* 1979). The inner bailey ditch, parts of the castle motte as well as a range of Norman buildings were uncovered in the same excavations to the south-east of the development site. A medieval lime kiln was discovered on land to the north-east of the site. This kiln was a relatively sophisticated example, and it is also recognised as a scheduled ancient monument of national importance (SAM 24259).

The castle was besieged and captured by forces of King Henry III in 1224. After its capture, the castle walls were demolished and its ditches and moats filled in with rubble. Much of the interior of the castle remained undeveloped for hundreds of years and excavations in the castle area revealed layers of ‘dark earth’ – an accumulation of cultivated soil dating to the post-Norman period.

Despite the fact that so little of the castle apparently survives, its construction was a major feat of engineering, involving excavation of many tonnes of earth and bedrock to create defensive ditches that were c.10m wide and c. 4m deep. The spoil will have been used to create equally massive earthen ramparts. At first the ramparts will have been supported by timber revetments, but later stone was used. Even after the deliberate demolition of the castle, there must have remained substantial earthworks that will have influenced the subsequent development of the townscape.

After the demolition of the castle, houses began to be built along the eastern side of the High Street. Tenement boundaries (or ‘Burgage’ plots) visible on maps probably have their origin in the 13<sup>th</sup> century. However, it was not until the post-medieval period that the area of the former interior of the castle, now known as Castle Lane, eventually became infilled with buildings, yards, workshops and small lanes and alleys. Historical maps show that, by the 19<sup>th</sup> century, the area was densely occupied, and this situation persisted until the extensive demolition of the 1960s created the open spaces and car parking areas still on the site today.

Archaeological evidence for the development of the Saxon and medieval town, outside the castle walls, is provided by two excavations located in St Paul’s square, to the west of the development site.

Excavations carried out in 1997, on the north side of St. Paul’s square, uncovered parts of a cemetery of possible Saxon date. Some of the graves were cut by pits containing domestic refuse dating from the Saxo-Norman period. These were sealed



by a thick layer of garden soil, itself cut by medieval pits.

In 1986, excavations in the High Street side of St Paul's Square (opposite the present development) revealed evidence of timber structures associated with iron working, pits, a well, road and courtyard surfaces, burials, and a 13<sup>th</sup>-century stone cellar. The investigations also uncovered remains of late medieval buildings thought to be part of a 'shambles' and 'Fish Row' (abattoirs and fish-mongers premises).

#### **1.4 Nature of the Development at 23–27 High Street**

In summary, the development comprised:

- alteration and renovation of the existing buildings, including an early post-medieval timber frame building located at 27 High Street;
- underpinning of the existing structures, where necessary, and insertion of a network of new load-bearing piles;
- adjustment of ground floor levels to improve access;
- installation of services;
- Construction of foundation pits for four car-staking lifts ('car stackers') each measuring c. 8m by 6m in area.

#### **1.5 Nature of the Archaeological Investigations at 23–27 High Street**

As a response to the above, the archaeological investigations consisted of:

- full excavation of the areas of the four car stacker pits, situated inside the building and within its curtilage (Figure 2).
- a watching brief on any ground disturbance and exposure of internal structural features during the building conversion (Figure 3).
- recording of the exposed timber frame within no. 27 High Street (Figure 3) to English Heritage 'Level 2' standard (English Heritage 2006).

The results complement previous archaeological investigations in this area, particularly Steadman (1999) and Baker *et al* (1979).

#### **1.6 Purpose of this Report**

This report presents an assessment of the results of all stages of the archaeological investigations. An updated project design is included, listing all tasks that will be required to analyse, publish and archive the results of the fieldwork. The completion of these tasks will fulfil the criteria stipulated in the BCC AO's brief (BCC 2005b). This will allow the discharge of the archaeological planning condition by Bedford Borough Council.



## 2. ORIGINAL AIMS AND OBJECTIVES OF THE INVESTIGATION

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### 2.1 Introduction

A series of research aims were established in the briefs (BCC 2005a, BCC 2005b) and project design (Albion Archaeology 2006a). These were necessary to ensure that the investigations were appropriately targeted in accordance with local, regional and national research priorities.

### 2.2 National and Regional Research Frameworks

Broad national research priorities have been formalised by English Heritage in *Exploring our Past* (1991), updated in their draft Research Agenda (1997). Research frameworks for Bedfordshire are currently in preparation (Oake, *in prep.*). Up-to-date research agenda, specific to Bedford, are provided by the Extensive Urban Survey (EUS) (Albion Archaeology 2002).

The archaeological resources of the neighbouring East Anglian region have also been assessed (Glazebrook 1997) and a regional agenda and strategy produced (Brown and Glazebrook 2000). This study covers the adjacent counties of Cambridgeshire and Hertfordshire, rather than specifically Bedfordshire. Nevertheless, topographical and historical similarities (at a regional level) between these counties make the document a useful tool for assessing the significance of the archaeological remains within the development area.

A number of research objectives, both generic and for the Saxon, medieval and post-medieval periods, were considered relevant to the work at 23-27 High Street, Bedford. They are set out below.

### 2.3 Original Objectives

Because of the nature of the development, i.e. the renovation of existing buildings, comprehensive archaeological evaluation of the site was not practicable. However, the evidence from previous investigations on adjacent land demonstrated that the site was archaeologically sensitive and that any surviving archaeological deposits would be likely to include remains of Saxon, medieval and post-medieval date. The following objectives were therefore identified:

- i. Establish the date, nature and extent of activity or occupation in the development site;
- ii. Establish the relationship of any remains found to the surrounding contemporary landscapes;
- iii. Recover artefacts to assist in the development of type series within the region;
- iv. Recover palaeo-environmental remains to determine local environmental conditions.
- v. Record evidence of Saxon, medieval and post-medieval occupation on the site and/or evidence for the castle boundary ditch and castle bailey.
- vi. Interpret any findings in relation to Bedford's documented history, archaeology and historical topography.



### 3. PROVISIONAL SUMMARY OF RESULTS

#### 3.1 Introduction

The investigation recovered information relating to four periods or ‘phases’ of occupation:

Phase	Chronological Period	Activity Type
0	Roman (AD43–AD410)	Residual artefacts.
1	Middle Saxon (AD650–AD850)	Ditch.
2	Late Saxon/Saxo-Norman (AD850–AD1150)	Settlement and industrial activity. Possible remains of castle rampart.
3	Early medieval (AD1150–AD1250)	Settlement and industrial activity.
4	Post-medieval (AD1500–AD1750) to modern (AD1750 onwards)	Activity associated with buildings along Castle Lane and High Street.

**Table 1: Summary of provisional phasing**

Within Phase 2, it is difficult at this stage to distinguish between medieval features predating the castle, those associated with the construction, occupation and demise of the castle, and those post-dating its demolition.

#### 3.2 Phase 0: Roman

##### 3.2.1 Artefacts

Two ‘residual’ fragments of Roman terracotta tile were recovered from the middle Saxon ditch (see below and Section 4.4.3). The Romans used tile as a building material – it was used as a roof covering and in floor and wall construction. It was usually used on higher-status structures such as villas, bath houses and civic buildings. The finds from 23–27 High Street are therefore very significant, because they indicate that a substantial Roman building might have lain in the vicinity of the site, even though no Roman features were found. Residual Roman finds have been found in other excavations in Bedford, notably those carried out between 1969 and 1973 at Castle Lane (Baker *et al* 1979, p.20).

#### 3.3 Phase 1: Middle Saxon (Figure 4)

##### 3.3.1 Boundaries

The earliest archaeological feature consisted of a large ditch in Car Stacker 3. The ditch was exposed for a length of 6.8m and was situated parallel to the projected north-south alignment of the castle’s outer bailey ditch (see Section 3.4.1).

Several episodes of backfilling were evident. One phase of backfilling consisted of substantial dumping of burnt, refuse material mixed with possible remains of burnt wattle and daub building components.



The ditch adds significantly to the body of evidence we have for the lay-out of the northern *burh* of Bedford. Potentially, it might provide evidence of a very early boundary or even a defensive structure built on the same alignment as the later castle ditch. This boundary may possibly have enclosed the middle Saxon settlement identified in the 1970s (Baker *et al* 1979, 17 etc.)

### **3.4 Phase 2: Late Saxon/Saxo-Norman (Figures 5 and 6)**

#### **3.4.1 Possible line of western arm of the outer ditch of Bedford Castle**

In the report on excavations at 29/41 High Street, Steadman (1999, 161) identified a large ditch running parallel with High Street, set about 32m back from the present street frontage. This was interpreted as the infilled ditch of the castle's outer bailey. The feature was detected through analysis of the depth of load-bearing geology identified from engineer's data relating to piles inserted during the development.

The line of the ditch, if projected south across the curtilage of 23–27 High Street, runs just to the west of Car Stacker 1. This conjectural projection is illustrated on Figures 4–8. This area was only investigated as part of the watching brief on groundworks (Figure 3). Although c.2m depth of made ground was encountered, this is not in itself conclusive proof of the presence of the castle ditch. However, the provisional results of a preliminary analysis of pile logs for the present development also indicate that there is a large depression in the bedrock located in a similar position (see Figure 10).

#### **3.4.2 Boundary or possible remnant of castle rampart**

The most substantial feature consisted of a linear spread of limestone fragments within Car Stacker 3, which extended on a north-south alignment throughout the length of the trench (Figure 5). The deposit was associated with a similar, slightly smaller concentration of limestone to the north in Car Stacker 1. Both deposits were situated parallel to the projected north-south alignment of the castle's outer bailey defences and could represent the remains of a rampart on the inner side of the defensive ditch.

The stones were situated above several layers of external silting and occupation deposits. This could indicate that the middle Saxon boundary, discussed above, may have shifted westwards and the area had been open ground before the construction of the rampart.

#### **3.4.3 Settlement and industrial activity**

Structural evidence consisted of postholes and refuse pits in all areas, and a collapsed hearth or oven structure in Car Stacker 1 (Figure 6). The postholes may have supported small partitions or singular posts associated with the activity around the hearth and pits.

A complex of several intercutting refuse pits was excavated in Car Stacker 4. No single feature in this car stacker could be dated exclusively to the late Saxon/Saxo Norman period. One of the stratigraphically earlier pits contained material mainly dating to this period but mostly the features contained an assemblage of finds of both late Saxon/Saxo-Norman and early medieval date.



Industrial activity was represented by a small, unlined, single-flue lime kiln situated within Car Stacker 2 (Figure 5). The kiln most likely produced lime used in the production of mortar for the building of Bedford castle. A further, partially destroyed kiln structure was situated in Car Stacker 4.

All features throughout the excavation area contained varying quantities of slag, but no evidence for metalworking hearths or working areas was found on the site itself.

### **3.5 Phase 3: Early medieval (Figure 7)**

#### **3.5.1 Settlement and industrial activity**

Two pits situated in Car Stackers 2 and 3, respectively, dated to this period. In all trenches, apart from Car Stacker 4, a dark occupation layer then sealed the earlier activity. The layer is reminiscent of the deposits of 'dark earth' identified in earlier excavations in this area (Baker *et al* 1979) and may indicate external cultivation or an area of open land used for the disposal of domestic rubbish.

The complex of inter-cutting refuse pits with a mixed assemblage of late Saxon/Saxo-Norman and early medieval pottery, mentioned above, should be mainly placed within this period. The stratigraphically latest and most substantial pit of the complex measured more than 4.5m in diameter. The existence of large pits in this area had been demonstrated by previous excavations in the area of the Castle Lane car park to the east of the present development (Baker *et al* 1979).

### **3.6 Phase 4: Post-medieval to modern (Figure 8)**

#### **3.6.1 Settlement and industrial activity**

The remains of two cellars relating to the premises built along the northern edge of Castle Lane were excavated within Car Stackers 3 and 4. Historical maps first depict buildings on this part of Castle Lane in 1765 (the Jefferys map, BLARS X1/88/2), but it is likely that the properties subsequently underwent several phases of rebuilding. They were finally demolished and the cellars backfilled in the later 20<sup>th</sup> century to create a delivery yard. A photograph in the BLARS collections depicts the frontages of these buildings (BLARS Z974-1a) (Figure 9).



## 4. DATA-SET QUANTIFICATION

### 4.1 Introduction

For the following discussion the data-sets recovered during the investigations have been divided into three main classes: contextual, artefactual and ecofactual.

*Contextual* data describe the individual features and deposits identified during fieldwork. Descriptions take the form of a written record accompanied by plans, section drawings and photographs. The data also includes observations of the sequence in which features were constructed and deposits laid down, enabling the relative chronology of events to be determined.

*Artefactual* data relate to the objects recovered during the investigations. These have been divided for ease of discussion into pottery, ceramic building material and other artefacts (including ‘registered artefacts’ (items of special interest) and bulk finds, such as industrial residues).

*Ecofactual* data comprise natural materials found within excavated deposits. These are able to yield information on the nature of past human activity and its environmental setting. They include animal bones, and information obtained from environmental samples (for example charred plant remains).

In the following sections contextual data is discussed first as this has provided the framework for the preceding summary of results and the subsequent data-set discussions. The methodological approach taken with each data-set is discussed, followed by sections dealing with quantification, provenance (spatially and chronologically) and also condition. All these factors are important in deciding the potential of the material for analysis.

### 4.2 Structural Data

#### 4.2.1 Quantity of records

Record type	No.
Contexts	357
Plans	50
Sections	18
Photographic films	28

**Table 2: Quantity of records**

#### 4.2.2 Methodological approach to assessing contextual data

The contextual data was rapidly assessed in order to establish whether it would provide a coherent spatial and chronological framework. The contexts were assigned to a number of episodes (phases) of human activity corresponding to broad, chronological divisions, e.g. middle Saxon, Saxo-Norman, early medieval and post-medieval, based on their artefactual assemblage (see Table 1).





### 4.2.3 Survival and condition of features/deposits

In all areas of the site, the medieval deposits were sealed by post-medieval and modern build-up of soil and demolition rubble. Except for the cellars, the foundations of the standing buildings were relatively shallow, typical of pre-First World War structures. This meant that the existing buildings and associated services had not generally truncated the medieval layers.

Car Stackers 1 and 2, in the interior of the present-day buildings, were relatively unaffected by later intrusions, but deeper intrusions were observed in the following locations:

- Post-medieval cellars in Car Stackers 3 and 4, near the street frontage of Castle Lane, had destroyed about a third of the earlier archaeological deposits in each case (see Figure 8).
- A modern stanchion base had caused partial damage to the early medieval ‘dark earth’ in Car Stacker 2.

Some damage to archaeological deposits was also occasioned by necessary works undertaken as part of the present development:

- In order to ensure a safe working method, the archaeological deposits on the perimeter of each car stacker were excavated mechanically in a trench dug to receive the metal sheet shoring.
- Some damage to the archaeological deposits was also caused by the installation of driven displacement piles measuring *c.* 0.25m in diameter. The severity of the damage varied according to the deposits the piles were driven through. However, in most cases the total diameter of the damage (including distortion of stratigraphy) was not more than 0.3m per pile.

## 4.3 Pottery

### 4.3.1 Methodology

For each context, pottery was recorded by fabric type in accordance with the Bedfordshire Ceramic Type Series, and quantified by minimum sherd count and weight. This information was entered onto the Context Assemblage Table in the project database. Pottery was also dated by individual fabric type and the date of the latest sherd used in the provision of an overall context spot-date. The latter has been used to assist in the establishment of the provisional phasing structure (see Table 1).

### 4.3.2 Quantification

A total of 1106 sherds weighing 14.3kg was collected, the greatest quantity deriving from features within Car Stacker 4.

### 4.3.3 Range and variety: the pottery type series

Fabrics are listed below (Table 3) in chronological order, using common names and type codes in accordance with the Bedfordshire Ceramic Type Series, currently held by Albion Archaeology on behalf of Bedfordshire County Council. Bracketed figures represent total percentage (by sherd number) for each chronological period. No new fabric types were identified.

Fabric Type	Common name	Sherd No.
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Fabric Type	Common name	Sherd No.
<b>Early to middle Saxon (&lt;1.0%)</b>		
Type A16	Mixed coarse quartz	1
Type A23	Sandstone	1
<b>Middle Saxon (&lt;1.0%)</b>		
Type A11	Maxey-type	2
<b>Saxo-Norman (67.6%)</b>		
Type B01	St Neots-type	405
Type B01A	St Neots-type (orange)	239
Type B01B	St Neots-type (fine)	78
Type B01C	St Neots-type (mixed inclusions)	2
Type B04	St Neots-type (coarse)	22
Type B04A	St Neots-type (hand-made)	1
Type C12	Stamford ware	1
<b>Early medieval (30.7%)</b>		
Type B07	Shell	187
Type C01	Sand	66
Type C02	Red quartz	5
Type C03	Fine sand	50
Type C04	Coarse sand	21
Type C05	Sand (red margins)	5
Type C53	Sand (pasty)	3
Type C71	Sand (buff-grey cored)	1
Type C75	Micaceous	1
Type C	Non-specific medieval	1
<b>Late medieval (&lt;1.0%)</b>		
Type E01	Reduced sand	1
Type E03	Smooth sand	3
<b>Post-medieval (&lt;1.0%)</b>		
Type P03	Black-glazed earthenware	2
Type P14	Blackware	1
<b>Modern (&lt;1.0%)</b>		
Type P37	White salt-glazed stoneware	2
Type P38	Creamware	2
Type P45	Transfer-printed ware	1

**Table 3: Pottery type series**

#### 4.3.4 Provenance, phasing and date range

The pottery dates from the early to middle Saxon period to the present day, with the majority being of *c.* 11<sup>th</sup>-13<sup>th</sup> century date. The range of fabric types and vessel forms is broadly comparable with pottery recovered from recent excavations to the rear of 29-41 High Street (Steadman 1999). Composition of the assemblage suggests the pottery was subject to variable processes of post-deposition disturbance or contamination. Pottery generally survives in good condition and the incidence of abrasion is low. Overall, the degree of fragmentation is high (average sherd weight 13g), although a number of vessels, mainly from Car Stacker 4, are represented by more than one sherd. Twenty-eight features (49% of contexts producing pottery) contained less than 100g, and only two features (4%) yielded in excess of 1kg.



#### **4.3.4.1 Phase 1**

Saxon pottery comprises four small hand-made body sherds recovered from a boundary ditch and as residual finds in dumped material in Car Stacker 3. Two are sand tempered sherds of early to middle Saxon date, and two are shell tempered Maxey-type wares, datable to the middle Saxon period.

#### **4.3.4.2 Phase 2**

Saxo-Norman pottery constitutes approximately 68% of the assemblage and comprises 746 wheel-thrown, shell tempered sherds in the St Neots-type tradition, broadly datable to the late 9<sup>th</sup>-11<sup>th</sup> centuries. A single hand-made sherd also occurred. If possible, any distinction between pre- and post-conquest types will be made during analysis, to assist in the provision of a closer date range. Variants in the St Neots-type wares will also be more closely examined at a later date. Forms include everted rim jars, bowls with hammerhead and inturned rims, and a single spouted bowl. Decoration comprises finger tip impressions, either as applied strips or directly impressed into jar rims or the carination of bowls. The exterior surfaces of many of the jars are heavily sooted, indicating their use as cooking pots, and several have internal ?limescale residues. A single glazed sherd of 10<sup>th</sup>-11<sup>th</sup> century Stamford ware was also identified. Saxo-Norman pottery occurred across all excavation areas, a number occurring as residual finds in later features.

#### **4.3.4.3 Phase 3**

Approximately 31% of the pottery is datable to the early medieval period. The material comprises 153 hand-made and wheel-thrown sand tempered sherds and 187 wheel-thrown developed St Neots-type shell tempered sherds. All are of probable local manufacture and are datable to the 12<sup>th</sup>-13<sup>th</sup> centuries. The late medieval period is represented by four wheel-thrown oxidised and reduced sand tempered sherds of 14<sup>th</sup>-15<sup>th</sup> century date, occurring as residual finds in post-medieval features. Diagnostic forms are rare and comprise simple everted rim jars and bowls, some with applied thumbled strips and/or thumbled rims. A number of sherds have sooted exteriors. As with the Saxo-Norman material, medieval pottery occurred across all excavation areas.

#### **4.3.4.4 Phase 4**

Post-medieval and later pottery derived from rubbish pits in Car Stackers 1 and 3. Post-medieval material comprises a sherd of 16<sup>th</sup>-17<sup>th</sup> century Blackware and two sherds of 17<sup>th</sup>-18<sup>th</sup> century black-glazed earthenware. Five undiagnostic sherds of 18<sup>th</sup>-19<sup>th</sup> century creamware, transfer-printed ware, and salt-glazed stoneware were also identified.

### **4.4 Ceramic Building Material**

#### **4.4.1 Methodology**

For each context, ceramic building material (comprising brick/tile and fired clay), was recorded by fabric type in accordance with the Bedfordshire Ceramic Type Series, and quantified by minimum fragment count and weight. This information was entered onto the Context Assemblage Table in the project database. Where possible, the ceramic building material was also spotdated.



#### 4.4.2 Quantification

Seventeen fragments of brick and tile weighing approximately 7kg were recovered. Five pieces of fired clay weighing 74g were also collected.

#### 4.4.3 Range, variety, provenance and date

Ten sand tempered peg tiles dating from the late medieval/post-medieval periods were recovered. Fragments are fairly small (average fragment weight 108g) and largely unabraded. Two complete bricks measuring L 200/225 x W 100/105 x D 69mm were recovered. No complete roof tiles were collected: the only measurements recorded were their thicknesses, which range between 12-16mm. A single curved or ridge tile fragment also occurred.

Two joining roof tile (*tegulae*) and two abraded brick fragments (total weight 720g) in a sand tempered fabric were recovered from the middle Saxon boundary ditch and have been identified as Roman in origin. One of the brick fragments has a smoothed, slightly dished surface and may have been reused.

The fired clay assemblage comprises amorphous and abraded fragments in a fine oxidised sand tempered fabric. A single piece has a smoothed surface and retains wattle impressions ranging in diameter between 17-20mm. The fragments were recovered from Saxo-Norman features in Car Stacks 2 and 3 and a post-medieval layer in Car Stacker 1.

### 4.5 Other Artefacts

#### 4.5.1 Methodology

For each context, artefacts were assigned a simple name and functional category in accordance with the Bedfordshire Artefact Typology and quantified by number and/or weight. Where possible, artefacts were dated, and this information contributed to the overall context spotdate.

#### 4.5.2 Quantification

The non-ceramic assemblage comprises nineteen registered artefacts (mainly iron and copper alloy), eight pieces of worked flint, approximately 20kg of ferrous slag, and small quantities of clay pipe, mortar, vessel glass, burnt stone and shell (Table 4).

Material	Quantity
Antler & iron	1
Bone	5
Ceramic	2
Copper alloy	3
Flint	8
Glass	555g
Iron	9
Iron & copper alloy	1
Lead	1
Mortar	300g
Shell	48g
Slag (ferrous)	20283g
Stone (burnt)	950g

**Table 4: Registered and bulk artefacts by material**



### 4.5.3 Range, variety, provenance and date

The majority of the assemblage derives from features associated with Phases 2 and 3. A scan of typologically datable artefacts indicates a date range spanning the early prehistoric to the post-medieval periods. It may subsequently be possible to suggest a chronological range for some of the undated artefacts through their association with pottery or other datable finds. Identification of any iron objects following x-ray may also help to clarify dating.

The earliest datable artefacts are probably of late Neolithic/early Bronze Age date, and comprise six worked flint flakes and two joining fragments from a single core. Two flakes are utilised and one is retouched. All are residual, occurring in features containing Saxo-Norman and later material.

Eight artefacts of Saxo-Norman and medieval date were recovered. They comprise a decorative bone casket strip, four bone dress pins, a copper alloy balance arm or balance stirrup, a possible strap fitting and a folding knife with an antler handle. Suggested dates for each artefact are listed below (Table 5).

RA No.	Description	Date Range
1	Iron object (?padlock key/looped spike)	Unknown
2	Copper alloy balance arm or balance stirrup	c. 11-14 <sup>th</sup> century
4	Copper alloy sewing pin	16-17 <sup>th</sup> century
5	Lead strip fragment or offcut	Unknown
6	Bone box or casket mount	Saxo-Norman/early medieval
7	Iron object	Unknown
8	Iron timber nail	Unknown
9	Iron strip fragment (?blade)	Unknown
10	Iron strip fragment	Unknown
14	?Copper alloy strap fitting	c. 13-14 <sup>th</sup> century???
15	Antler & iron folding knife	Late medieval + ???
16	Iron strip fragment	Unknown
17	Iron & copper alloy object	Unknown
18	Pig fibula dress pin	c. 400-1150
19	Pig fibula dress pin	c. 400-1150
20	Pig fibula dress pin	c. 400-1150
21	Pig fibula dress pin	c. 400-1150
22	Iron strip fragment	Unknown
23	Iron nail	Unknown

**Table 5: Summary of Registered Artefacts**

Post-medieval artefacts include two fragments of clay pipe stem, a wine bottle base and a copper alloy sewing pin.

Metalworking residues weighing approximately 20kg comprise dense ferrous slag and tap slag, indicative of smelting processes. A small amount of vitrified clay, and fuel ash slag was also recorded. Metalworking residues occurred in all excavation areas, with the majority deriving from features in Car Stacker 2. All fragments are redeposited.

### 4.6 Structural Timbers Recovered from the Standing Building

Five hardwood timber fragments were removed from the late 19<sup>th</sup>-/early 20<sup>th</sup>-century buildings. These were not in their original locations and had been reused as internal



lintels and other structural elements. However, the timbers are probably oak and retain features relating to their original use as elements of timber-frame buildings. Their original provenance is unknown, but it is probable that they were taken from buildings on the site that were altered or demolished when the present buildings were constructed.

As they were part of the standing building they do not require remedial conservation and are suitable for dry storage.

## **4.7 Animal Bone**

### **4.7.1 Methodology**

For each context, animal bone was quantified by minimum fragment count and weight and scanned to assess the state of preservation, evidence for butchery or gnawing, and where possible, identification of species. This information was entered onto the Context Assemblage Table in the project database.

### **4.7.2 Quantification, preservation, species and provenance**

Approximately 2900 animal bone fragments weighing 44kg were recovered, the majority deriving from features in Car Stacker 3. Bone preservation is variable, with some fragments displaying greater surface erosion than others, although the material generally survives in good condition.

Diagnostic elements are horn cores, skull, mandible and pelvis fragments, phalanges, long bones, scapulae, ribs and vertebrae, many of which have been deliberately chopped and a few of which are burnt.

Species represented include cattle, sheep/goat, pig, horse, cat and ?domestic fowl, with the former being prevalent. The partial skeleton of an early medieval juvenile pig was recovered from a pit in Car Stacker 4.

Animal bone was present in deposits from all phases.

## **4.8 Environmental Samples**

Eleven samples were taken for the extraction of charred plant remains and/or artefacts. They were processed by bulk flotation in a peroxide solution, with volumes ranging from ten to twenty litres. Flots were taken from all samples on a 300 micron meshed sieve. The residues were then passed through a 5.6mm, 2.0mm and 1.0mm sieve stack. The 5.6mm residues were sorted for artefacts, while the 2.0mm and 1.0mm residues were retained unsorted.

### **4.8.1 Quantification and provenance**

The results of processing are set out in Table 6, below.



Sample	Context	Type	Date	Reason For Sample	CPR	Seeds
1	1049	Occupation Layer	Saxo-Norman	Charred plant remains (CPR)	5	0
2	1059	Pit fill	Saxo-Norman	Charred plant remains (CPR)	5	0
3	1055	External dump layer	Saxo-Norman	Charred plant remains (CPR)	5	0
4	2052	Kiln fill	Saxo-Norman	Technological sample	n/a	n/a
5	3051	Ditch fill	Middle Saxon	Charred plant remains (CPR)	5	0
6	3053	Ditch fill	Middle Saxon	Charred plant remains (CPR)	5	0
7	3053	Ditch fill	Middle Saxon	Radiocarbon dating	n/a	n/a
8	4038	Kiln fill	Early medieval	Charred plant remains (CPR)	5	1
9	4047	Pit fill	Early medieval	Charred plant remains (CPR)	5	0
10	4064	Pit fill	Saxo-Norman	Charred plant remains (CPR)	5	3
11	4058	Pit fill	Saxo-Norman	Charred plant remains (CPR)	4	1

Key: 0 = none; 1 = very sparse; 3 = moderate; 4 = abundant; 5 = very abundant; n/a = not applicable

**Table 6: Soil Samples and their potential for analysis**

The relative abundance of charred plant remains and absence of charred seeds suggests that plant remains are most likely to have been derived from fuel residues or from the destruction of buildings by fire. Identification of species present may assist interpretation of their origin.

Sample 4 was a sample of lime, taken potentially to use for technological analysis or dating. However, on the advice of English Heritage's Scientific Advisor for East of England, it is concluded that analysis of the lime sample would not contribute to the project objectives.

Sample 7 was taken for potential radiocarbon dating of the middle Saxon ditch. At this stage, it is not considered necessary to obtain a date determination.



## 5. ANALYTICAL POTENTIAL OF THE DATA

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### 5.1 Introduction

In this section the analytical potential of each data set is reviewed. This information is summarised in Table 7.

### 5.2 Contextual Data

The site can be characterised as having a high density of archaeological features. The features consists of positive layers, such as build-up of occupational material, external dumps and surfaces, as well as cut features in the form of pits, ditches and post holes. Post-medieval and modern remains consist of walls, surfaces and layers.

On the street frontage of Castle Lane, post-medieval cellars have destroyed some of the earlier archaeological deposits. However, throughout most of the site, modern truncation of the archaeological deposits has been minimal and the archaeological features were sealed by post-medieval and modern deposits. This means that the archaeological features have survived in good condition with stratigraphic relationships intact and a high potential to establish the date, nature and extent of activity and occupation on the development site.

The development of the urban infrastructure in this part of Bedford has been well documented (Albion Archaeology 2002) and the archaeological features, together with the remains of post-medieval and modern activity on the site, have a high potential for the interpretation of any findings in relation to Bedford's documented history, archaeology and historical topography.

Excavations in the immediate vicinity (Steadman 1999, Baker *et al* 1979) also raise the potential of the development site in establishing the relationship of its archaeological remains to the surrounding townscape.

### 5.3 Ceramics

The quantity and quality of the pottery recovered indicates that the assemblage has good potential for analysis. Although fragmentary, the Saxo-Norman and early medieval material is largely unabraded, with a number of vessels represented by more than one sherd. With the exception of features in Car Stacker 4, the deposits from which the pottery derived appear generally undisturbed. Study of the composition and distribution of the Phase 2 and 3 assemblages will assist in determining aspects of chronology, function and character of activity. The assemblage will provide a valuable addition to knowledge of ceramic fabrics and forms within Bedford and can be usefully compared with pottery from other excavations in the town (*e.g.* Steadman 1999, Baker *et al* 1979).

The sample of ceramic building material is essentially too small to be of particular value, and other than noting its presence, has little potential for analysis.

### 5.4 Other Artefacts

The size and nature of the artefactual assemblage allow only limited conclusions to be drawn regarding the character, economy and date of activity on site. The earliest





datable artefacts are a small assemblage of residual worked flints. Considered collectively, the Saxo-Norman and medieval artefacts have some potential for further analysis, with diagnostic objects mainly representing personal items. Ferrous metalworking residues indicate smelting processes, and may be compared with the slag assemblage recovered from excavations to the rear of 29-41 High Street (Steadman 1999).

Post-medieval activity is evidenced by fragments of clay pipe stem, a wine bottle base and a copper alloy sewing pin.

### **5.5 Structural Timbers Recovered from the Standing Building**

Although not recovered from their original context, the timbers have potential to yield information relating to buildings that formerly stood on or near the site (as would be the case for residual fragments of architectural stone).

Tree-ring dating might enable the individual timbers to be dated. However, this technique is expensive and would at best only indicate the date of felling of the tree, not the date of the use of the timber in a building. A more appropriate approach will be to assess the likely date through a study of the carpentry by a suitably qualified specialist. Such a study may also identify the structural function of the timbers, potentially contributing information relating to past use of the site.

Bedford Museum's Keeper of Archaeology has indicated that the museum wishes to retain the timbers for potential display.

### **5.6 Animal Bone**

Given the circumstances of recovery (relatively small stacker pits), the animal bone assemblage is fairly sizeable and survives in good condition. However, the fragmentary nature of the bone (average fragment weight 15g) limits the number of identifiable fragments available for analysis and the amount of ageing, metrical and butchery data available from those fragments that can be identified to species. The bulk of the faunal material comes from Phases 2 and 3 and it may be possible to gather information concerning the exploitation of animals on the site at that time. Recording of any metrical data from the Phase 2 and 3 deposits may enable some limited species size comparison with other sites in Bedford and will add to the existing metrical data-set for the town.

### **5.7 Ecofactual Remains**

The ecofact samples are unlikely to yield significant information, although identification of the species present may assist interpretation of the activities being undertaken on the site at various times and locations. The small quantity of seeds recovered is unlikely to benefit from statistical analysis. Analysis of the earliest, middle Saxon, deposits will be prioritised as these are relatively rare and, in an urban site are less likely to be contaminated by residual deposits.



Objective	Contextual	Ceramic	Other artefacts	Structural timbers	Animal bone	Ecofacts
1 Establishing the date, nature and extent of activity or occupation in the development site	High	High	Moderate	Moderate	Moderate	Low
2 Establishing the relationship of any remains found to the surrounding contemporary landscapes	High	High	Low	Low	Low	Low
3 Recovering artefacts to assist in the development of type series within the region;	High	Moderate	Low	Low	None	None
4 Recovering palaeo-environmental remains to determine local environmental conditions.	Moderate	None	None	Low	Low	Low
5 Recording evidence of Saxon, medieval and post-medieval occupation on the site and/or evidence for the castle boundary ditch and castle bailey.	High	Moderate	Low	Moderate	Low	Moderate
6 Interpret any findings in relation to Bedford's documented history, archaeology and historical topography.	High	Moderate	Low	Moderate	Low	Moderate

**Table 7: Potential of recovered data-sets to address the original research objectives**



## 6. RESEARCH OBJECTIVES FOR ANALYSIS

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Following assessment of the results of the fieldwork and taking into account the known documentary, cartographic and photographic sources discussed above, the following research objectives for analysis have been identified. These refine, amalgamate and build on the original objectives.

### **OBJECTIVE 1: Establish the date, nature and extent of activity or occupation in the development site**

The majority of the excavated evidence relates to the late Saxon/Saxo-Norman period. The most common datable artefact of this period, pottery, exhibits little change through time. Despite this, the period was a very significant one for English history (the change from Anglo-Saxon to Norman) and, in the regional context, for Bedford (the construction, occupation, siege and eventual demolition of the motte and bailey castle). A key objective will therefore be to identify, as far possible, any evidence for cultural change and variation in the nature of settlement. Evidence which helps to distinguish between pre- and post-castle phases will be of particular value.

For the post-medieval period, establishing links between the excavated evidence, observations of the standing buildings and historical documents will contribute to the understanding of the later development of the site.

### **OBJECTIVE 2: Establish the relationship of any remains found to the surrounding contemporary landscapes**

Evidence which helps establish the date, nature and extent of activity or occupation in the development site (as above) will contribute to an understanding of the wider townscape, in particular:

- What was the layout of Saxon Bedford and is there any evidence for major changes between the early-middle Saxon township and later Saxon *burh*?
- Does the evidence from this site refine our interpretation of the layout, development and extent of the motte and bailey castle?
- How did the town develop into the vacant castle site following the destruction of the castle?

### **OBJECTIVE 3: Recover artefacts to assist in the development of type series within the region**

The majority of the artefacts date from the medieval period, particularly the late Saxon/Saxo-Norman period. By combining structural analysis of the sequence of deposits on the site with a study of the pottery, it may be possible to refine the typology and dating of artefacts of this period.

### **OBJECTIVE 4: Recover palaeo-environmental remains to determine local environmental conditions**

Samples derived from the middle Saxon ditch in Car Stacker 3 may shed light on conditions prevailing in the area at a relatively early date. Otherwise, it is unlikely that the evidence from this project will contribute significantly to our understanding of environmental conditions, since there are no deposits of particular value.



**OBJECTIVE 5: Record evidence of Saxon, medieval and post-medieval occupation on the site and/or evidence for the castle boundary ditch and castle bailey**

This objective will effectively be addressed under OBJECTIVE 1. However, the specific objective of recording the castle boundary ditch will be addressed by an analysis of the engineer's piling data to identify and map any evidence for a large ditch in the appropriate location.

**OBJECTIVE 6: Interpret any findings in relation to Bedford's documented history, archaeology and historical topography**

The overall synthesis of the results of the investigations will be compared with previous archaeological findings and documentary records in order to refine the archaeological deposit model for Bedford (expressed in the Extensive Urban Survey) and for the Castle Lane area (ongoing work by Albion Archaeology).

**OBJECTIVE 7: Methodological development: evaluation of impacts and mitigation of development on urban sites; the integration of excavated evidence with analysis of standing buildings**

As a result of this project, an insight has been gained into the challenges faced by archaeologists when dealing with development in historic urban areas. This insight may contribute to future strategies. The following issues, in particular, will be explored:

- Predicting the archaeological effects of major renovation of existing pre-1900 buildings;
- The effect of piling on archaeological deposits;
- Safe excavation of deep deposits within or adjacent to standing pre-1900 buildings;
- Managing archaeological recording during contractors' groundworks;
- Understanding and interpreting the results of small-scale excavations.



## 7. UPDATED PROJECT DESIGN

### 7.1 Introduction

Albion operates a fully integrated, computer-based system for analysing archaeological data. All contextual, artefactual and ecofactual information is entered onto an Access database. Plan and section drawings are digitised. The databases and digital drawings are interfaced via a GIS system (Gsys) allowing all chronological, spatial and material groupings (and any combination thereof) to be viewed and manipulated. In addition, all the site photographs are held in a digital format, allowing them to be viewed on screen with database and digital drawings. The system enables rapid and flexible analysis of the project data-sets. It also facilitates the output of a series of text reports, supported by plan and other graphic forms. These will form the basis for the final publication report.

### 7.2 Publication

The Associate Editor of *Bedfordshire Archaeology*, a county-based journal, has agreed in principle to include in a future volume a report on the results of the excavation. The suggested format is set out below (Table 8) with indicative page and figure counts.

	Summary	Pages	Figs
1.	<b>Introduction</b>		
	• Site location and conditions	1	1
	• Archaeological and historical background	2	1
	• Method statement	1	-
	• The archaeological investigations	1	1
2.	• Structure and terminology in this article	½	-
	<b>Results of the investigations</b>		
	• Middle Saxon	½	1
	• Late Saxon/Saxo-Norman	3	2
	• Early medieval	1½	1
3.	• Post-medieval to modern (including buildings)	2	3
	<b>The artefactual assemblage</b>		
	• Pottery	3	1
	• Ceramic building material	½	-
	• Other artefacts	3	1
4.	• Structural timbers recovered from the standing building	3	1
	<b>The ecofacts</b>		
	• Animal Bone	1	
	• Environmental Samples	½	
	5.	<b>Discussion</b>	
The results of the investigations		4	1
6.	Review of methodology	2	1
	<b>Conclusions</b>	1	
	Acknowledgements	½	
	References	1	
	<b>TOTAL</b>	31	15

**Table 8: Provisional outline of the publication**



The chronological, phased development of the site will provide the basic structure for the site narrative. Within each phase, text will be organised by landscape and group, with artefactual and ecofactual information integrated into the text as appropriate. Evidence from documentary, cartographic and photographic sources will be integrated into this chronological framework.

The discussion will concentrate on the sequence of land use within the site, with a focus on evidence for the impact of the castle on the pre-existing Saxon settlement and the later medieval and post-medieval town. The evidence for the post-medieval development of the site will be examined with reference to historical maps and other relevant documentary sources.

The discussion will integrate evidence from adjacent archaeological investigation. Comparisons for this type of site will be sought regionally and nationally, if these prove relevant.

The outline (Table 8) of the publication should be considered a guideline and may be altered during the analysis and pre-publication stages if the results warrant it.

### 7.3 *Timetable*

Following acceptance by the client and AO of the assessment and updated project design, Albion would like to proceed rapidly with the analysis and publication of the results. This would ensure project momentum is maintained.

Detailed method statements, with task numbers and resource levels, are provided in Appendix 1. Table 9 sets out the five key stages within the analysis and publication programme. An indication of maximum time required to reach the first three key stages is indicated and these could serve as appropriate monitoring points, if required.

Completion of	Description of tasks	Time
Key stage 1	Analysis	3 months
Key stage 2	Report writing for data-sets and illustration	3months
Key stage 3	Completion of 1 <sup>st</sup> draft followed by circulation to client, AO and referees	3 months
Key stage 4	Completion of final draft and submission to <i>Bedfordshire Archaeology</i>	1 month
Key stage 5	Publication and archiving	*

**Table 9: Provisional timetable to complete the project**

\*Publication, and therefore deposition of the archive with Bedford Museum, will be dependent on the length of time taken for the refereeing of the article.

### 7.4 *Archiving*

On publication of the final report, the archive of materials (subject to the landowner's permission) and accompanying records will be deposited with Bedford Museum, Accession Number 2006/185.



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## **9. APPENDIX 1: METHOD STATEMENTS FOR ANALYSIS, PUBLICATION AND ARCHIVING (BY EACH DATA-SET)**

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### **9.1 Analysis of Contextual Data**

#### **9.1.1 Liaison meetings**

On-going discussion will take place between the principal members of the project team throughout the analysis and publication stages. These will involve discussion over the nature of the work required, commissioning of the work and addressing any queries that arise during the course of the project.

#### **9.1.2 Analysis of documentary, cartographic and photographic sources**

The Historic Environment Record and, if necessary, the excavation archives held at Bedford Museum will be examined to provide background information on archaeological sites in the vicinity, along with the development of this part of Bedford.

All available historical maps, photographs and documents will be examined in an attempt to correlate archaeological features and buildings located within the investigation area to features on the maps. Sources consulted will include those held by the Bedfordshire and Luton Records and Archives Service.

#### **9.1.3 Computerisation**

Computerisation will facilitate the analysis of the large data-sets generated by this project. Albion operates a fully integrated computer-based system of structural analysis using databases (Microsoft Access) and a mini GIS (G-Sys) for interrogation. Basic contextual information has been entered into a database table and has been successfully utilised in the preparation of this report.

The digitised drawing produced for the assessment will require checking and correcting to ensure it is linked correctly with the contextual database. Once this is complete, the drawings are fully interrogatable and manipulable by any database table.

Once this is achieved, it will be possible to rapidly interrogate data sets within the Gsys programme. For example, it would be possible to plot the distribution of specific find types, or all features which are considered to be contemporary etc. This type of interrogation will greatly enhance the analysis of data and is, therefore, likely to assist in the interpretation of the archaeological remains. It also enables basic publication figures to be produced rapidly.

Any relevant historical maps or data from earlier archaeological excavations will be geo-referenced and digitised to permit examination with the all features drawing.

#### **9.1.4 Sub-group and group analysis**

All contexts will be processed to sub-group level. Much use will be made of contextual information specifically descriptive (held in the context database) and section drawings.

Each context will be analysed using the above information and assigned to a single sub-group, consisting of one or more (usually several) contexts that are closely related both stratigraphically and interpretatively. For example, comparable cuts within a single ditch length will be assigned to the same sub-group. Primary, secondary and tertiary deposits of ditches will also be kept separate at sub-group level.

The method of sub-group definition will rapidly identify those sub-groups, which have limited or no further analytical value (e.g. features/deposits of geological origin). These sub-groups will not be subject to any further analysis.





The sub-group allocation for each context will be entered into the contextual database table. A sub-group text will then be written directly into the sub-group database table so that it can be easily accessed. It will contain a factual, descriptive section as well as an interpretative section, setting out the rationale behind the definition of the sub-group. This text will be checked for content, accuracy and spelling/grammar. It is not envisaged that sub-group plans will be routinely produced, but this information will be available via the relational database tables.

Sub-groups worthy of further analysis will be assigned to a single group representing a higher level of interpretation. It is likely that most groups will comprise multiple sub-groups.

Other deposit sub-groups, i.e. secondary or tertiary fills, will be assigned to separate groups to reflect the likelihood that these may be considerably later in date than the construction/primary deposit groups and will therefore need to be analysed separately. However, to ensure that their spatial location (for example within a specific pit group) is not lost, they will be issued a group number comprising a decimal point of the 'containing' group for example G7.2 is the secondary fill of enclosure ditch G7 etc.

The group allocation for each sub-group will be entered into the sub-group database table. A group text will then be written directly into the group database table so that it can be easily accessed. It will contain a descriptive section as well as an interpretative section. This text will be checked for content, accuracy and spelling/grammar. It will form the basis for any detail required in the descriptive section of the publication text. A plan will be produced for each group with the location of all relevant sub-groups marked. If appropriate a group matrix will be produced.

### 9.1.5 Landscape and phase analysis

Each group will be assigned to another, higher level of interpretation known as a landscape unit.

Groups representing secondary or tertiary deposits may be considerably later in date than the construction/primary groups and to distinguish these at landscape level they will be assigned to a separate landscape number. However, to ensure that their spatial location, for example within a specific enclosed settlement is not lost they will be issued a landscape number comprising a decimal point of the 'containing' landscape, for example L4.2 is a secondary filling landscape of enclosure L4.

The landscape allocation for each group will be entered into the group database table. A landscape text will then be written directly into the landscape database table so that it can be easily accessed. It will contain a descriptive section as well as an interpretative section. This text will be checked for content, accuracy and spelling/grammar. It will form the basis for the site narrative section of the publication text. A plan will be produced for each landscape with the location of all relevant groups marked.

Each landscape will be assigned the final level of interpretation known as a phase.

The phase allocation for each landscape will be entered into the landscape database table. A phase text will be written directly into the phasing database table so that it can be easily accessed. It will contain a descriptive section as well as an interpretative section. This text will be checked for content, accuracy and spelling/grammar. It will form the basis for the site narrative section of the publication text. A plan will be produced for each phase with the location of all relevant landscapes marked. If appropriate a phase matrix will be produced.

The completion of the *Landscape and Phase Analysis* represents a key stage in the analytical programme and is the precursor to the production of publication text and illustrations.

## ◆ COMPLETION OF KEY STAGE 1



### 9.1.6 Final phasing/publication liaison

Once the provisional final phasing is determined this will be examined in light of artefactual material. When the final phasing has been checked the various specialists will be informed. Each will receive a report known as a *Final Phasing Information for Specialist*. This will include the phasing hierarchy, format of their publication text (with a guide number of words) along with other information that they may require.

### 9.1.7 Site narrative text

The site narrative will form the basis of the descriptive section of the publication text. It will be organised by phase, landscape and, where appropriate, group.

### 9.1.8 Structural illustration

The digitised plan and section data will be interrogated via the relational database tables to produce mock-up publication illustrations. Plans will be produced to show all features in each phase with Landscape and Groups identifiable.

## ◆ COMPLETION OF KEY STAGE 2

Structural Analysis		
Task	Staff	Days
Liaison meetings	PO	2
	PM	2
	Illust	2
Analysis of documentary etc. sources	PO	5
Computerisation	PO	5
Sub-group and group analysis	PO	10
Landscape and phase analysis	PO	5
Assistance with analysis	PM	2
◆ COMPLETION OF KEY STAGE 1		
Publication liaison	PM	3
Publication liaison	PO	3
Site narrative	PO	10
Assistance with site narrative	PM	5
Structural illustration	Illust	10
Assistance with illustration	PO	3
◆ COMPLETION OF KEY STAGE 2		

*Table 10: Summary of structural analysis tasks*

## 9.2 Analysis of Pottery

### 9.2.1 Quantification and recording of pottery and CBM

Pottery and ceramic building material will be laid out in context order. Pottery will be quantified by minimum vessel and sherd count, and weight, and ceramic building material (CBM) by fragment count and weight. Pottery and CBM fabrics have already been identified according to the Bedfordshire Ceramic Types Series, and these will be checked. All attributes such as decoration, evidence of function (sooting, wear marks etc.), and manufacturing techniques (firing characteristics etc.), will be recorded. Any complete or measurable dimensions of CBM fragments will be recorded. All quantified data will be entered onto the relevant table within the site database.



### 9.2.2 Production of technical text for pottery and CBM

Detailed description of the pottery and CBM recovered, including fabric and form definitions. Selection of pottery vessels or CBM fragments for publication standard illustration will be made at this juncture. The criteria for the selection of illustrated pottery vessels will be as follows:

- all fabrics and forms previously unknown in the county and therefore unpublished
- better examples of those types already published
- vessels from specific features or groups of features
- vessels associated with specific structures
- vessels of intrinsic interest

#### ◆ COMPLETION OF KEY STAGE 1

### 9.2.3 Phasing/publication Liaison

See structural analysis section.

### 9.2.4 Pottery publication text

A specialist text summarising the pottery assemblage within appropriate chronological periods by fabric type, forms, decoration and attribute. The text will refer to comparative assemblages (published or unpublished, in particular that from the 1969–73 excavations). In addition and where appropriate the pottery assemblage from elements of the structural hierarchy i.e. landscapes and groups will be discussed.

### 9.2.5 CBM publication text

A specialist text summarising the CBM assemblage by type/forms.

### 9.2.6 Pottery illustration

Illustration of the material selected for inclusion in the technical text will be carried out by the Illustrator, in consultation with the artefact analyst.

#### ◆ COMPLETION OF KEY STAGE 2

<b>Ceramic Analysis</b>		
<b>Task</b>	<b>Staff</b>	<b>Days</b>
Quantification and recording (Pottery)	AO	3.5
Quantification and recording (CBM)	AO	0.5
Pottery technical text (type series)	AO	1
CBM technical text (type series)	AO	0.5
<b>◆ COMPLETION OF KEY STAGE 1</b>		
Phasing/publication Liaison	AO	1
Pottery publication text	AO	4
CBM publication text	AO	0.5
Pottery illustration	Illust	3
Assistance with pottery illustration	AO	1
<b>◆ COMPLETION OF KEY STAGE 2</b>		

**Table 11: Summary of ceramic analysis tasks**



### 9.3 Analysis of Other Artefacts

#### 9.3.1 X-radiography

Includes packaging of artefacts and transportation costs to lab, actual x-radiography costs and conservator's initial report, liaison with conservator, and up dating of the site database following return of the objects from the lab.

#### 9.3.2 Narrow Term identification

Each object will be assigned a narrow term, and where applicable, a date range. This information will be established by an examination of each object, noting;

- form
- method of manufacture
- material and source
- presence of diagnostic features
- condition
- selected parallels from comparable sites
- comparison with ceramic data from the site

#### 9.3.3 Technical Catalogue (Task 21)

A selection of registered artefacts will be made for inclusion in the publication catalogue and a draft catalogue prepared. Selection of artefacts for publication-standard illustration will be made at this juncture.

#### ◆ COMPLETION OF KEY STAGE 1

#### 9.3.4 Phasing/publication liaison (Task 23)

See structural analysis section.

#### 9.3.5 Non-ceramic publication text (Task 26)

Following phasing confirmation, the artefact assemblage will be discussed in relation to both the temporal and spatial framework of the site.

#### 9.3.6 Illustration (Task 29)

Illustration of the material selected for inclusion in the technical catalogue will be carried out by the Illustrator in consultation with the artefact analyst.

#### ◆ COMPLETION OF KEY STAGE 2

<b>Other Artefact Analysis</b>		
<b>Task</b>	<b>Staff</b>	<b>Days</b>
X-radiography	External	0.5
Narrow term ID (internal)	AO	1
Non-ceramic catalogue	AO	2
<b>◆ COMPLETION OF KEY STAGE 1</b>		
Phasing/publication liaison	AO	0.5
Non-ceramic publication text	AO	3
Illustration	Illust	1
Assistance with illustration	AO	0.25
<b>◆ COMPLETION OF KEY STAGE 2</b>		

**Table 12:** Summary of other artefact analysis tasks



## 9.4 Analysis of Structural Timbers

### 9.4.1 Recording

Recording will identify all attributes such as joints, carpenters' marks and other inscriptions, conversion of timber, decoration, sooting and wear marks etc. Evidence of original function and (in cases of re-use) subsequent function of each timber. Any datable attributes will be identified (e.g. if carpentry methods limited to a particular period are evident). A visual assessment of tree species, growth rate and likely habitat will be made. Significant features or, if relevant, whole timbers will be selected for illustration in the report.

#### ◆ COMPLETION OF KEY STAGE 1

### 9.4.2 Phasing/publication liaison (Task 23)

See structural analysis section.

### 9.4.3 Structural timber publication text (Task 27.1)

The final report would describe the significant features of the timbers and interpret them in the context of the site.

### 9.4.4 Illustration

Illustration of the material selected for inclusion in the technical catalogue will be carried out by the Illustrator in consultation with the woodwork specialist.

#### ◆ COMPLETION OF KEY STAGE 2

Structural Timber Analysis		
Task	Staff	Days
Recording	External	3
◆ COMPLETION OF KEY STAGE 1		
Phasing/publication Liaison	PO	0.5
Publication text	External	1
◆ COMPLETION OF KEY STAGE 2		

*Table 13: Summary of structural timber analysis*

## 9.5 Analysis of Animal Bone

### 9.5.1 Quantification and recording

Recording and analysis will incorporate the identification and quantification of skeletal elements by species from each context with the aim of investigating intra-site variation in faunal assemblage composition between different features. Where possible, measurements will be taken and recorded.

#### ◆ COMPLETION OF KEY STAGE 1

### 9.5.2 Phasing/publication liaison

See structural analysis section.



### 9.5.3 Animal bone publication text

The final report will incorporate any new information alongside comparisons with other relevant sites and a discussion of species representation, preservation and provenance.

#### ◆ COMPLETION OF KEY STAGE 2

<b>Animal Bone Analysis</b>		
<b>Task</b>	<b>Staff</b>	<b>Days</b>
Quantification and recording	external	3
<b>◆ COMPLETION OF KEY STAGE 1</b>		
Phasing/publication Liaison	PO	0.5
Publication text	external	1
<b>◆ COMPLETION OF KEY STAGE 2</b>		

**Table 14:** Summary of animal bone analysis tasks

## 9.6 Analysis of Charred Plant Remains

### 9.6.1 Quantification and recording

The flots and unsorted residues of samples taken will be subject to identification in order to assist interpretation of the origin and character of the containing deposits (for example if only wood charcoal is found this would indicate fuel ash; reed or straw may indicate burnt thatch, hence destruction of buildings by fire). Full quantitative analysis is unlikely to produce significant conclusions. The earliest, middle Saxon, deposits will be prioritised as these contexts are relatively rare.

#### ◆ COMPLETION OF KEY STAGE 1

### 9.6.2 Phasing/publication liaison

See structural analysis section.

### 9.6.3 Charred plant remains publication text

The final publication text will detail the analysis of selected samples and incorporate the results of the assessment for unanalysed samples.

#### ◆ COMPLETION OF KEY STAGE 2

<b>Charred Plant Remains Analysis</b>		
<b>Task</b>	<b>Staff</b>	<b>Days</b>
Quantification and identification	external	1
<b>◆ COMPLETION OF KEY STAGE 1</b>		
Phasing/publication Liaison	PO	0.5
Charred remains publication text	external	1
<b>◆ COMPLETION OF KEY STAGE 2</b>		

**Table 15:** Summary of charred plant remains analysis tasks



## 9.7 Overall Publication, Archiving and Project Management

### 9.7.1 Editing publication text including specialist reports

The entire publication will be read and edited to ensure a consistency in approach.

### 9.7.2 Production of synthesis

A synthetic text will be produced discussing the key elements of the site, probably within the major chronological periods.

### 9.7.3 Amendments and queries in consultation with specialists during article preparation

During the production of the synthesis it is likely that a number of questions will arise that the various specialists will need to address.

#### ◆ COMPLETION OF KEY STAGE 3

### 9.7.4 Albion refereeing process

Albion has a policy of circulating the first draft of articles intended for publication to the client, AO and any other interested parties. This task includes time for any required discussion with the referees.

#### ◆ COMPLETION OF KEY STAGE 4

### 9.7.5 Submission of article and amendments resulting from editor's comments to publication text and figures

Amendments to publication text and figures based on comments received from Albion's refereeing process, following submission of the publication article to the editor of *Bedfordshire Archaeology*.

### 9.7.6 Printing and proof reading

The printing of the article will be arranged by the editor of *Bedfordshire Archaeology*, but proof reading will be necessary.

### 9.7.7 Archiving and accessioning

Upon completion of the report, the written and material archives will be prepared for accessioning to Bedford Museum. The cost of transfer includes transport, liaison and storage charges.

### 9.7.8 Project management

All project tasks have been identified from Albion's generic task list menu. These have been entered onto the Albion's Time Recording System (TRS) so that expenditure and resources can be tracked throughout the life of the project. The management of the project includes monitoring the task budgets, programming tasks, checking timetables and liaising with all members of the project team.

Overall publication, archiving and project management			
Task	Staff	Days	
Editing publication text	PM	5	
Production of synthesis	PM	5	
Amendments and queries in consultation with specialists during article preparation	PM	1	
◆ COMPLETION OF KEY STAGE 3			
Albion's refereeing process	PM	1	



	Albion's refereeing process	ext.	2
	Albion's refereeing process	OM	1
◆	<b>COMPLETION OF KEY STAGE 4</b>		
	Submission to <i>Bedfordshire Archaeology</i>		
	Amendments resulting from editor's comments	PM	2
	Printing	ext.	
	Proof reading	PM	1
	Archive preparation (Structural)	AO	2
	Archive preparation (Artefacts)	AO	1
	Archive transfer (storage costs)	ext.	
	Archive transfer	AO	1
	Project management (Overall)	PM	2
	Project management (Albion)	OM	2
◆	<b>COMPLETION OF KEY STAGE 5</b>		

**Table 16:** Overall publication, archiving and management tasks





## 10. APPENDIX 2: THE PROJECT TEAM

To ensure a consistency of approach the same specialists will be used who have been involved in the assessment stage of the project.

Task	Org.	Title/Organisation	Name
Overall management	Albion	Operations Manager (OM)	Drew Shotliff
Daily management	Albion	Project Manager (PM)	Jeremy Oetgen
Structural analysis	Albion	Project Officer (PO)	Christiane Meckseper
Artefact analysis	Albion	Finds Officer (FO)	Jackie Wells
Structural timbers	External	MoLAS	Damian Goodburn
Animal bone analysis	External	University of Bournemouth	Mark Maltby
Charred plant remains	External	ULAS	Angela Monckton
Illustration	Albion	Illustrator (Illust.)	Cecily Marshall
Archiving	Albion	Archives Officer (AO)	Helen Parslow

ULAS: University of Leicester Archaeological Services.

MoLAS: Museum of London Archaeology Service.

**Table 17: The project team**



## 11. APPENDIX 3: SUMMARY OF ALL TASKS

Description	Staff	Days
Liaison meetings	PM PO Illust	2 2 2
Analysis of documentary etc. sources	PO	5
Computerisation	PO	5
Subgroup and group analysis	PO	10
Landscape and phase analysis	PO	5
Assistance with analysis	PM	2
Pottery quantification and recording	FO	3.5
Pottery technical text	FO	1
CBM quantification and recording	FO	0.5
CBM technical text	FO	0.5
X-radiography	external	0.5
Narrow term ID	FO	1
Non-ceramic catalogue	FO	2
Structural timber recording	external	1
Animal bone quantification and recording	external	3
Charred plant remains quantification and recording	external	1
<b>Keystage 1: completion of analysis</b>		
Phasing/publication liaison: Structural analysis	PO PM	3 3
Phasing/publication liaison: pottery	FO	1
Phasing/publication liaison: non-ceramic	FO	0.5
Phasing/publication liaison: structural timbers	PO	0.5
Phasing/publication liaison: animal bone	PO	0.5
Phasing/publication liaison: charred plant remains	PO	0.5
Site narrative	PO	10
Assistance with site narrative	PM	5
Pottery publication text	FO	4
CBM publication text	FO	0.5
Non-ceramic publication text	FO	3
Structural timbers: publication text	external	1
Animal bone: publication text	external	1
Charred plant remains: publication text	external	1
Structural illustration	Illust	10
Assistance with structural illustration	PM	3
Pottery illustration	Illust	3
Assistance with pottery illustration	FO	1
Non-ceramic illustration	Illust	1
Assistance with non-ceramic illustration	FO	0.25
<b>Keystage 2: completion of all specialist text</b>		
Editing publication text	PM	5
Production of synthesis	PM	5
Amendments and queries in consultation with specialists during article preparation	PM	1
<b>Keystage 3: completion of 1st Draft</b>		
Albion's refereeing process	PM	1
Albion's refereeing process	external	
Albion's refereeing process	OM	1
<b>Keystage 4: Submission to Bedfordshire Archaeology</b>		
Amendments resulting from editor's comments to publication text and figures	PM	2
Printing	external	
Proof reading	PM	1
Archive preparation: structural data	AO	2
Archive preparation: finds data	AO	1



Description	Staff	Days
Archive transfer: storage costs	external	
Archive transfer	AO	1
Project management: overall	PM	2
Project management: Albion	OM	2
<b>Keystage 5: end of project</b>		

**Table 18: Summary of all tasks**



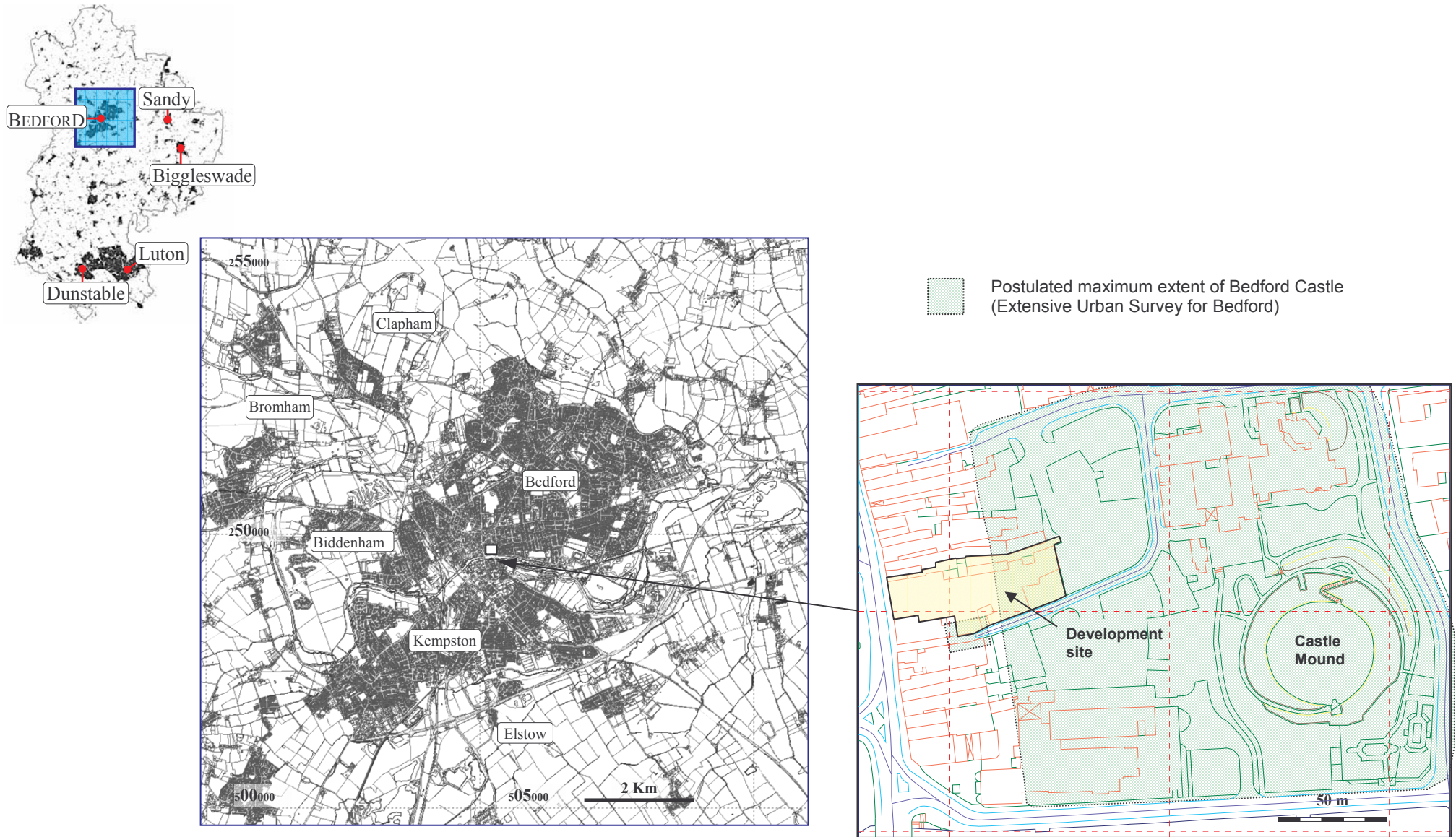
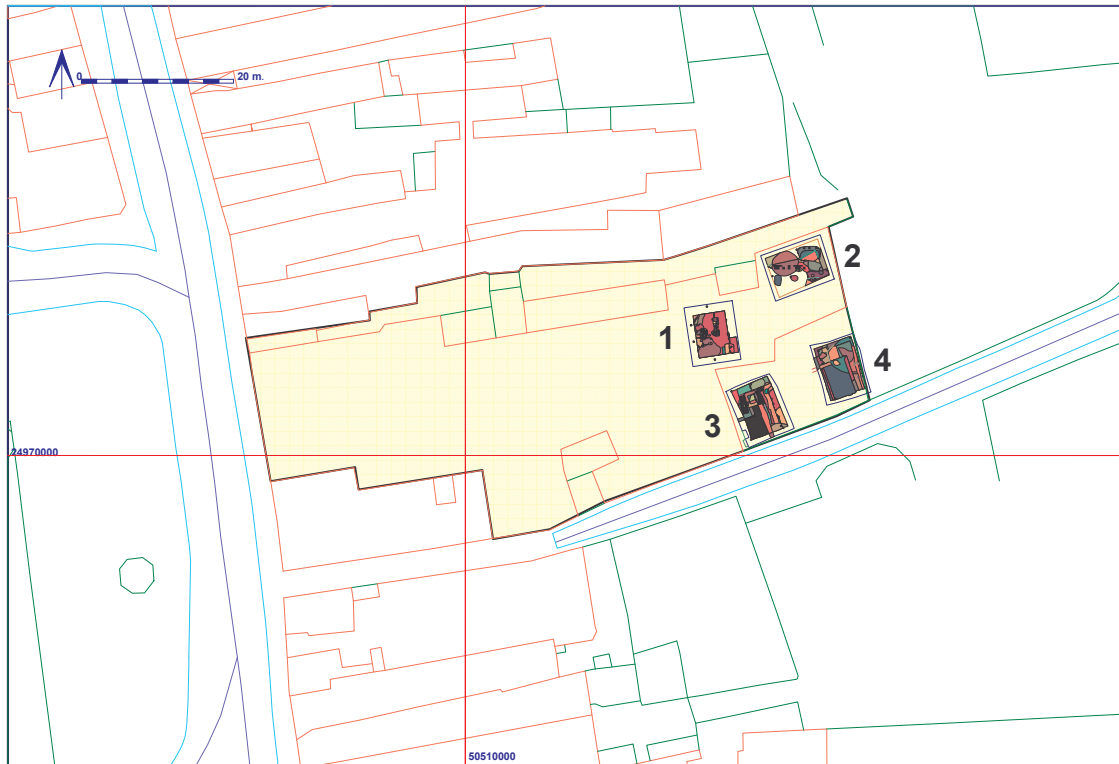


Figure 1: Site location map

Base map reproduced from the Ordnance Survey Land-line Map (2001), with the permission of the Controller of Her Majesty's Stationery Office, by Bedfordshire County Council, County Hall, Bedford. OS Licence No. 076465(LA). © Crown Copyright.





**Figure 2:** Location of car stacker pits

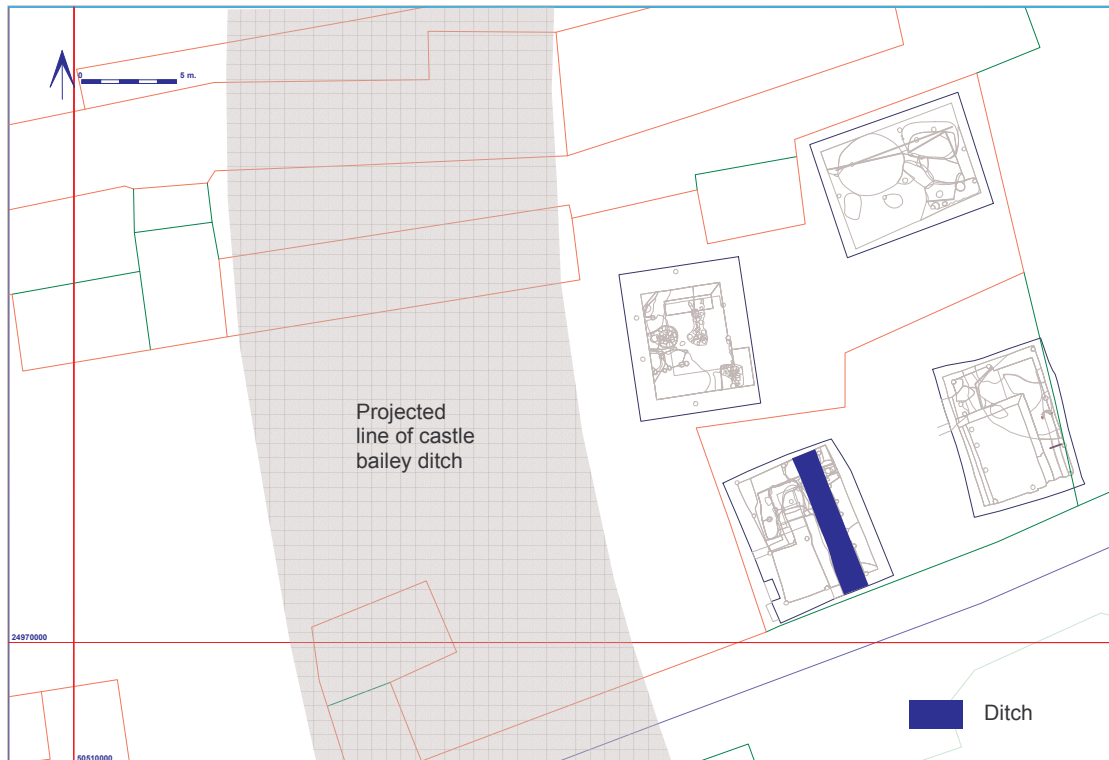


**Figure 3:** Location of watching briefs of groundworks and standing buildings recording

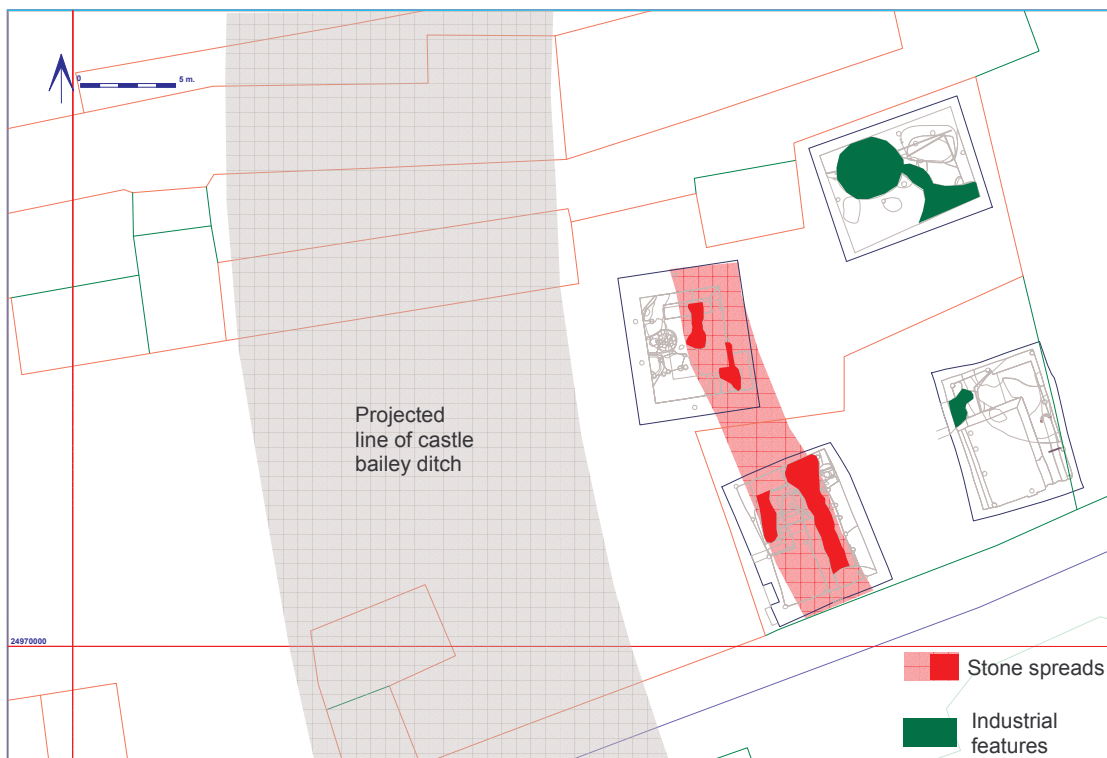
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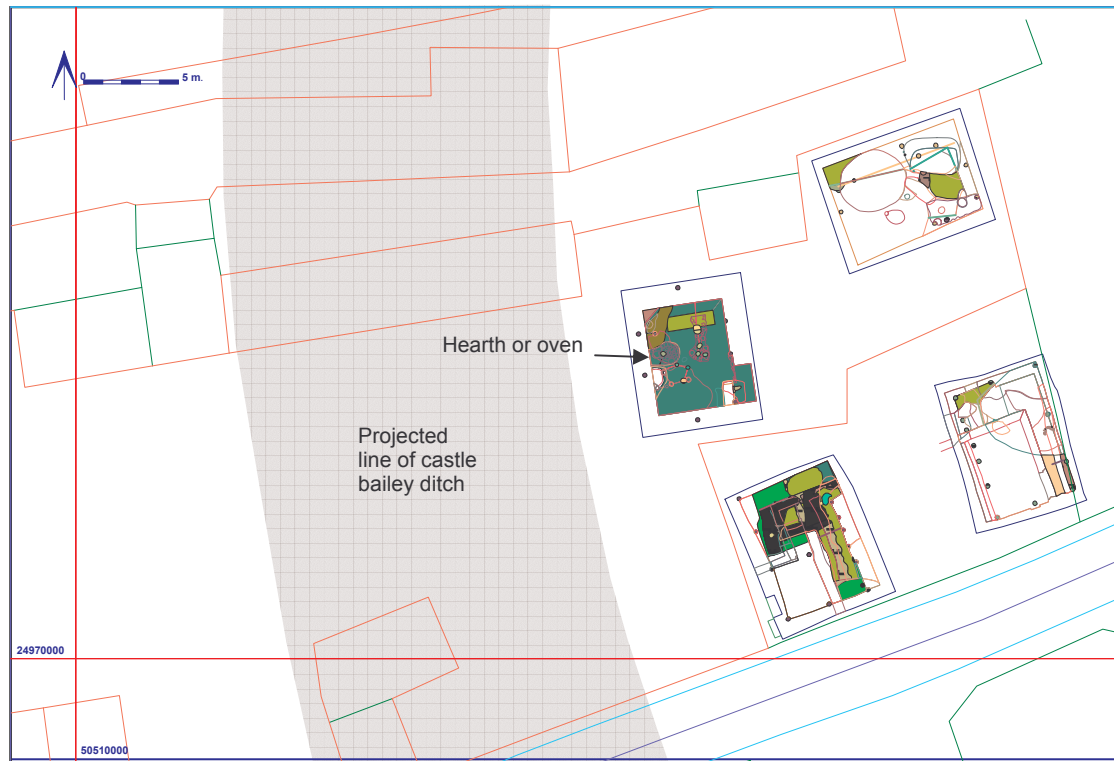


**Figure 4:** Middle Saxon ditch

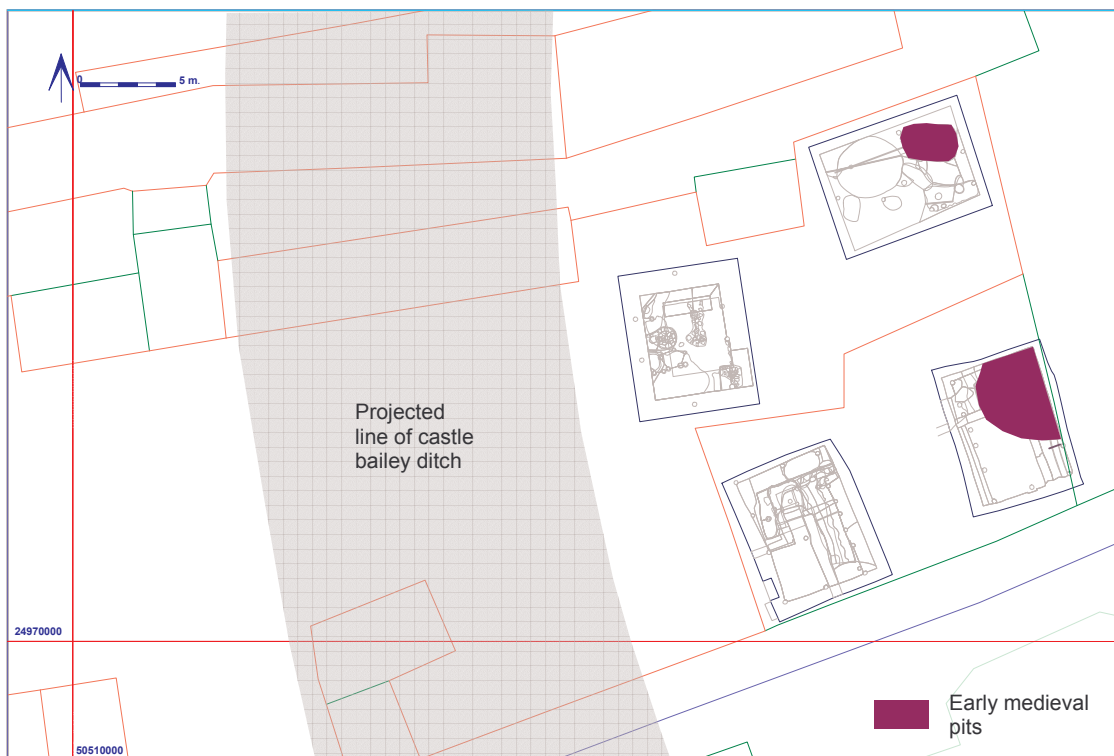


**Figure 5:** Saxo-Norman stone spreads and industrial features



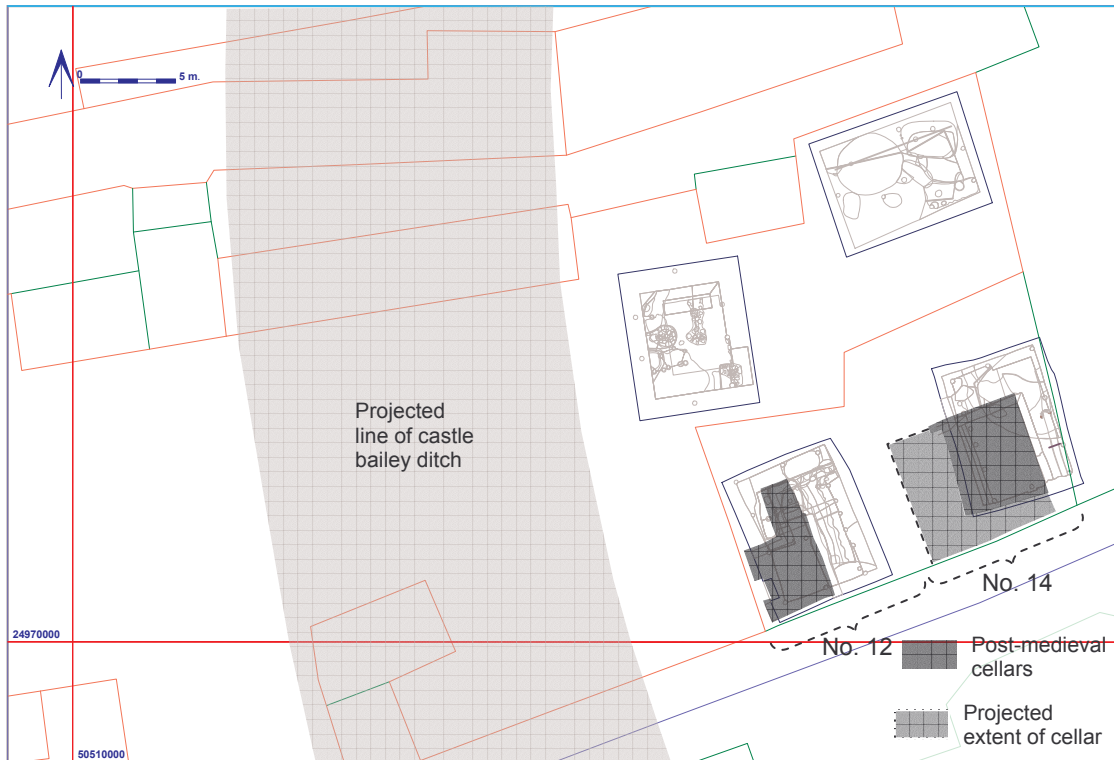


**Figure 6:** Saxo-Norman occupational evidence



**Figure7:** Early medieval pits





**Figure 8:** Post-medieval cellars

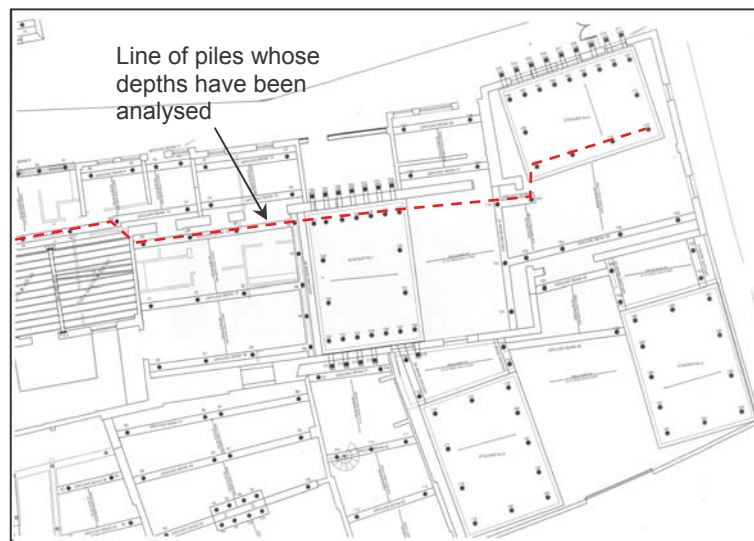
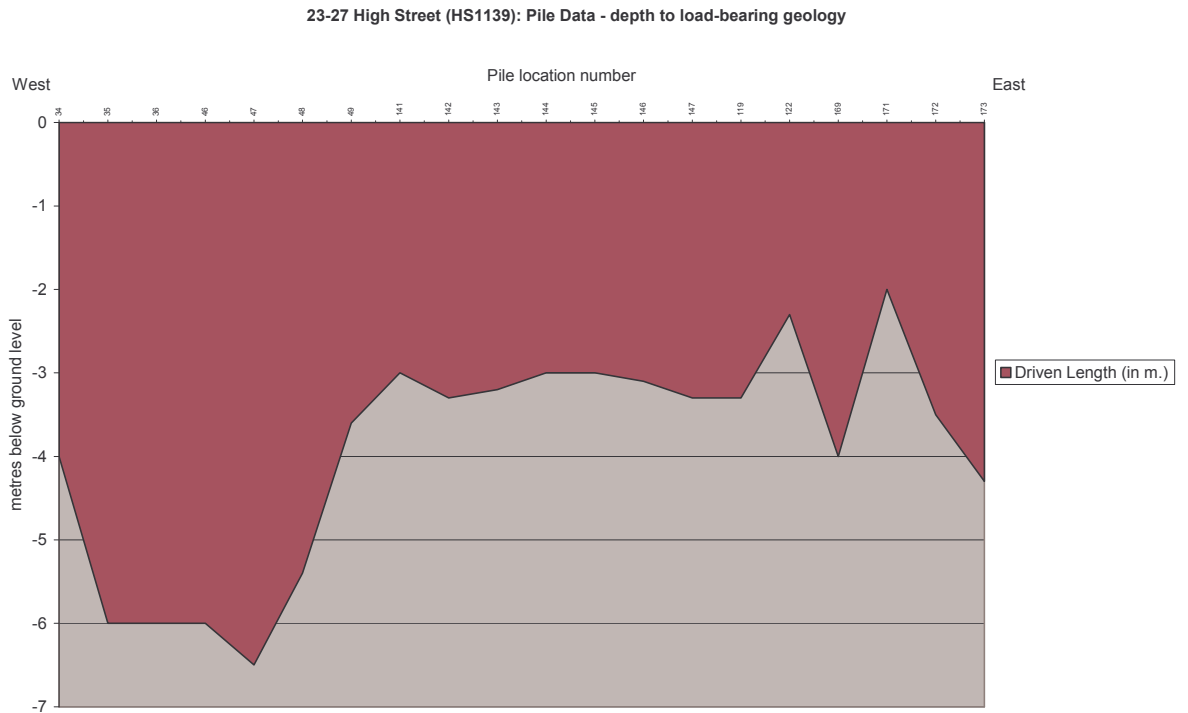
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**Figure 9:** Archive photograph looking west along Castle Lane, showing frontages of buildings that formerly stood at nos. 12/14 Castle Lane

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**Figure 10:** Provisional profile of top of load-bearing geology, based on preliminary analysis of engineer's piling logs