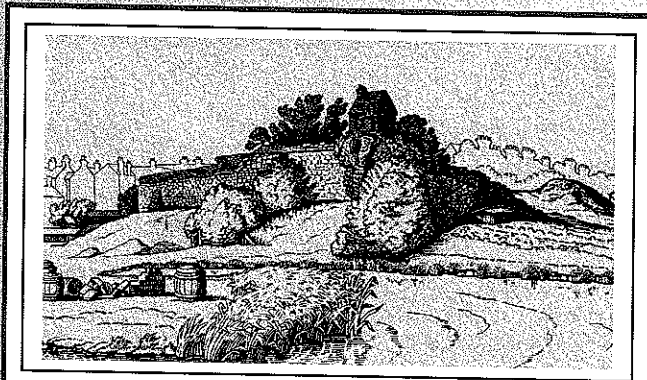


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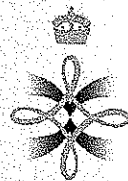


**THE UNIVERSITY
OF BIRMINGHAM**



**Banbury Town Centre Redevelopment
Project: A Post-Excavation
Assessment and Research Design**

Birmingham University Field Archaeology Unit



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**BANBURY TOWN CENTRE REDEVELOPMENT:
A POST-EXCAVATION ASSESSMENT
AND RESEARCH DESIGN**

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**Banbury Town Centre Redevelopment Project:
A Post-Excavation Assessment and Research Design**

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Banbury Town Centre Redevelopment Project:
A Post-Excavation Assessment and Research Design

1.0 INTRODUCTION

This report provides a preliminary statement on the results of a programme of archaeological investigations undertaken by Birmingham University Field Archaeology Unit on areas affected by the Banbury Town Centre Redevelopment. The work was commissioned by Banbury Shopping Centre Limited and PillarCaisse and was undertaken between 1989 and 1999. It was based on an archaeological project design prepared by Ferris and Litherland (1989) that has been updated on a regular basis, and considers the work undertaken by Fasham (1973, 1983) and Rodwell (1976).

The site as defined (Fig. 1) consists of a "13.44 hectare development....within the historic core of Banbury in an area roughly bounded by the inner relief road on the east, Bridge Street and the present Castle Shopping Centre on the south, and Castle Gardens on the north. The Oxford Canal bisects the proposal area roughly southeast-southwest and the major part of the development relevant to this brief lies to the west of the canal. The new Castle Street extension will, however, continue through to link with the inner relief road, and this, plus new landscaping and car parking areas, will affect the land between the River Cherwell and the Oxford Canal." (Brief for First Stage of Archaeological Works: Archaeological Section of Draft 106 Agreement, Section 2.1.1). Land use contained within the development area included a working bus station and car park, an arterial road through the town, and an area of buildings, largely 19th-century in character.

This report begins to synthesise a programme of work that has been undertaken over the last ten years, that included desk-based assessments, ground probing radar survey, borehole survey, test pitting, trial trenching (Fig. 2), open area excavation, documentary and cartographic research and standing building recording (a full list of reports from each stage of the work is available in Appendix 1). Outlined below are the principal results of the various investigations and a quantitative and qualitative assessment of the archive and finds. This is followed by an updated project design that includes proposals for further analysis leading to the full publication of the results.

The general objective of the full post-excavation analysis and publication programme will be to produce a thematic report combining the various elements of the study, rather than a series of disconnected site reports. However, for clarification of the results at this point in time the sites are related by overall phasing only and are discussed as separate units.

The layout of this report has been prepared according to the guidelines set out by English Heritage in the Management of Archaeological Projects (MAP 2).

1.1 Background to the Site

Banbury is situated approximately 32 kilometres to the north-east of Oxford on the southern border of the Midland plain. The town was sited in an important position on the western bank of the River Cherwell, on rising ground that controlled a fording point across the river. This position overlooked the junction of several arterial routes linking the east, west, south and north, routes that were significant from as early as the prehistoric period. The fortunes of the town are inextricably linked to those of the surrounding countryside, with the town being first and foremost a market for the distribution of agricultural produce and for servicing the agricultural community. The origins of the town lie in the Medieval period, when Banbury began to take on an urban character comparable with the settlement that we know today, the shaping force of the settlement at this time being the construction of the castle.

Banbury Castle was built in the first half of the 12th century by Bishop Alexander de Blois (1123-1148), of the See of Lincoln. The castle was situated on a knoll of slightly higher and better-drained land, just to the north of the market place, overlooking the crossing of the River Cherwell to the east. In the late-13th or early-14th century the Castle of Alexander de Blois was remodelled. The later castle incorporated the latest innovations in military design proved in the Welsh campaigns of King Edward I.

During the 16th century the castle fell into disrepair, but was rapidly refortified during the Civil War, when the castle successfully withstood two Roundhead sieges in 1644 and 1646. There are several documentary references to the repair and improvement of the fortifications in the time span between the two sieges. These final modifications included the creation of two new bulwarks and the addition of two sally ports. However, after the castle had surrendered on favourable terms in 1646, the defensive earthworks were slighted. Two years later, in 1648, the townspeople were granted permission to use stone from the castle to rebuild and repair the town that had suffered greatly during both sieges. Lord Saye and Sele, who then owned the castle, was paid £2,000 compensation. Towards the close of the 17th century a plan of the former castle area was made for the Lord Saye and Sele. This plan shows that in less than forty years the castle had almost completely disappeared, apart from two minor buildings and the outline of the large, but slighted, twin concentric ditches.

In the late 18th century, canal cuts from Coventry and Oxford bisected the Cherwell water meadows, to link up somewhere between Banbury Mill and the former Castle precinct. This was a major stimulus, not only to Banbury itself but also to the developments in this area now backing onto the new canal. It gave rise to such features and activities as boatyards and dry docks (of which Tooley's Boatyard is an important surviving example), boat building, limeburning, and timber and stoneyards.

The Victorian period in Banbury is characterised by the extensive building programme that took place all over the town. Improvements in the sanitation facilities, and better and more widespread services, left their mark below ground as much as the building programme did above.

1.2 Background to the Project

The development scheme was for an extension to the present Castle Centre and a new covered shopping centre, together with provision of a link road from Castle Street to the inner relief road, car parking, landscaping and ancillary facilities, plus the relocation of the Bus Station. The development affected part of the 'new town' created by Bishop Alexander de Blois, Bishop of Lincoln between 1123 and 1148. The area contained deposits relating to Banbury Castle and the Market Place frontages and burgage plots belonging to Bishop Alexander's town. It also affected parts of the 18th and 19th century townscape, canal and riverside landscape that so strongly influenced the growth and evolution of the modern town.

Three main zones of archaeology were identified within the development area:

Zone 1 The Castle Precinct

The Castle originally occupied a slight knoll to the north of the market place (NGR centre SP 4570 4080), the site was partially built over in the 1970s by the Castle Shopping Centre, Castle Street and a carpark to the north.

Zone 2 The Bridge Street/Mill Lane Urban Landscape

The Bridge Street/Mill Lane Zone comprised a triangular-shaped street block located on the eastern fringes of Banbury market (NGR centre SP 4585 4064).

Zone 3 The River and Canalside Waterfronts.

The Canal and Riverside zone comprised a roughly triangular-shaped unit of 0.5ha of land bounded by the canal to the east, Mill Lane to the south, Castle Street to the west and the bridge over the canal to Spiceball Park to the north (NGR centre SP 4585 4070). The protected Scheduled Ancient Monument of Tooley's Boatyard (SAM 172) occupies the north of Zone 3.

While these zones did reflect specific characteristics of the archaeological and historical resource, some repetition and overlap between them was inevitable (Fig. 1). The phasing laid out below is an overview of the whole of the development area, the phases within each individual Zone will be discussed in later sections of this document.

Table 1

PHASE	DESCRIPTION	ZONE 1	ZONE 2	ZONE 3
0	PRE-SAXON	•		
1	LATE-SAXON/EARLY-NORMAN	•	•	
1a	Timber Castle	•		
1b	Restructuring of the timber castle	•		
2	1150-1250 PLANNED TOWN	•	•	•
3	1250-1640 MATURING MARKET TOWN	•	•	•
4	CIVIL WAR	•	•	•
4a	Refortification	•		•
4b	Demolition of the Castle	•		•
4c	Reconstruction of the town in the aftermath of the war		•	
5	1778 IMPACT OF THE CANAL	•	•	•
6	LATER VICTORIAN IMPROVEMENTS	•	•	•
7	20 th CENTURY	•	•	•

1.3 Previous Archaeological work

The Castle Precinct (Zone 1) is the best documented area within the proposed redevelopment, and approximately one third of the castle was excavated prior to the building of the Castle Shopping Centre in the 1970s (Fasham 1973 and 1983; Rodwell 1976). The redevelopment affected the remaining two thirds of the castle complex.

The first castle was defended by a thick, embanked curtain wall with a relatively small ditch, possibly with rectangular interval towers at points around it (Rodwell 1976, 116). Excavation revealed a group of buildings within that was domestic in character. There is documentary evidence for a chapel within the walls, and reference to a prison that may have belonged to this phase of the castle.

Excavations to the south of Castle Street, in the early 1970s, showed that the castle had been remodelled when two large concentric ditches were dug, and the upcast used to create a raised central platform for the new castle. The line of the outer ditch and bank, the design of the curtain wall with drum towers, the narrow outer bailey overlooking the market place and the remains of buildings inside the castle were also located. Information about the inner ditch was also obtained.

During the excavation of a subway under Castle Street Fasham was able to excavate part of a small cemetery which, he believed, was 'probably associated with the siege of the castle in 1644' (1972, 322).

The 19th century saw development along Factory Street, including the building of industrial premises and several cellared buildings aligned with the street (Rodwell 1976, 91).

Excavations adjacent to Zone 2 were carried out by the Oxford Archaeological Unit, in advance of the construction of the Inner Relief Road (Chambers *et al.* 1991). They identified an important topographical feature, the river cliff of the Cherwell, located to the east of Mill Lane. The cliff appeared not only to have defined the floodplain of the river but also the extent of the medieval town. They also confirmed that medieval development occurred along the north side of Bridge Street close to the river crossing.

No previous archaeological work or discoveries are documented within Zone 3 prior to the current redevelopment scheme. However, a comprehensive building survey of Staley's Warehouse and a detailed history of the development of the canal wharves to the east of Mill Lane was written when the Inner Relief Road was punched through the neighbouring area (Kinchin-Smith 1992). This work was preceded by an evaluation carried out by the Oxford Archaeological Unit (Chambers *et al.* 1991).

2.0 RESULTS

2.1 Zone 1 The Castle Precinct

2.1.1 Introduction

The archaeological investigation of the castle involved initial desk-top assessment, non-intrusive and intrusive evaluation, and mitigation excavation. The location of the

most recent campaign of archaeological work can be seen on Figure 3, together with that of the previous excavations conducted by Fasham and Rodwell in the early 1970s. Operating within the ethos of PPG 16 the current excavation strategy, whilst driven by a series of clearly-defined research aims, was also concentrated upon those parts of the castle which were directly threatened by the proposed development. A further limiting factor was the need to avoid a number of live services, including high voltage electric cables, sewers, fibre-optic communication cables and gas mains.

A broad chronology for the major phases in the development of Banbury Castle was established in the written accounts of the 1970s excavations by Fasham (1973 and 1983) and Rodwell (1976). This has been incorporated into the provisional phase summary presented below. However, there are difficulties integrating both sets of excavation data. These problems exist over and above the obvious ones of integrating data from excavations which took place under different conditions some 30 years ago and which in some cases were up to 100m apart from one another. For example, it was clear that between the 1970s and 1990s up to 3m of ground had been cleared from the car park to the north of Castle Street, where the recent excavations were located. Therefore, evidence of activity after *c.*1250 was confined to substantial negative features such as moats and ditches, and deep wall foundations. Broadly speaking, only the earliest sequences of activity from the 1970s excavations were directly relatable to the results of the recent work. What is more, in several cases the level from which even relatively early features had been dug was found to have been subsequently scoured away. This stratigraphic, or vertical, limitation was further compounded by the disruptive effect of a number of deeply-cut modern services upon the physical relationship of archaeological features within a horizontal plane, which meant that it was difficult to group localised stratigraphical sequences into meaningful overall phases.

However, whilst acknowledging that there are problems, it should be stressed that in several important respects the results of the 1970s and 1990s excavations complement and enhance one another. On the one hand, much of Fasham's work, which was concentrated within an area very close to that of the 1990s excavations, was directly comparable (Area B, 1983,72). On the other hand, Rodwell's excavations mainly provided information on the layout and development of the castle from the 13th century on the south side of Castle Street, while the 1990s excavations have mainly charted the earlier phases in the development of the castle to the north of Castle Street.

2.1.2 Definitions

It is necessary to clarify the terminology used to define the castle described below. The castle has many different meanings in European history and archaeology. Its most familiar use is to describe a fortified residence. At Banbury this definition is immediately stretched by the historic function of the castle as an administrative centre from which the Bishops of Lincoln oversaw their estates in north Oxfordshire. Therefore, at this early stage of research a very broad conception of the castle has been employed. Of course, refinement of the terminology will form one of the major research objectives in subsequent work.

The existence of a 'timber castle', which preceded the stone castle built by Alexander the Magnificent, was unsuspected before the recent excavations took place.

Scholarship in the last 20 years has demonstrated that up to the 13th century large numbers of castles were built of timber or clay, cob, thatch and shingle. So, today the existence of a timber phase is not, perhaps, as surprising as it was in the early 1970s. Of course this evidence is based upon a relatively small sample of the overall site, and it would be unwise to draw too strict a dichotomy between timber and stone phases, as neither material may have been mutually exclusive to each of the broad phases outlined below.

The terminology used to describe the various components of the castle plan should also be clarified. When the compilers of the *Victoria County History* visited the site of the castle in 1909, no doubt with the local example of Oxford Castle in mind, they interpreted the mound in Castle Street East as a motte. This classification clouded later interpretations of the development of Banbury Castle. The Normans introduced the motte and bailey castle to this country. It consisted of an artificially-constructed earthen mound, the motte, surrounded by a ditch with an adjoining separately-defended enclosure, the bailey. There is no evidence that the timber or early stone castles were motte and bailey types. However, this is not to downgrade them to defended manor houses, as both have evidence of substantial fortifications. The later concentric double-ditched castle is an advanced refinement of the motte and bailey, based upon improvements made in the light of experiences in the Crusades and North Wales. Therefore, strictly speaking it is not a motte and bailey castle. However, the term bailey has been used to describe the inner and outer enclosures defined by the moats and curtain walls, although possibly 'court' may be a more appropriate term. The artificially-raised inner bailey is not strictly speaking a motte.

2.1.3 Excavation Results

The following narrative is based upon a framework devised from the initial processing and ordering of the site archive. Seven main complex phases of activity were recorded. The most coherent and significant archaeology related to the earliest three phases, and included a sequence of moats with deep and partially-waterlogged fills, remains of timber and stone structures, and the substantial foundations of a curtain wall. Dating of the phases is obviously provisional, and already assessment of the structural evidence, and the dating evidence for the pottery, suggests that refinement of the dating for the earliest stone phases of the castle, for example, can be made at an early stage in the post-excavation programme.

2.1.4 Preliminary phasing for Zone 1:

Table 2

PHASE	DESCRIPTION
0	PRE-SAXON Pre-castle occupation
1	LATE-SAXON/EARLY-NORMAN
1a	Timber Castle Site clearance and construction of timber castle
1b	Restructuring of the timber castle
2	PLANNED TOWN 'Alexander's Castle'
3	MATURING MARKET TOWN Concentric Castle
4	CIVIL WAR
4a	Refortification
4b	Demolition of the Castle Razing the Castle c.1648-1685
5	IMPACT OF THE CANAL Laying out of the Castle Wharf and the Castle Gardens
6	LATER VICTORIAN IMPROVEMENTS Housing Development
7	20th CENTURY Widening of Castle Street

PHASE 0 Pre-Saxon Pre-castle occupation.

Banbury Castle was sited upon a low, but relatively well-drained, gravel knoll sloping away to the north and east towards the marshy flood plain of the River Cherwell. Underneath the superficial gravel deposits Blue Lias Clays were penetrated in places by deeply-dug moats which later surrounded the castle and also helped to drain the land. At the interface of the clay and gravel several streams drained eastwards into the River Cherwell, including the Cuttle Brook which was subsequently diverted to feed the castle moats. Residual scatters of flint flakes and implements attest to prehistoric occupation of the gravel knoll, which was a popular choice of site within the Thames Valley generally. Likewise, Roman pottery was also found, mainly within late-Saxon contexts. A marked bias within this assemblage towards higher status and colourful fabrics has been noted and will be investigated further.

PHASE 1 Late-Saxon/Early-Norman

PHASE 1a Timber Castle Site clearance and construction of the timber castle (Fig. 4)

The earliest defensive remains consisted of a 10m-wide and 3m-deep ditch on an east-west alignment (Plates 1 and 2). There was slight, but tantalising, evidence for the southerly return of this ditch on both the east and west sides of the excavation, suggesting that it formed a moated enclosure, approximately 50m wide but of unknown depth. On the inner lip of the ditch a series of beam slots for a timber

rampart or palisade was cut into up-cast material from the ditch which had been dumped here to increase the size of the defences. This up-cast material sealed a buried soil horizon which was only seen on the southern lip of the ditch, having been removed over most of the area before construction work began.

A complex area of gulleys, beam slots and post-holes was noted inside of the putative north-western return of the moat, after removal of another garden soil, this time associated with the first stone-built castle. At present, the most likely possible interpretation of these features is as the remains of a timber tower situated at one corner of the early moated enclosure. No archaeology of this date was described in either Fasham or Rodwell's site narratives.

PHASE 1b Restructuring of the Timber Castle

Alteration of the timber castle, silting-up and re-cutting of the moat, probable dismantling of timber palisade, construction of a garderobe drain and cutting of a cluster of circular, bowl-shaped pits (Fig. 5).

After the initial construction of the moat and timber castle the moat began to silt up, probably as a result of seasonal inundation from the River Cherwell. A secondary deposit within the moat contained a high percentage of degraded timber, possibly the result of demolition work nearby. One of the earliest of a number of smaller re-cuts of the moat included the insertion of a garderobe drain, constructed from hollowed sections of oak, which rested upon a sand bed (Plate 3). At the eastern end of this chute or drain another smaller ditch appeared to run north-east from the main moat. A cessy-deposit had accumulated at the junction of this smaller ditch and the outflow of the drain.

A number of circular, bowl-shaped pits, between 2m and 2.5m in diameter, was cut during this intermediate phase. Very little in the way of pottery or environmental information was recovered from the pit fills and their provenance must for the present remain unclear. These pits appeared to form a cluster adjacent to the northern side of the early moated enclosure. Two of the pits were cut through the beam slots of the timber rampart, which implies it was demolished. In location, level, and form the pits bear a close resemblance to Fasham's 'Pre-gravel' Phase 1 Pit-groups A and B excavated nearby, and may be directly comparable. However, it is by no means clear if all these pits are contemporary in date.

PHASE 2 Planned Town

'Alexander's Castle', enlargement of the defended enclosure, excavation of a new moat, and construction of a complex of ironstone buildings (Fig. 6).

The defended enclosure of the Phase 2 Castle was enlarged by digging a new moat some 5m further north. The moat itself though was smaller than the Phase 1a moat, measuring about 5m in width and 2m in depth (Plate 4). A series of ironstone foundations showed that several structures was built against the northern perimeter of the enlarged enclosure (Plate 5). The majority of these structures was built over the silted Phase 1 moat. This resulted in some later subsidence, necessitating various

repairs, despite the fact that the foundations of the largest building (Structure 3/2) were strengthened where they were built over the softer fill of the moat. There did not appear to be a typical curtain wall on the inner side of the moat, instead, the outer faces of the buildings themselves may have been judged to afford sufficient defence.

A free-standing rectangular ironstone building (Structure 3/1), which measured 9m by 6m internally, was situated near the putative north-west corner of the Phase 2 Castle enclosure. This was the only Phase 2 building to retain a floor, central hearth and up to six courses of masonry above ground-level (Plate 6). The building was not completely dismantled at the end of Phase 3 because some of the walls were sealed under a bank thrown up against the inner curtain wall of the Phase 3 Castle. This bank survived beneath a narrow berm of land which was not cleared when the car park was built. There was an entrance to the building from the south. The entrance was adapted sometime in the later life of the building to form a small chamber. The phasing of the hearth and the addition of a small chamber suggest that the building had a domestic function for most, if not all, of its life, and would also seem to indicate that the building was single-storied and not an undercroft to a first-floor hall. The development of Structure 3/1 was similar to that of a building excavated by Rodwell some 90m to the south (1976, 118). At some stage in the history of the building, the floor and walls slumped severely into the soft fill of the Phase 1 moat. The extent of this slumping was such that the building must have become disused. Perhaps the slumping was caused by the pressure created by the dumping of material here to raise the height of the inner bailey of the Phase 4 castle (see below).

About 10m to the east of Structure 3/1 the foundations of an east-west-aligned building (Structure 2) formed the core of a complex of other structures. The east end of Structure 3/2 was truncated by a late-18th-century yard surface, but the building was at least 15m long and 8.5m wide. Levelling for the car park meant only the foundations survived, consequently details concerning the form and function of the building could not be discerned with any accuracy.

However, the build of the foundations - which were stepped internally, possibly to support a timber floor - was of a high quality, being wider and better-faced than the foundations of Structure 3/1. In common with Structure 3/1, the building was partially built over the line of the Phase 1 moat. The foundation of the north wall was supported upon a bed of compact, relatively-clean Blue Lias Clay. The foundation of the west gable wall, which bisected the moat and was subject to greater longitudinal stress within the building, was supported upon a deep rubble base set into the early moat. The foundation of the south wall was a conventional design because it was situated inside the inner lip of the Phase 1 moat.

Sandwiched between the north wall of Structure 3/2 and the Phase 2 moat were the remains of a sequence of later buildings which had been added onto the larger building (Structure 3/3), one of which contained a large rectangular hearth. Another later building (Structure 3/4) was built against the south side of Structure 3/2. Part of a moulded door-jamb survived *in situ* in the north-east corner of the building. Structure 3/4 was on a similar alignment, and located in close proximity, to the pre-gravel Building III, excavated by Fasham and roughly dated 1125-1250 (1983, 78). To the west of Structure 3/2, in an area heavily truncated by modern services,

remnants of walling indicated that the gap between the west gable end of Structure 3/2 and the east wall of Structure 3/1 was infilled by another building (Structure 3/5). Structure 3/2 was clearly a building of some quality, the walls of which were wide enough to support a two-storied structure. Therefore, it is tempting to view the building as a hall, surrounded by ancillary buildings. In common with the Phase 3 Castle the north side of the castle, which overlooked the marsh, was not as heavily defended as the south side, which faced the marketplace. So, while Structure 3/2 was probably the most important on the north side of the castle, it is unlikely that it would have formed part of the principal range, which would probably have been located further to south.

PHASE 3 Maturing Market Town

Widespread demolition of the Phase 2 Castle, and construction of the concentric double-ditched castle (Fig. 7).

Evidence from Rodwell's excavations in the 1970s indicated that the buildings of the Phase 2 castle were completely demolished to foundation level on the south side of the castle. These were replaced by a system of defences (Fig. 8) which comprised an outer ditch and bank, a curtain wall with interval and corner towers, an inner ditch, and a raised platform within the inner bailey which sealed the Phase 2 levels. The majority of the inner bailey of this later castle lay outside of the area available for investigation in the 1970s. By contrast, the recent excavations were concentrated upon those parts of the northern half of the inner bailey which were accessible.

However, levelling for the car park north of Castle Street in the 1960s had completely removed all of what Fasham called 'the gravel layer', which comprised the material excavated from the inner ditch and then dumped to raise the height of the inner bailey of the Phase 3 Castle. Therefore, the majority of the archaeology post-dating Phase 2 was also carried away with the exception of various deeply-dug and mainly defensive features. This combined with the extensive robbing of all major Phase 3 walls after the Civil War (Phase 4b) meant that the chronology of this period must remain crude. So, at this stage of research, the wide mid-13th to 14th-century date bracket suggested for this phase by the excavations in the 1970s cannot be improved upon.

Demolition of 'Alexander's Castle'

Inside the inner bailey, Structure 3/1 was extensively, but not entirely, demolished. Parts of the north and west walls of the building were not demolished to foundation level, including the north-west return which survived to a height of five courses. This was probably because these sections of wall were covered by a bank thrown up against the inner curtain wall. There is also some evidence to suggest that the north wall and part of the east wall of Structure 3/2 may have been retained into Phase 4, although it is unlikely that the whole building survived demolition. A circular oven to the north of Structure 3/2 was the latest in a sequence of hearths and buildings (discussed in the Phase 3 Section, above) and may have been built during Phase 4.

A large, straight-sided circular pit, nearly 10m in diameter and 2m in depth, occupied a position very close to the centre of the inner bailey. The exact chronology of this pit cannot be fixed precisely, because it was truncated by the levelling for the car park. However, it cut the south and west walls of the Structure 2 and the backfill contained

a large quantity of Banbury Ware, including the smashed remains of a virtually-complete, large storage jar. Banbury Ware is known in Banbury as late as the 14th century, but began to be superseded by Potterspury Ware in the late-14th and 15th century. The pit also contained a copper alloy bowl (Plate 7) but did not give any clues as to function. The pit may have been a borrow-pit to quarry gravel. However, the straight-sides, limited size and central location of the pit argue against such a function. It may be possible that we are looking at a comprehensively robbed circular building. Such a building would have occupied the most important location within a castle owned by the Bishops of Lincoln, remodelled according to new principles of military architecture largely derived from experiences in the Crusades. Within such a context it is not inconceivable that this putative building may have been a circular chapel.

Inner Curtain Wall

Several sections of deep foundations for the inner curtain wall survived on the north and east sides of the inner bailey. Where the foundations of the north curtain wall were constructed in the Phase 3 Castle moat these survived to a depth of 2m beneath clearance level (Plate 4). The wall itself was 4m, or nearly 12 feet wide, constructed from faced iron-stone blocks with a rubble core, most of the facing stone being robbed during Phase 6. A later garderobe/interval tower (Structure 4/1) had been added to the curtain wall. The garderobe drain would have fed into the inner moat.

The Inner Moat

The inner moat was situated just outside of the inner curtain wall. The inner lip of the moat was also embanked against the foundations of the curtain wall. When originally dug the inner moat was about 15m wide and 5m deep (Plate 8). The large quantity of spoil excavated from this feature was used to artificially raise the height of the inner bailey of the castle and formed Fasham's 'gravel layer'. The inner moat was re-cut a number of times during its lifetime, the last and most disruptive occasion being the Civil War refortification.

Outer Defences

No trace of an outer curtain wall was found on the northern side of the castle. The only outer defence consisted of the outer moat, which was also roughly 15m wide. Truncation of the outer moat by levelling to create the car park meant that the original depth of the moat could not be ascertained on the north side of the castle. The reduced defences on the north side of the castle may be explicable in terms of the natural defensive barrier represented by the marshy land here. The outer moat was also obliquely sectioned by the Cuttle Mill excavation (see section 2.3.5 Phase 4b below). Here the moat was at least 3m deep when excavation ceased due to water-logging.

PHASE 4 The Civil War

PHASE 4a Refortification

Because of the extensive levelling caused by the construction of the car park in the 1960s, evidence relating to the Civil War was confined to evidence of refortification of the site by re-cutting the inner moat. Various intrusive finds from this period,

including cannonballs, a large, unexploded, trench mortar (12 inches in diameter) which had sunk into the inner moat, and part of a human femur were found across the site. Their presence is explicable in terms of the well documented disruption caused by the Parliamentary bombardment of the castle during the Civil War and subsequent demolition.

PHASE 4b Demolition of the Castle
Razing the Castle c.1648-1685

Evidence for the demolition of the castle was confined to various fills within the inner moat of the castle. With the exception of 'a little storehouse and stable' the estate map of 1685 confirmed that the castle was comprehensively dismantled at the end of the Civil War. This would have resulted in a large quantity of discarded material being scattered over the site, which filled in the remaining moats. Limited excavations by the Banbury Historical Society in advance of the construction of the car park in the 1960s were located on what was then believed to be part of the castle motte. The results were disappointing because they indicated that much of the Castle Street mound was in fact material of relatively recent date. In fact, it is quite likely that the higher parts of the so-called motte were the product of late-17th-century demolition activity.

PHASE 5 Impact of the Canal
Laying out of the Castle Wharf and the Castle Gardens (Fig.9)

The development of the Castle Gardens probably started in the 18th century. Evidence of this phase of activity was confined to the cultivated soils within the upper fills of the inner moat, which confirmed the documentary evidence for the development of the site. Activity associated with the building of the canal is represented by the remains of a dry-dock excavated to the north-east of the castle which cut through the inner defences of the Castle (Plate 9), and will be discussed in another section of this report (see section 2.3.5 Phase 5, below). Levelling to create a yard surface around the dry-dock and the Castle Wharf, depicted on the 1st Edition Ordnance Survey map, truncated the eastern end of Structure 3/2, and may be assumed to have covered a wide area.

PHASE 6 Later Victorian Improvements
Housing Development (Fig. 9)

The Victorian era saw the laying out of Castle Street East and a terrace of houses which fronted onto Castle Street. In the 19th century, industrial activity around the Castle Wharf included the operation of lime-kilns on the castle site.

PHASE 7 20th century

Widening of Castle Street

This phase covers a wide period of disruption to the castle as the urban core of Banbury gradually expanded in response to a rising population. Castle Street East was levelled and widened in the 1960s, and the terrace of houses which fronted onto Castle Street was demolished in the 1970s. However, construction of the car parks to the north of Castle Street caused most disruption to the archaeology of the castle. The car park where the bulk of the recent excavations were centred was created in the 1960s, at the same time that the level of Castle Street itself was lowered. The second car park to the west of the excavations was constructed in the 1970s.

2.2 Zone 2 Bridge Street/Mill Lane Urban Landscape

2.2.1 Introduction

Apart from a row of ten cottages built at the north-east end of Factory Street between 1788 and 1852, Bridge Street and Mill Lane appear to represent the only urban occupation zone within the development area to be occupied before the end of the 18th century. This area was situated directly to the east of the partly-infilled triangular medieval market place, outside the line of the Municipal Boundary formed by the Cuttle Brook.

It is likely that both roads would have existed from an early period in the town's history, as thoroughfares either to the Bridge or the Mill, both known to be at least 13th century in origin. However the first definite references date from around 1400; Bridge Street is mentioned in 1393 and Mill Lane called 'Mullestrete' in 1407 (P.R.O.E212/81, and Close Roll. 1407,349). The area was severely affected by the sieges of the Castle during the Civil War; in a survey of 1653 four tenements and one barn were described as burned down in the Bridge Street area. It is likely that these tenements were some of the 30 houses that were burned down in the first siege of the Castle in 1644 because they were reported to have been giving cover to the besiegers' operations.

Mill Lane and Bridge Street occupy part of the alluvial flood plain of the River Cherwell. The bridging points over the Cherwell must have had a profound influence on the development of the area, and this district of Banbury must always have had a close relationship with the river. Bridge Street runs from the Cherwell up to the market place, and is the main east-west arterial route out of the town, connecting Banbury with Buckingham to the east via the ancient bridging point over the river.

Mill Lane ran behind Bridge Street, connecting the Bishop's Mill to the market, creating a triangular plot of land up to the mill on the eastern side of the canal. This plot is itself dissected by the later insertion of Mill Street between 1825 and 1838. The curious kink in Mill Lane predates the canal, but is inexplicable in terms of the visible topography of the area today, although it may follow an earlier property boundary. The late-18th-century growth of the canal-side service industry meant that by the early 19th-century Mill Lane was peppered with small warehouses belonging to carriers and storage men, many of which probably originated with the building of the canal.

It is clear from the documentary evidence dating to c.1840 that the area around Mill Lane had slumped into poverty; it had become renowned for its unsavoury characters. Following this decline an attempt to 'improve' the area was made involving the erection of municipal buildings such as The Paving and Lighting Commission stoneyard and warehouse and the Gas Works. The building of the Temperance Hall with a British Workmans Non-Alcoholic Public House must have been part of a later redemption crusade in the 1870s, although Bridge Street appears to have consistently retained its better, mercantile, class of inhabitants.

2.2.2 Results

The street block measured c.2000m², of which a cellar survey conducted in each property established that an area of approximately 400m² had been affected by severe disturbance. Cellarage predominated within plots fronting onto Bridge Street (Plate 10); their presence was probably a reflection of the status of properties and the fact that the land near the market, fronting Bridge street, was slightly higher and better drained than the rest of the street block. The only cellared building on Mill Lane was the former public house on the market corner, originally called *The Struggler*.

2.2.3 Preliminary phasing for Zone 2:

Table 3

PHASE	DESCRIPTION
1	LATE-SAXON/EARLY-NORMAN Small boundary ditch
2	PLANNED TOWN Laying out of Mill Lane connecting the new market place with the Bishop's Mill
3	MATURING MARKET TOWN Construction of buildings along the Mill Lane frontage
4 4c	CIVIL WAR Reconstruction of the town in the aftermath of the war
5	IMPACT OF THE CANAL Extension and consolidation of buildings along frontages
6	LATER VICTORIAN IMPROVEMENTS Improvements in sanitation and services
7	20th CENTURY Brick additions to buildings and modern services

PHASE 1 **Late-Saxon/early-Norman** Small boundary ditch

A small ditch orientated east-west, whose fill contained Saxo-Norman pottery, may have been an early field boundary linking the Cuttle Brook with the Cherwell.

PHASE 2 Planned Town
Laying out of Mill Lane

Mill Lane was laid out to link the then newly-established market place with the Bishop's Mill which lay to the east of the town. It seemed to follow roughly the same alignment as the early ditch of phase 1.

PHASE 3 Maturing Market Town
Construction of buildings along Mill Lane

By the 1500s buildings had been erected along the Mill Lane frontage, the later medieval street surface and sections of ironstone walls from these structures are visible on Plate 11. Similarly, construction had begun along Bridge Street (Plate 12); the development of buildings along this frontage was epitomised by the growth and expansion of the structure on the corner plot of Mill Street and Bridge Street (latterly known as number 54 Bridge Street). Evidence for the 16th century origin of the structure included the remains of a hearth and early floor surface at the western end of the building and an eavesdrip gully below what was the eastern gable. A ditch on a north-south alignment located to the north of the structure represented an old property boundary belonging to the original burgage plot.

PHASE 4 Civil War

PHASE 4c Reconstruction of the town in the aftermath of the war

The Bridge Street/Mill Lane district was remodelled in the 17th century, although some 16th century features (see above) had survived the Civil War bombardment and ensuing demolition programme. The remodelling involved the erection of new ironstone buildings, probably commercial in nature.

The remodelling of the backyards of burgage plots also began during this reconstruction programme, no doubt a direct result of the destruction that took place during the Civil War. Extensions were built to the rear of existing buildings such as Structure 54 Bridge Street which gained two stone-lined cellars. The majority of walls belonging to this group of late-17th-early-18th-century stone buildings sat directly on the natural sand and gravel subsoil.

Some alterations occurred within existing boundaries although the boundaries were no longer visible; the boundary ditch between 53 and 54 Bridge Street, for example, had been infilled by this point. Other features reflecting the redevelopment of the area were several stone lined wells, dug in the backplot areas of the burgages. Surprisingly little evidence for the disposal of rubbish was found on the site, other than a series of intercutting rubbish pits within the back plot of 53 Bridge Street and a 17th-18th - century cess pit, complete with chute, located in the backyard of 2 Mill Lane.

PHASE 5 Impact of the canal

Extension and consolidation of buildings along frontages

The development of the plots in the immediate post-canal period followed a general pattern of licensed premises and residential accommodation situated close to the market, with warehouse and storage facilities nearer the canal. Buildings were again extended, and restructured; the original 16th-century building and the 17th-century extension of number 54 Bridge Street were enclosed and consolidated at this time. Similarly, elsewhere along the frontage, minor changes were made to other 17th-century cellars, including the blocking of doorways and the robbing and rebuilding of walls. Several wells were backfilled during this period as land in the backplot area was gradually annexed.

PHASE 6 Later Victorian Improvements

Improved sanitation and services, the construction of a large warehouse behind Mill Lane and the re-alignment of property boundaries

The Victorian era brought with it a major phase of remodelling with improvements in sanitation. This involved the digging of new drains and service trenches, and brick additions to existing buildings and further extension into, and the re-alignment of, the back plots was also undertaken. One property boundary that indicated a change in alignment of the back plots was that between 49 and 50 Bridge Street, where a Victorian boundary wall had been built over an ironstone well that must originally have been within the backyard of one or other of the properties. The backfilling of wells characterises this period, as they had become obsolete with the introduction of better sanitary facilities.

Although archaeological survival within an urban context is commonly highest within the backyard area of properties, much of the archaeology within this area had been destroyed by the building of a large Victorian three-storey warehouse that was set back from the Mill Lane frontage.

PHASE 7 20th Century

Brick additions to buildings and modern services

The whole of the Bridge Street/Mill Lane zone was riddled with modern service trenches. Brick footings for late extensions to the properties were also recorded.

2.3 Zone 3 The River and Canalside Waterfronts

2.3.1 Introduction

The Canal and Riverside zone represents, as it were, a link between the castle precinct and the commercial and domestic development towards Bridge Street. It stands, nevertheless, in its own right as an important focus for Banbury's waterborne communications and commerce. The proximity of the river, and later the canal, had considerable implications for the development of the area. Several 16th-century

references to boats using the Cherwell may reflect activity carried out from a much earlier date, and raise the possibility of a riverfront wharf. An important factor shaping this development was the river cliff of the Cherwell, land beyond it being liable to seasonal flooding. Therefore, the land within Zone 3 probably lies wholly upon the better drained sands, gravels and lias clays immediately above the floodplain of the Cherwell valley.

2.3.2 Cuttle Mill

The exploitation of water resources for power and transport was realised commercially at Banbury from an early date. Three watermills were noted in the Domesday survey. Written references to the Cuttle Mill begin in the early-15th century, but the mill itself could, of course, predate these. A Crown survey of 1552 noted that the Lordship comprised the castle and courts and gardens, a fish stew, watermill and adjoining fisheries and meadows (Beesley 1841, 217). The fish stew, watermill and adjoining fisheries and meadows must have been situated between the castle and the Cherwell. By 1606, Cuttle Mill appears to have fallen into disuse, but later, during the Civil War, this area would have formed an important part of the outer defences of the castle, guarding against a flanking manoeuvre between the Castle and the Cherwell.

2.3.3 Canalside Waterfront

By 1778 the canal from Coventry to Oxford was completed as far as Banbury. For twelve years Banbury was the terminus of the canal until the section to Oxford was finished in 1790. The precise location of the canal terminus between 1778 and 1790 remains uncertain. The main company wharf at Mill Lane, now underneath the bus station, is perhaps the best candidate. It was always known as 'the Old Wharf', and possessed a sufficiently large basin to allow a canal boat to turn around; in addition, the break in level represented by the river cliff would have made a natural stopping point. The detour of the canal between the river cliff-lock and the bridge is carried on a raised embankment above the flood plain of the river, as specified in the original Oxford Canal Act of 1769, in order to skirt the land of Jonah George, one of the canal company proprietors.

The canal transported cheaper and better quality coal from the Warwickshire coalfields southwards, and grain from the fertile Banbury hinterland northwards. The arrival of the railway in the 1850s heralded the beginning of a marked decline in canal trade, although this took place over a number of decades.

2.3.4 Results

Based upon the evidence laid out above, the most probable site for the Cuttle Mill was suggested to be on Castle Street, south of the roundabout at its junction with Spice Ball Alley (Plate 13). However, no evidence for a mill was found during excavation, but a series of ditches shows that the area was part of a much wider water management regime dating from the 16th-17th century. Several of the ditches and the Cuttle Brook were still open as late as the 18th century.

2.3.5 Preliminary phasing for Zone 3:

Table 4

PHASE	DESCRIPTION
1	LATE SAXON /EARLY NORMAN Use of the Cuttle Brook as a boundary
2	PLANNED TOWN Use of the Cuttle Brook as the Municipal town boundary ditch
3	MATURING MARKET TOWN Development of the riverside waterfront
4	CIVIL WAR
4a	Refortification
4b	Demolition of the Castle
5	IMPACT OF THE CANAL Deliberate backfilling and levelling of the Cuttle Brook
6	LATER VICTORIAN IMPROVEMENTS Extension of Factory Street
7	20th CENTURY Destruction of Factory Street

PHASE 1 Late-Saxon/Early-Norman

Use of the Cuttle Brook as a boundary

The course of the Cuttle Brook flowed from the west to the east, looping around the natural gravel knoll upon which Banbury was founded, feeding into the River Cherwell to the east of the town. Test pits (TP22/2 and TP22/3) excavated on the probable line of the Brook encountered organic silty clays to a depth of 1.80m (Cutler 1996), indicating that the Brook was a substantial feature. Excavation revealed that it had a V-shaped profile, and was c.3m wide and 3m deep. The brook formed a natural boundary around the early settlement.

PHASE 2 Planned Town

Use of the Cuttle Brook as the Municipal town boundary ditch

After the formal laying out of the town by Bishop Alexander, the Cuttle Brook formed the Municipal town boundary. Several smaller ditches drained into the Brook from the south and the north.

PHASE 3 Maturing Market Town

Development of the riverside waterfront

A late medieval deposit into which an ironstone rubble wall had been cut represented the earliest phase of occupation directly adjacent to the canal, reiterating the notion of a riverside wharf area. Only the lowest course of the wall survived, however, and due to the longevity of use of ironstone for construction purposes in the area, and the lack of dating evidence, only a broad date range of late-15th-early-19th-century could be assigned to the wall. Two inter-connected ditches associated with a line of postholes

were located to the north of the line of the Cuttle Brook, and may have represented the late-medieval/early-post-medieval layout of a riverside wharf.

Another large linear channel on an east-west alignment was located below Factory Street. It was not fully excavated due to the watertable, but was in all probability an outlet from the outer ditch of the castle draining into the Cherwell.

PHASE 4 Civil War

PHASE 4a Refortification

During the Civil War the town boundary ditch, the Cuttle Brook, was used as a third line of defence around the Castle. Excavation revealed that a substantial ironstone rubble wall, constructed of large boulders, was erected on the northern lip of the Brook. The wall may have been a bulwark constructed in the winter of 1644/65 during a period of refortification in the Civil War.

PHASE 4b Demolition of the Castle

Use of the outer moat as a sewerage outlet

During the decline of the castle the outer moat was allowed to silt up, excavation of a wooden drain reflects its use as a sewerage outlet during that period.

PHASE 5 Impact of the Canal

Deliberate backfilling and levelling of the Cuttle Brook

Following the construction of the canal, the ditch of the Brook was finally backfilled and levelled using a dump of animal bones and cattle horn.

During excavation of the Castle site the western part of a dry dock was uncovered (Plate 14). The dock was situated at right angles to the Castle Wharf, a spur off the canal (Fig. 9). Castle Wharf was built in 1792 by James Golby, a prominent Banbury grocer and coal merchant. The dock was formed by an ironstone rubble wall, U-shaped in plan, that remained *in situ* to a height of c.1.2m. The backfill of the dock was largely late-19th-century in date. The base of the dock had been covered with re-used boat planks that formed a crude floor (Plate 15). This implied a working surface, hence its probable function as a dry dock. Unfortunately conclusive evidence in the form of a sluice gate or drain had not survived. The stub of an ironstone wall abutting the northern part of the dock wall was interpreted as the remains of a warehouse or workshop associated with the dock. The dock cut through the moat of the pre-Castle manor house, and the inner moat ditch and curtain wall of the later Castle (Plate 15).

PHASE 6 Later Victorian Improvements

Extension of Factory Street and the construction of buildings along the new frontages belonging to the canalside wharf area

The late-19th-century development of the wharf area saw the extension of Factory Street to the east. The original metalled road surface and services associated with the street were located during excavation. A brick-built warehouse and a cellared structure that both lay on the south side of the street were also uncovered.

PHASE 7 20th Century

Destruction of Factory Street

Factory Street, and the buildings that once were aligned on it were demolished when Castle Street was extended as far south as Bridge Street.

3.0 GROUND PROBING RADAR SURVEY by Peter Barker

The site, at the time of the survey, was used as a large municipal car park and bus station amounting to 1ha and 0.5ha respectively. The surfacing material used for the hard standing and access roads etc. was tarmac. This overlies a drift geology of sands, gravels and alluvial deposits. The site is known to be positioned over the northern and eastern sections of Banbury Castle, consisting of a square inner bailey and surrounded by two large ditches between which was an outer bailey.

To the south of the castle was the route of the Cuttle Brook which fed the Cuttle Mill, thought to have lain on the south-east corner of the castle. The mill and its race were thought to lie beneath the bus station hard standing.

During the 18th and 19th centuries the site was developed with terraced housing and other buildings and streets.

3.1 Methodology

As the proposed development of the site would destroy any surviving archaeology it was necessary to carry out a comprehensive evaluation of the site (Fig. 2).

As trial trenching of such a large area would be expensive, time consuming and disruptive, a geophysical survey was considered desirable in order to target more accurately any trenching. The geophysical techniques normally used for rural sites - namely magnetometry and resistivity - were not suitable. This was due to the ground cover, the cluttered urban nature of the site and the likely depths of deposits. The technique most likely to produce results was ground probing radar (GPR).

In order to establish that GPR would be effective on the site it was decided to initially carry out a reconnaissance survey of the whole area which would also act as a trial.

3.1.1 Phase 1 - Reconnaissance survey January 1997

The reconnaissance survey took the form of 16 transects up to 100m in length over selected positions within the site. This selection was based on the historic maps of the site and aimed primarily at locating the ditches to the castle together with the mill and its watercourses.

As the depth of the ditches was likely to be considerable, bearing in mind their width, it was thought that longer wavelength radar antennae should be used in order to achieve maximum depth. This would be at the expense of resolution which was felt to be acceptable.

The two antennae used for the reconnaissance survey were 100MHz and 300MHz with range settings of 100nsec and 70nsec respectively. Based on calculated radar velocity in the ground of 0.07m/nsec this equates to maximum depths of scan of 3m and 2.1m respectively.

3.1.2 Phases 2, 3 & 4 - Detailed surveys March 1997-November 1997

Three phases of detailed survey were undertaken between March and November 1997. This detailed work was split over seven sites located over areas of potential interest found by the reconnaissance survey as follows:

Table 5

Phase	Site	Area	Antenna MHz	Transect centres	Location
2	1	360m ²	300	1m ortho	Castle Street next to the bus station
2	2	180m ²	300	1m ortho	Within the bus station
2	3	360m ²	300	1m ortho	Castle Street car park
2	4	570m ²	300	1m ortho	Castle Street car park
2	5	1820 m ²	300	2m parallel	Castle Street car park
3	5 (part)	900m ²	300	1m ortho	Castle Street car park
4	6	225m ²	300 & 100	1m ortho	Castle Street car park
4	7	450m ²	300 & 100	2m parallel	Compton Road
Total		3965 m ²	= 25%	of whole site	

From the above table it can be seen that most of the detailed survey used 1m orthogonal radar transects. The intensity of collection allows good line by line comparison of anomalies, so permitting a confidence in their interpretation. In addition, good quality 'time slice' plots can be produced. Time slice plots are an objective computer generated plot of the areal activity within the radar data. This can be shown as the whole "depth" of the radar scan or can be sliced up into time bands. These can be converted to depth if a radar velocity is assumed or calculated.

3.2 Results

3.2.1 Reconnaissance Survey

The reconnaissance survey revealed a tentative course for the Cuttle Brook across the Bus Station. Traverses within the car park areas indicated the presence of infilled ditches in the general position suggested by the documentary evidence. In addition there were indications of structures surviving in the area between the ditches.

It was concluded that sufficient information was obtained from the reconnaissance survey to justify a detailed GPR survey being carried out in the areas showing higher potential.

3.2.2 Detailed Survey

Cuttle Mill - Sites 1 and 2

The detailed survey in these two areas failed to confirm the tentative interpretation of the reconnaissance survey - that the Cuttle Brook once crossed both survey areas. From studying the 1900 plans of the area it showed streets and structures which have subsequently been demolished. The radar responses are thought to relate to these relatively modern features and not to earlier occupation of the site.

Castle Area - Site 3

Several linear features were found which were interpreted as being structures probably associated with the castle defences.

Castle Area - Site 4

The greatest complexity of results was obtained from this area. The strong long linear features running approximately east to west were interpreted as wall foundations in the form of a wedge. Between these foundations there appeared to be an area of fill. Sloping features also suggest that infilled ditches also existed in this area.

Castle Area - Site 5

The survey suggested the inner and outer ditches crossed this area. The outer ditch appeared to be positioned much as expected, but the inner ditch seemed to lie 10m further to the west than documentary sources suggest. Evidence for some structures within the outer ditch was also found.

Castle Area - Sites 6 & 7

These areas appeared to contain several ditches, with a variety of orientations, including the inner ditch of the Castle. Some evidence for structural remains was also found in Site 6.

3.3 Conclusions

The various radar surveys carried out over the site of the Castle and Cuttle Brook have found much evidence to suggest surviving structures as well as ditches. Some correlation of the ditch positions can be made with documentary evidence. The structural evidence is more difficult to understand in terms of how it fits into the overall layout of the Castle.

The subsequent archaeological excavation of many of these areas provides a rare opportunity to re-interpret the radar data. This should not only help with understanding areas which have not been excavated but will also help interpret radar data from other sites. Such an exercise is therefore strongly recommended.

4.0 BUILDING RECORDING

The redevelopment of the Bridge Street/Mill Lane triangle presented an opportunity to combine building analysis with excavated evidence recovered after demolition of the buildings. The ultimate aim of the final report is to integrate this information with documentary research in order to produce a detailed chronological model for the development of the entire street block. The following statement is designed to provide an indication of the potential of the evidence recovered by the standing building survey, as well as itemising the extent of the work carried out.

The only academic study of the buildings of Banbury in print is a discussion of the architecture of the town in the Victoria County History volume covering Banbury (VCH Oxon, 1972, 29-39). Short accounts of the more notable buildings in the town appear in the *'Buildings of England'* series (Pevsner 1974). However, none of the buildings in the Bridge Street/Mill Lane triangle was considered to be of sufficient conventional architectural merit to warrant inclusion in that study. Robert Kinchin Smith has produced a study of Staley's Wharf, demolished during the road improvements to the area, which appeared in *Cake and Cockhorse* (1993). In addition, students on the Diploma in Practical Archaeology course at the University of Birmingham have carried out a number of studies of discrete areas of 19th-century housing throughout the town. The development of a local style of vernacular post-medieval building in the countryside around Banbury has also been intensively studied in a classic work (Wood-Jones 1963), although more work is required on the influence and dissemination of an urban style upon the rural scene before we can be sure of drawing many analogies between buildings in the town itself and those in the countryside.

In common with the broader archaeological project, a phased approach was adopted towards the study of the historic buildings within the Bridge Street/Mill Lane triangle. This began with an appraisal based upon an external inspection, summarised in a section of the desk-top assessment report (Ferris, Leach and Litherland 1991). The next stage comprised a detailed evaluation of the building stock. Each of the twenty-one buildings was photographed in detail, internally and externally. Accurate floor plans were compiled of selected buildings and a descriptive narrative, analysing the origins, development and use of each building was prepared. The possibility of a building incorporating elements of an earlier structure was also highlighted and these buildings were targeted for further study, which included extensive soft-stripping to reveal the early fabric which was then recorded in detail. Finally, a watching brief was maintained throughout the demolition work, which provided further opportunities for detailed recording.

The overwhelming majority of the buildings within the Bridge Street/Mill Lane triangle were constructed in the 19th century from red brick. There were almost twice

as many buildings constructed in clamped-brick as opposed to machine-cut brick. This seems to indicate that later-Victorian improvement of the area - symbolised by the construction of the Temperance Hall (Plate 16) in 1875 - was not widespread. Instead, clearance of insanitary court housing behind both street frontages probably occurred over a protracted time-span, which began in the early-Victorian period. Improvements included service provision, most clearly seen in the addition of rear wings to buildings, and the provision of tapped water supplies, attested to by a large number of capped wells. The clamped-brick buildings, in particular, provide an interesting opportunity to examine in more detail the development of brick building in Banbury in the 19th century. At present, it would appear that the widespread choice of this type of brick began in the late-18th century and continued as late as the 1870s/1880s. After that time mass-production of machine-cut brick began to eclipse local production. The choice of Flemish bond seems to have been popular for frontages, particularly for commercial premises along Bridge Street, although no obvious correlation appears to exist between the choice of bonding and the status of a building. What is perhaps most interesting is the number of buildings constructed in unusual, and often irregular, bonding, which is, perhaps, evidence of a continued tradition of ironstone building techniques in the Banbury building trade well into the 1800s.

On balance, it would appear that a period between 1825 and about 1850 saw the most profound change in the built environment of Bridge Street and Mill Lane. The development of the Paving and Lighting Commission yard to the east of Mill Street (now also called Mill Lane) may have acted as a catalyst for this change. At this time several merchants who sat on the commission, including J.G.Rusher and Thomas Staley, began to invest a lot of capital in the area. Crucially this coincided with the decision of the Wardle family, who had owned a lot of land near the canal, to begin to sell. This was also *the* era of canal-based expansion. Thereafter, the built environment of Mill Lane, in particular, seems to have largely stagnated. What is clear is that further study has great potential to answer a number of important questions concerning the dynamic inter-relation of commercial, industrial, distributive, service and housing needs in 19th-century Banbury. The broad cross-section of building types within Bridge Street and Mill Lane also provides an opportunity to examine the changing fortunes of each type within a single street block. It also provides an opportunity to examine lesser-studied building types, such as minor warehouse/distributive structures and commercial premises, alongside more-intensively-studied types such as institutional buildings, inns and pubs.

The most important result of the survey work was the identification of the substantial remains of two ironstone-rubble buildings, encapsulated behind later brick frontages within numbers 53 and 54 Bridge Street (Plate 17). An intact timber roof, contemporary with the earliest phase of ironstone rubble walling (Plate 18), was also found within 53 Bridge Street. The discussion of the development of both these buildings will make an important contribution to the regional literature on the development of post-medieval housing in towns, between 1500 and 1900. Finally, the opportunity to integrate the above-ground and below-ground archaeology with documentary and cartographic analysis concentrated upon a single street block should break new and interesting ground. While, equally, the integration of each strand of archaeological analysis, including the study of the standing buildings, should prove to be particularly illuminating, and provide fertile lines of cross-disciplinary enquiry.

5.0 DOCUMENTARY RESEARCH

To date, the majority of the documentary research was undertaken as a part of the initial desk-top assessment phase of archaeological work. Thereafter, documentary research has taken place in a piecemeal fashion. The main aims of this further research have been to aid the dating of various discoveries and to place the archaeological results within a wider context. Now, the documentary component of historical research needs to be fully integrated into the final reporting of the archaeological results from the whole campaign of excavations. In order to accurately assess the extent of further documentary research it is necessary to quantify the work which has already been done, and to map out any gaps which require filling.

For a town of such moderate size Banbury has attracted the attentions of an unusual number of historians and academics. It can also boast one of the most active and prolific Historical Societies in the country, responsible for the transcription of numerous primary records, which are invaluable for in-depth study of almost any aspect of the history of the town. Banbury has also been well served by its chroniclers, in particular Alfred Beesley whose history of 1841, in some instances utilising documents no longer available to the present-day historian, forms a starting point for any research, even today. The importance of the town was also recognised by its inclusion in the first volume of the Historic Towns Atlas (Lobel 1969) and by its unusually full coverage in the Victoria County History (V.C.H. 1972). The Victorian period, in particular, has been investigated in some depth by Barrie Trinder in numerous books and articles, while the sociological classic 'Tradition and Change' took Banbury and its people as the subject of its investigations (Stacey 1960), a topic revisited some fifteen years later (Stacey *et al.* 1975).

If we consider each archaeological zone in turn, then it is clear that the castle (Zone 1) has been most intensively studied. The reports on the 1970s excavations of the castle involved extensive reassessment of the documentary evidence for its development, particularly by Rodwell (1976). The castle was at the centre of the medieval administration of the town and so the medieval documentation is relatively good. For example, the documentary record indicates the existence of structures or features at different times, including a prison, chapel and fishponds. Clearly, there is no point in repeating this research, although a reassessment of the evidence for the late-Saxon and early-Norman periods is vital given the substantial, and hitherto unrealised, evidence recovered from the excavations of the castle. Therefore, it will be necessary to employ a medieval historian to review this early evidence and any further information to emerge since the mid-1970s, to provide an academic overview of where Banbury Castle fits into regional and national research frameworks. The post-demolition history of the castle was also the subject of recent documentary research, which sought to explain the later disturbance of the site. All this research needs to be integrated with the archaeological results, while a priority for further research should be a search for illustrative or photographic coverage of the Castle Gardens. Even photographs of the site dating from the 1960s could explain a great deal about the survival of buried archaeological features.

The historical evidence for the development of the Bridge Street/Mill Lane triangle (Zone 2) was reviewed by the desk-top assessment. This revealed that very little evidence survived prior to the 16th century, and that even after this date survival was both sporadic and variable. However, 16th-century records survived for some

tenements in Bridge Street and Mill Lane, but it was not possible to tie these firmly to a specific geographic location. The process of piecing together individual tenement plot sequences only becomes possible from the later-18th century in some cases. The lack of a detailed historic map of the area prior to the mid-19th century is one of the main drawbacks to further analysis. Therefore, further research to try to trace any earlier maps or plans, particularly those which may have been made when individual plots were redeveloped or sold, must be a priority.

However, the potential of documentary research to open detailed avenues of enquiry into the 19th-century development of the street block is immense, particularly when this research is integrated with the evidence from the building survey and the excavations. It also makes sense to integrate this research with that into the canal-side area (Zone 3) which shares a very similar development history in the 19th century. Here, it will be necessary to examine in detail the evidence for the development of the canal contained in the records of the British Waterways Museum housed in Gloucester.

Generally speaking, the information contained within the historical record was initially used to assess the archaeological implications of the development, highlighting areas of specific interest and periods of importance. The important role of documentary research within the final synthetic report may best be illustrated by its ability to identify 'watersheds' or critical junctures, of which the Civil War stands out as a particularly cataclysmic event. Each strand of evidence, be it from documents, buildings, or excavation will be used to critically analyse the other strands within the final report, the aim of which will be to provide as definitive a statement as is possible of the overall development of the entire area covered by the archaeological project. This is a not an insignificant proportion of the medieval town, approaching something like twenty percent of its area.

6.0 ASSESSMENT

6.1 The Paper Archive

Basic Quantification

Table 6 Excavation Archive

MATERIAL	Geotechnical Groundworks	Zone 1		Zone 2			Zone 3		Tooley's	
		Evaluation	Excavation	Evaluation	Excavation	Building Recording	Evaluation	Cuttle Mill	Test Pits	Building Recording
Plans and section drawings		28	139	10	47		9	25	10	
Elevations and ground plans						30				20
Colour Slide Films (36 shots)	3	4	16	9	8	5	1	4	2	5
Colour Print Films (36 shots)		2	20	4	4	2	1	2		5
Black and White Films(36 shots)	3	4	15	9	10	5	1	2	2	5
Context Record Sheets		129	564	48	401		38	77		
Feature Record Sheets		37	208		255		14	25		
Borehole Record Sheets	27									
Test Pit Record Sheets	134									
Survey Information (Pages)			7	6	6			8	2	2
Penmap Information			•						•	
Environmental Record Sheets	183		34					11		
Site Notebooks					•	•			•	•
Database		•	•	•	•		•	•		
Assemblage Summaries		55	232	42	78		11	38		
Specialist Reports	1	3	1							

Documentary Archive

Misc. Documentary Research	c.50 articles/items
Misc. plans from the Developer	20-30
Geoscan Reports	9

All Context and Feature records and Assemblage Summary sheets have been inputted onto an integrated Microsoft Access 97 database. Each different phase of work currently has its own data set on separate databases. These databases will need cross-referencing as part of the following post-excavation programme. They will also need updating using specialist material and final phasing information.

6.2 The Artefactual Assemblage

6.2.1 Medieval and Post-Medieval Pottery by Stephanie Ratkai

Quantification and Assessment

At this stage the pottery was not quantified but absence/presence tables were drawn up and every context spot-dated. The pottery was quantified by sherd count by context only. The fabrics, because of the methodology chosen for the assessment, necessarily fall into broad groups, which will receive more detailed analysis for the final report. All the pottery was examined macroscopically and allocated to broad fabric groups in accordance with Mellor's survey of Oxfordshire pottery (1993).

The largest pottery group came from the Castle and consisted for the most part of large unabraded sherds and many rim sherds. It was clear from even a brief examination of the pottery that it would be possible to reconstruct a number of vessels, and that a good proportion of complete, or near complete, profiles existed. The pottery from the town sites was in not such good condition, and tended to consist of smaller sherds and a smaller proportion of form sherds. However, the ceramic sequences from the town tended to be continuous and extend for much greater periods of time than the Castle group.

The Castle

The assemblage consisted of approximately 3,000 sherds. Pottery has been previously recovered from the Castle by Fasham (1973 and 1983) and Rodwell (1976). The former excavation produced a substantial amount of pottery and is of particular interest, as the excavated area lay very close to the recent excavation. The previous pottery reports, have, in the light of further research, most particularly by Mellor (1994), may be in need of some reinterpretation. However, it is clear that the general sequences observed by Fasham (1973), Rodwell (1976) and Robinson (1983) are replicated by the current assemblage.

The earliest pottery consists of a small number of Roman sherds, predominantly samian or Oxford colour coats. With such a small number it is difficult to offer much in the way of interpretation. However, the apparent shortage of more mundane Roman wares (e.g. grey wares, mortaria etc) in favour of pottery which is red and glossy suggests some bias. This appears to be true also of Roman material recovered previously from the Castle, although it is recorded in very little detail. This seems to indicate a bias in collection which may best be ascribed to the attractiveness of samian and/or red colour coats to the post-Roman-pre-Conquest inhabitants of Banbury. Stray samian sherds are known from the early post-Conquest castle of Hen Domen, where they were brought from a nearby Roman site. It has been suggested that samian was ground and used as a cosmetic (pers. comm. Dr J Evans) or in medicines. It is also possible that it was seen as in some way talismanic. Whatever, the presence of Roman material almost exclusively in contexts with Saxon or late-Saxon pottery suggests some connection with the pre-Conquest inhabitants of Banbury.

A small quantity of what elsewhere would be classed as early-middle Saxon pottery was recovered. However, Mellor (1994) suggests that this tradition may in fact last through to the late Saxon period. Further work on the occurrence of this pottery on the

site and its relationship with the Roman and late-Saxon pottery may elucidate matters further.

The following ceramic horizon is represented by oolitic limestone-tempered cooking pots, with small quantities of St Neots ware, shelly ware and Stamford ware. This ceramic horizon was recognised in previous studies of the pottery. However, previous work has tended to suggest a date of the late-11th-early 12th-century for the oolitic limestone-tempered wares (Robinson 1983) or the 11th-12th-century (Rodwell 1976). However, Mellor suggests a date of late-9th-late-11th century (or possibly early-12th century), in effect consigning this fabric to a primarily late-Saxon date. It is perhaps significant that this fabric occurs in Warwickshire, where it was dated by the author to the 11th-early 12th centuries, but further work has resulted in a revision of this dating and the author now feels that the oolitic-tempered wares are largely pre-Conquest in their occurrence.

The oolitic and shelly traditions were replaced by sandy wares, a fact noted by Fasham (1973), Robinson (1983) and Rodwell (1976). These seem to comprise for the most part early Oxford ware and early Banbury ware, dated to the late-11th-13th centuries (Mellor 1994). These fabrics form by far the largest part of the fabrics present from all periods, and are comprised nearly completely of cooking pots. Again, some of the dating in earlier reports may be suspect, since Robinson has the transition from oolitic wares to sandy wares occurring in the late-12th or early 13th centuries.

The next ceramic horizon is represented by the occurrence of Boarstall-Brill and Potterspury wares which seems to happen towards the end of the 13th century, or at the beginning of the 14th century, and continue throughout the 15th century. These fabrics are not plentiful. This too was noted by preceding pottery researchers.

Pottery of the late-15th century onwards is scarce, but is represented by late Brill, Tudor Green-type, ?Nettlebed, Cistercian ware, blackware and a well-sorted red sandy ware in a similar tradition to the glazed red earthenwares of East Anglia and the east Midlands. Seventeenth century pottery consisted of coarsewares, blackwares, yellow wares and a small number of German stoneware sherds.

The pottery demonstrates that the principal period of activity, or at least deposition of pottery in this area of the Castle was in the 12th-13th centuries.

Bridge Street/Mill Lane

A comparatively small amount of pottery (*c.* 1000 sherds) was recovered from this area, the majority of which dated from the post-medieval period up to the 19th century. Some early activity is represented by three shelly sherds from drain fill 2300 (F185), some residual oolitic cooking pot sherds from surface 2305, and other horizons and a possible Roman sherd which occurred residually in wall core 2303 (F188). Later activity is represented by the use of Banbury ware and early Oxford ware (ie from the late-11th-13th centuries), and continuing occupation throughout the medieval period is shown by the presence of Boarstall-Brill and Potterspury sherds. There is no break in the pottery, with fabrics which date from the 16th century through to the 19th centuries.

Mill Lane test pits and trial trenches (B30 97)

The various trial pits and trenches produced a similar range of fabrics from that recovered from B20 (above) and provided further evidence of early occupation in the form of oolitic cooking pot sherds. However, as with B20 most of the pottery dated to the 17th-19th centuries. There was little pottery from this area, surprising in view of its location. The lack of ceramic finds suggests that most of the pits and trial trenching fell within the confines of medieval buildings where, in general, pottery would not be allowed to accumulate.

Discussion

The earliest pottery is concentrated on the Castle site and there is good reason to believe that there was pre-Conquest activity, which may stretch back to the early-middle Saxon period. It is unlikely that the Roman pottery represents Roman occupation. Sherds from oolitic-tempered cooking pots, which almost certainly represent pre-Conquest occupation, occur in the greatest quantity at the Castle but they were also found at the Mill Lane, Bridge Street and Cuttle Mill sites. However, only one putative Roman sherd was found in these areas.

Twelfth and 13th-century pottery was dominant on the Castle site and occurred on the other Banbury sites. However, whereas the Castle site produced little pottery later than this, at the town sites pottery of the 14th and 15th centuries occurred more frequently. All the town sites show a continuous sequence from the medieval period through to the post-medieval period and, with the exception of Cuttle Mill, up to the 19th century.

The range of pottery found at the Castle and town sites is much the same, allowing for chronological biases, suggesting there was no difference in supply mechanisms between urban and Castle dwellers.

Aims

All Roman-medieval pottery should be studied under x20 magnification, divided into fabrics and matched to the Oxfordshire county type series. The pottery fabrics should also be compared to the Northamptonshire type series and the Warwickshire type series. The pottery should be quantified by sherd number, sherd weight, minimum number of rims and rim percentage. Vessel form should be recorded where known and also decoration, glaze, sooting and abrasion.

Apart from the general recording and quantification of the pottery, there is a number of more specific aims which will enhance the study of ceramics in Banbury and in the region, together with broader applications relating to the Castle, town, trade, economics status, function etc. The Castle site has a great deal of additional potential, even though other excavations have taken place and been published. Previous work, although meticulous, did not discuss the wider implications and applications of the ceramics in taphonomy, trade, function, status etc. Since these publications, Mellor's synthesis has made the understanding, possible chronology, and scope of pottery in Oxfordshire more accessible, and this, together with increased excavation in Northamptonshire and Warwickshire and syntheses on these two counties' type series, means that there is a much greater pool of information on which the Banbury pottery can draw.

More specific aims could be:

To identify and date the Roman pottery and comment on its possible significance. The Roman pottery from previous excavations on the Castle site will be examined to see if there is a bias towards fine oxidised wares, which may suggest deliberate collection in the Saxon period (pottery to be examined by Dr J Evans and Dr S Willis).

To describe the early Saxon pottery and thin section each fabric. The early Saxon pottery will be compared with other similarly-dated material from Oxfordshire, to try to determine if this early tradition continues through to the late-Saxon period as, suggested by Mellor (1994).

To study the development of the ceramic tradition from the late-Saxon oolitic-tempered wares through to the emergence of early Banbury and Oxford wares. The development of vessel forms in early Oxford ware and early Banbury ware will be examined to see if there are any chronological indicators, and to see if the relative proportions of early Banbury ware and early Oxford ware have any chronological significance.

To look more closely at trade, distribution and marketing models for north Oxfordshire. Once the Banbury fabrics have been sourced it will be possible and to establish what links existed between Banbury and Warwickshire and Northamptonshire, and the possible reasons for these. It should also be possible to compare the pottery assemblages and their sources from the Castle and the town sites.

Further analysis of the pottery assemblage will help to fulfill research aims 1, 2, 3, 5, 6, 7, and 8 (see section 8)

Illustrations

The pottery from previous excavations in Banbury has been plentifully illustrated and Mellor also illustrates the main forms in each ware type. It would clearly not be applicable to provide illustrations which merely replicate what is already published and it is suggested that for this report an example of the main forms are drawn and any forms which have not thus far been illustrated, but that the main focus should be on groups of vessels for example pit groups (a total of 250 sherds). There should also be a figure showing the changes in vessel form/fabric chronologically, and figures showing pottery distribution and sources by period.

Table 10

Code	cbxt	Ban	comments	Date
BCO	4016	x	large storage jar, thumbled strips and wavy combing	12th-13th c

Table 11

Code	cbxt	Loc	Date	Comments
TBO	1000	T1	19th c	
TBO	1005	TP1	16th-?17th c	Cw?
TBO	4001	TP4	19th c	resid cw, mang and estw, also brill 14th-15th c
TBO	6000	TP6	19th c	
TBO	6001	TP6	19th c	
TBO	6002	TP6	?e19th c	calcgr and shell, brill, westerwald, tge, slpw, crw, gre, wsg, estw, blw
TBO	6004	TP6	late 17th-e18th c	mang, potterspury 15th-16th c?
TBO	7003	TP7	e 19th c	gre horiz handle late 17th-18th c? estw
TBO	10004	TP10	late 17th-e18th c	cw
TBO	10005	TP10	e 19th c	only 1 19th c sherd rest are brill, cist, blw
TBO	10006	TP10	19th c	

Table 12

Code	cbxt	feat	date	Comments
B30	1001		12th-13th c	sc
B30	15001		e19th c	
B30	15002	151	e19th c	crw, cw
B30	16005		11th-12th c	calcgr, ban int rim
B30	17002	171	12th-13th c	eox, glazed
B30	19001	190	17th c	
B30	21002		post 1840	
B30	21005	210	19th c	cw, plw
B30	21007		post 1840	gre residual
B30	21008		19th c	
B30	22006	221	16th-18th c	gre
B30	22007		late 18th-e19th c	
B30	22009	222	?19th c	base of figurine
B30	23003	230	?late 18th c	gre, cw, slpw, odd burnt sherd
B30	24001	240	e19th c	wsg, mang, stw, plw
B30	24002	240	?16th-17th c	cist, tge, brill
B30	24004	241	18th?	cw
B30	24005	243	saxo-norman	calcgr
B30	25005		1st half 18th c	mang cw
B30	40004	4003	16th-17th c	brill, gstw, gre, epot
B30	40004	4003	19th c	cw, mang, crw, estw, tge, blw/slpw, bltrans
B30	40011	4007	late 17-e18th c	mang, protomp?
B30	40012	4008	13th-15th c	brill, cca?, epot, calcgr

6.2.2 The Flint by Lynne Bevan

The Castle

A total of 71 items of humanly-struck flint was recovered. Although small in number and lacking in chronologically-diagnostic tools such as microliths, this assemblage attests to prehistoric activity in the area, probably at some time during the later Mesolithic on the basis of three cores, designed for the production of very small blades, and nine blades, one of which was serrated. Three possible scrapers and six retouched flakes were also identified, although none of these was datable.

The raw material used was a translucent light to medium grey coloured flint with the thin, compacted cortex characteristic of flint from river gravels. The assemblage from the open-area excavation, however, appears more convincingly Mesolithic than the smaller evaluation assemblage which was tentatively dated to the Neolithic to Bronze Age periods on the basis of a paucity of chronologically-diagnostic tools combined with broad, rather than blade-like, flakes (Bevan 1998, 24). A Neolithic leaf-shaped arrowhead was identified among a small flint assemblage previously recovered from the site (Rodwell 1976, 143).

The small size of the flint assemblage is in keeping with that generated by a short-stay Mesolithic camp, perhaps designed to exploit seasonally-available resources for which the raised land, on a knoll close to a water source, would have provided an ideal location. In view of the paucity of known Mesolithic sites in the Midlands, Full cataloguing and publication of the assemblage is recommended, including the illustration of a selection of blades and blade cores.

Cuttle Mill

Eight items of humanly-struck flint were recovered - an ovoid end-scraper, a retouched flake, a possible broken pre-form for a leaf-shaped arrowhead and five unretouched flakes. The possible pre-form is of Neolithic date with which the scraper, although not a closely-datable tool, might be contemporary, or equally it might be of Bronze Age date. Although not chronologically-diagnostic, the flakes are all broad and squat, suggestive of a Later Neolithic to Bronze Age, rather than an earlier prehistoric date. The material used is a good quality light grey pebble flint from secondary deposits. A low density usage of the landscape is suggested rather than settlement of any duration. Cataloguing and the compilation of a short report (including illustration of the two retouched items) is recommended.

The previous work of Fasham and Rodwell recovered one and 19 flints respectively, giving an overall total of around 100 flints from central Banbury. Study of the newly-excavated material, along with a brief re-examination of this material, and of any flints recovered by the Oxford Archaeological Unit's work in the town, will allow an overview of prehistoric activity here to be given. The small size of the flint assemblage is in keeping with that generated by a short-stay Mesolithic camp, perhaps designed to exploit seasonally-available resources for which the raised land, on a knoll lying above a zone of marsh, bog and meandering water-courses now represented by infilled palaeochannels, would have been ideal. In view of the paucity of known Mesolithic sites in the Midlands, the full publication of the material in its regional context is recommended.

Further analysis of the flint assemblage will help to fulfill research aim 1 (see section 8).

6.2.3 The Small Finds by Lynne Bevan with contributions by Erica Macey

Small finds are defined as all objects and utilised materials not collected on site by context assemblage, as with pottery, animal bone etc, as samples, or as bulk finds. Small finds have been individually logged and numbered on site. At assessment stage the small finds have been grouped and discussed by material. In the final report it is intended that they will be regrouped into functional and chronological categories. At the end of this section, the overall small finds assemblage is presented in tabulated form (Table 13), with a brief discussion of its overall potential for further study.

Conservation Statement

The preservation of most types of materials found on the Banbury sites was good. Bone survived well, and in some waterlogged contexts wood and leather were preserved. Copper alloy, however, did not survive particularly well, and most of the iron objects recovered were heavily corroded and in a fair to poor state of preservation. Small finds are presently stored in stable conditions at Birmingham University Field Archaeology Unit premises. However, many of the metal objects will require investigative x-ray and conservation before and after their study, while those wood and leather objects of medieval date will need extended conservation treatment and stabilisation. Conservation work will principally be carried out by the Salisbury Conservation Laboratory's contract service, while the wooden objects will be dealt with by the Mary Rose Trust, Portsmouth.

Small Finds by Material

Brick and Tile by Erica Macey

Brick

Small quantities of ceramic brick fragments were recovered from the Castle site and Bridge Street/Mill Lane. The assemblages are summarised separately below.

The Castle

Twenty-one fragments of ceramic brick, weighing 3281g, were recovered. Five fragments of possible Roman origin were recovered (2 x 1141, 1381, 4030, 5011), all from post-Roman features. The remainder of the assemblage, none of which was chronologically-diagnostic, was derived from contexts dating to the late-17th century.

Bridge Street/Mill Lane

Four fragments of ceramic brick, weighing 1497g, were recovered, all of which appear to be undiagnostic pieces of post-medieval date.

Tile

Small quantities of ceramic tile were recovered from the Castle site, Bridge Street/Mill Lane, and Cuttle Mill. The material was quite fragmentary and no complete examples were recorded. Finds from each site are discussed below.

The Castle

Thirty four fragments of tile, weighing 2598g, were recovered. Five pieces (1017, 1243, 1400, 4030, 5011) are of probable Roman date, including a fragment of *tegula* (1400). Although much of the assemblage was derived from Medieval features, the tile fragments are un-glazed and generally undiagnostic of the period.

Bridge Street/Mill Lane

Seventy-seven sherds of tile, weighing 5650g, were recovered from this site. In addition, a further 27g of tile fragments were recovered from an environmental sample (1027), but these are extremely fragmentary and too small to be of any diagnostic use. One near complete tile (2078), has been tentatively identified as an *imbrex*, but may prove to be more modern after further investigation. Four fragments of tile were from a late medieval context (2034), although they were un-glazed and not chronologically-diagnostic. The remainder of the material was from Phases 4–7, which cover the period from the 17th century to the modern demolition horizon. One tile fragment (2121) from Phase 5, the late-18th-early-19th century, has one complete and one partial fingerprint impression.

Cuttle Mill

Eighteen fragments of tile, weighing 473g, were recovered from this site. Two fragments (3033, 3045) were from a later medieval context, but had no diagnostic features. The remainder of the assemblage was from Phases 4–5, which covers the period from the demolition of the Castle to the construction of the Canal in the late-18th to early-19th century.

Recommendations

The eleven potentially Roman fragments should be the subject of further research. Although removed from their original contexts by post-Roman activity, comparison by context (and fabric) with the small quantities of Roman pottery identified at the Castle should be carried out to determine whether there was a focus of activity in a particular area. Although some of the tile obviously came from Medieval contexts, only one fragment of glazed tile was identified. A short report on the glazed tile should be written. The remainder of the material was generally very fragmentary and apparently of post-medieval date and, as such, does not warrant further attention.

Charcoal

Very small quantities of charcoal were recovered from the Castle site, Bridge Street/Mill Lane and Cuttle Mill. These will require examination by a wood specialist at the same time the waterlogged wood is examined.

Clay Pipe

The Castle

A total of 92 fragments of clay pipe was recovered, comprising 78 stem fragments and 14 bowls. Six of the bowls are complete and have dating potential.

Bridge Street/Mill Lane

A total of 303 clay pipe fragments was recovered, the majority of which consisted of 264 sections of broken stem. Several almost complete pipes and a number of complete bowls were present, at least ten of which had moulded decoration, and two stamps were also noted, on a stem decorated with ropework motifs enclosing the maker's stamps 'BANBURY' and 'CARTER' and on a bowl with the stamp 'NORWOOD OXFORD', from the same context (2128).

Cuttle Mill

Thirteen clay pipe stem fragments and a complete bowl with a decorative edge were recovered (3059). The bowl is broadly datable.

Recommendations

A total of 422 fragments of clay pipe were recovered, ranging from almost complete pipes to stem and bowl fragments, including a number of fragments of datable form, some with stamps and decoration. This large collection, much of which comes from dated contexts, will make an important contribution to our knowledge of clay pipe manufacture, distribution and usage in Banbury. A full report of the clay pipe is required including comparison with other clay pipe assemblages and up to 20 illustrations of the principal forms and decorated/stamped pieces. A summary listing by context is required for the undiagnostic stem and bowl fragments, although measurements of stem bore size, circumference of stem, angle of bowl etc may also help with dating the less immediately diagnostic parts of the assemblage. The opportunity should also be taken to contextualise the newly-excavated material in the overall Banbury town assemblage that also includes pipes excavated, and only selectively published, by Fasham and Rodwell in particular.

Fired Clay

The only recognisable object among the small quantity of fired clay recovered from the Castle site was a complete loomweight (context 1052), for which further research, including illustration, will be required. The remainder of the fired clay consisted of two shaped fragments of possible daub (1028 and 1109) and 18 small amorphous fragments.

Glass

A substantial glass assemblage, comprising approximately 340 pieces, was recovered from the sites. The assemblages, which included a number of complete vessels and large vessel fragments with dating potential, are discussed by site below.

The Castle

A complete wine bottle of c. 18th-century date and 55 fragments of bottle glass were recovered, most of which originated from the same four broken wine bottles, along

with a medicine bottle, a triangular piece of Medieval window glass with three grozed edges and 18 other fragments of window glass.

Bridge Street/Mill Lane

The glass assemblage consisted of a green faceted, ovoid glass bead, a complete glass bottle of possible 18th-century date, a clear glass decorative jug or decanter, a broad-based wine bottle, both of which are almost complete, and several substantial fragments from a further five to six wine bottles. A total of 139 small fragments from wine and beer bottles was also found, including part of a base with ‘..N BARRETT & B...’ on it and a body fragments bearing the letter ‘T’. Other vessel fragments included part of a wine glass base, the base from a ?lead crystal tumbler, a base fragment from a dressing-table tray and a complete medicine vial with ‘ATKINSON & BARKER’ on one side. Fragments from four other possible medicine vials were found, as well as 78 fragments of window glass, including a triangular-shaped fragment of possible Medieval glass with grozed edges, now totally opaque (2228). A distorted fragment with a ‘molten’ appearance was also recovered (2108) which was more likely to have resulted from burning than the manufacturing process.

Cuttle Mill

A milk bottle from ‘BANBURY CO-OPERATIVE’ (c. 1950s-1970s) was recovered, part of the neck and shoulder from a light green ?medicine bottle and an almost complete amber glass bottle labelled ‘HITCHMAN & CO LTD CHIPPING NORTON’ dating to the early-20th century. Other glass fragments comprised twelve fragments from 17th-19th-century wine bottles, a piece of bottle glass, now completely opaque but probably originating from a wine bottle, eight fragments of window glass and a marble, now totally opaque.

Recommendations

Although generally 18th-20th century in date, the Banbury glass assemblage includes a number of potentially earlier vessels for which closer chronological resolution will be possible based upon comparative material. For this reason, and to help to rectify a general paucity of later glass assemblages in archaeological literature, the assemblage should be the subject of further research, and a selection of the more complete vessels and the Medieval window fragments should be illustrated. Reference will need to be made to the assemblage of glass collected by Rodwell and the smaller group collected by Fasham.

Leather by Erica Macey

Small quantities of waterlogged leather were recovered from three sites in Banbury; the Castle, Bridge Street/Mill Lane and Cuttle Mill. Most of the items were quite fragmentary, with a large portion of unidentifiable scraps. Storing the assemblage in a wet environment prevented further degradation. The assemblages are discussed separately below:

The Castle

Seven items of waterlogged leather were recovered from one context (1118), six of which could be identified as shoe fragments, whilst the other fragment was unidentifiable.

Bridge Street/Mill Lane

Nineteen fragments of leather were recorded from one context (2078), only two fragments of which were identifiable. Both were shoe fragments; one of which had two small pins or tacks embedded in the leather.

Cuttle Mill

Thirteen fragments of leather were recovered. Most of the assemblage consisted of indeterminate scraps of leather, but four shoe fragments were also identified (Layer 25 x 2, Layer 14 and 3039). One fragment of leather was associated with the skull of a horse (Layer 25); further research may be necessary to determine whether this is a piece of harness such as a blinker or merely a random scrap piece. The shoe fragments may also warrant further investigation as an aid to dating.

Recommendations

The small quantity of leather present on these sites indicates that it is unlikely that leatherworking or tanning was taking place in the vicinity and that the items recovered are domestic debris. A closer study of the state of wear of the shoe remains may corroborate this. Further research is also recommended on the shoe fragments to determine the dating of the footwear since the narrowness of the instep visible on some of the fragments from the Castle site is suggestive of a possible Medieval, or early post-Medieval date. Further investigation will also be required for the fragment of potential horse harness and basic cataloguing will suffice for the remainder of the assemblage.

Metalwork

Copper Alloy

Copper alloy objects were few and generally in a poor state of preservation. The finds are summarised by site below.

The Castle

A large complete bowl (SF 7, 1378), a ?Medieval coin (4022), three other coins (1013, 1232, F173 and 1125, F140), a small ?spoon with a perforated terminal (1497, F279), a large stud (1115), a broken button (5010) and fragments from a buckle (1098) were recovered. Other material consisted of two fragments of strip and some small unidentified fragments. With the exception of the bowl, all of the finds were in a particularly poor state of preservation.

Bridge Street/Mill Lane

Copper alloy finds included five coins, three of which were poorly-preserved and undatable (SF 4, 2064, 1822, and SF 6, 2083), and a ?Georgian perforated coin or possible token (SF4, 2040). The remaining coins were also of Georgian date (2380 and SF 1, unstratified), the latest dating to the reign of George IV.

Other identifiable finds included two c.18th-century figure-of-eight buckles (SF98, 2123 and 2120), four studs (SF3, 2010, 2010, 2128 and 2380), a key handle (2034), part of an enamelled watch face (2137), a button (2380), a looped stud (1021), and a modern spoon (2319). Items of sewing equipment comprised a thimble (2233) and 28 small pins, 23 of which were found together with a possible sequin (2176) and appear

to represent the contents of a sewing box. Other finds comprised a leaded copper alloy fitting with a triangular section, three fragments of sheet, three fragments of wire, three small unidentified fragments of plate and a fragment of rod.

Cuttle Mill

Two complete brass pins (SF1 and SF3, 3039) were recovered from the same context, together with a ring of twisted copper alloy wire (SF2, 3039). Two stud heads in a very degraded condition were also recovered (unstratified).

Recommendations

Further research, illustration and conservation is recommended for several of the identifiable items including the complete bowl which is potentially Medieval in date, the more legible of the coins, the buckles and some of the pins. A summary listing and cataloguing by context will suffice for the remainder of the material.

Iron

Iron objects were in a generally good state of preservation, especially some of the larger nails. However, identification of a number of items was precluded by corrosion products and x-ray analysis will be required. The assemblages are summarised and x-ray requirements discussed by site below:

The Castle

Identifiable iron objects consisted of a knife (F173, SF 4), part of a lock plate (1122), part of the rim from a cauldron (1109, F130), a horseshoe (1030, F109), a rectangular plate, a square-sectioned possible ?tool (1118), five fragments of plate, a length of twisted iron wire and a broken ring. Some small fragments were also recovered with 'wood grain' visible in the corrosion products. A total of 41 nails was identified.

In addition, there were several unidentified items for which X-raying will be required: a ?blade (1020), a ?hook (1037), a ?reaping hook (1093), ?door furniture (SF2, unstratified), a ?spur (unstratified), a spike with a ?'pommel' (5010), and seven other corroded items (1064, 2 x 1257, 2 x 1349, 4001 and 6011). Cleaning will be required for the knife and possibly two or three other objects.

Bridge Street/Mill Lane

The iron collection was poorly-preserved and three items - a possible 'L'-shaped staple (2119) and two large corroded lumps, one with the end of pointed tool protruding from it (2228) - will require X-ray examination.

Identifiable items comprised a cast iron furniture mount (F124), a punch or wedge (2183 and 2000/53), a masonry staple (2137), a ?spike (2034), part of a ?grille (2042), a looped fitting (2037), and several fragments of door furniture, including some decorative pieces (1000, 1031, 2030, 2035, 2117, 2167, 2176 and 2228). Other door furniture comprised a looped hinge (3038), and five door hinges (2034). A total of 134 nails was recovered.

Other finds included 38 fragments of miscellaneous plate, a large flat fragment, two rectangular-sectioned ?implements, seven short ?rods, two fragments of strip, an unidentified lump, and several small unidentified fragments.

Cuttle Mill

Iron finds comprised an 'S'-shaped hook (23003), a fragment of curved strip (17001), ten nails and three unidentified iron objects for which X-ray examination is required (SF6, 3040, 3041, 15002), one of which is a rectangular-sectioned ?tool, heavily corroded at its thickest end (15002). In addition three small, unidentified corroded lumps were recovered.

Recommendations

However, there was a high incidence of corrosion products on some of the objects and X-ray analysis will be required for further identification of 19 objects.

While the compilation of a summary catalogue is all that is required for the majority of the iron collection, particularly the nails and most of the miscellaneous fittings and fragments, research needs to be conducted upon the more interesting of the objects such as knives, blades, hooks, some of the door furniture and the decorative mount. It is also possible that x-ray analysis of the 19 items listed above will reveal some more objects of interest.

Lead

Lead finds were few in number and, with the exception of some possible projectiles, mostly consisted of various lengths of lead from windows, offcuts and scrap. There was also some evidence for lead-working at the Castle site.

The Castle

Lead objects included three small 'balls' (1109, 5002 and unstratified) which might have been projectiles. In addition, a large thick fragment from a leaded iron vessel (1261), two fragments of strip, two fragments of lead sheet and two amorphous fragments with a 'molten' appearance (1020, 1229) were recovered. The molten and scrap fragments attest to lead-working on the site.

Bridge Street/Mill Lane

Lead finds comprised six fragments of strip from windows.

Cuttle Mill

A large, folded piece of lead sheet (N14 layer) and a length of rivetted lead strip (SF4, F304) were recovered.

Recommendations

Apart from the projectiles, for which a full catalogue and consultation with a Civil War expert is recommended, a summary listing only is required for the lead objects.

Leaded Iron

(a preliminary metallurgical description for which a more accurate identification will be sought).

Two cannon balls, the smaller of which has a fuse attached, were recovered from the Castle site.

Recommendations

Cataloguing, drawing, photography, and consultation with a Civil War expert is recommended for the cannon balls (together with the other potential projectiles discussed below).

Silver

A silver brooch with a pink floral and blue ribbon motif executed in mother-of-pearl and dating to the late-19th-early-20th century (2137) was recovered from Bridge Street/Mill Lane.

Recommendations

Closer chronological resolution should be possible since the brooch bears a silver mark. Illustration and the compilation of a short report is recommended for this well-preserved and aesthetically-pleasing item.

Mortar

Eighteen fragments of mortar were recovered from the Castle site, six fragments from Bridge Street/Mill Lane and four fragments from Cuttle Mill. No further action will be required for this material beyond a summary listing by context.

Oyster and Mussel Shell

A total of 164 oyster (*ostrea edulis*) shells and fragments was recovered. The largest amount came from the Bridge Street/Mill Lane site (84), followed by the Castle site (54) and Cuttle Mill (24) where a mussel shell was also recovered. A basic listing of this material will be required.

Slag

Small quantities of probable smithing slag were recovered from the Castle site, Bridge Street/Mill Lane and Cuttle Mill, for which further analysis by an archaeo-metallurgist will be required. This is particularly important in the case of a sample of a much larger slag deposit recorded at the Castle site (1394).

Stone

Worked stone small finds and building stone are discussed by site below:

The Castle

Worked stone small finds comprised half of a spindle whorl (1406), and a whetstone with a small perforation for suspension, possibly of Norwegian ragstone (1312). Architectural fragments comprised ten items of faced building stone, including three fragments of window tracery (1213, 2 x 5008) one of which is a substantial decorative piece with possibly Romanesque mouldings (5008). Other notable pieces were a corner from a ?trough (1037), a rectangular block with a hollowed upper face (1144), a large 'L'-shaped block and a flat fragment with a curved outer edge (both from Structure 2). The remainder were parts of building blocks (2 x 5008, 5012, 6011, 2 x

unstratified), one of which - a triangular-shaped block dressed on all faces - was probably a keystone for a window or door arch (5012). In addition, seven fragments of Rhenish lava were identified (1456), a material known to have been imported from the continent during Medieval times. While not obviously worked, the fragments probably originated from a broken quernstone and their presence is noteworthy (1456). In addition, four fragments of stone roof-tile were recovered.

Bridge Street/Mill Lane

Three fragments of dressed building stone, including the edge of a ?trough (unstratified), a roughly triangular-shaped fragment with a recessed triangular design detail (G1) and a large slab with a chamfered edge were recovered. In addition, ten fragments of stone roof-tile were also recovered.

Cuttle Mill

Stone finds comprised part of a circular-sectioned ?honestone (40004), part of a basin-shaped trough (3047) and a fragment of stone roof-tile.

Recommendations

While much of the worked stone from Medieval building works will have been removed from Banbury or re-used elsewhere in the past, the small collection contains some interesting objects, particularly the possible window or vaulting tracery from the Castle site, all of which, together with the small finds and lava fragments, will require geological examination, especially since the perforated whetstone and the lava were probably continental imports. Illustration will be required for twelve of the objects.

Wood by Erica Macey

Small quantities of worked wood were recovered from the Castle site, Bridge Street/Mill Lane and Cuttle Mill. They are discussed by site below:

The Castle

A large piece of hollowed-out tree trunk was recovered (1468). Close examination revealed that this was a section of garderobe chute, which directed waste material into the moat. The section of the moat where the chute was found was a recut of the early moat (Phase 1b), from the Saxo-Norman period, when a timber castle was constructed on the site. This item is currently undergoing conservation at the Mary Rose Trust, Portsmouth, but will warrant further investigation on its return.

Bridge Street/Mill Lane

Three fragments of sawn wood were recovered, all of which were from the same context (2006).

Cuttle Mill

Seven items of worked wood were recovered, including a section of tree trunk with a possibly chamfered edge and a section of wooden drain, complete with two iron nails on the "lid". The drain section was found in the outer moat of the castle, which, having fallen into disuse was recut as a drainage channel in the late-17th to early-18th century. This channel was subsequently cut by the ditch from where the log was recovered. Both of these items, cut from tree trunks, are reasonably well preserved,

although cracked from drying. The other five items were unidentifiable fragments (3059/ 3039, 2 x 3059, 2 x Layer 14).

Recommendations

As with the leather assemblage, it appears that the wood present on the sites is from domestic debris. The assemblage is in a varying state of preservation, with most items being completely waterlogged. The exceptions to this are two of the finds from the Cuttle Mill, namely the drain section and the tree trunk, which both come from more modern contexts. It may be possible to obtain a dendrochronological date from the tree trunk, however as it is in a relatively modern context, this would probably be of limited use, as would further study of either of these items. A short report, photography, conservation and dendrochronology will be required of the section of garderobe chute. No further work is recommended for the remaining small, undiagnostic sawn pieces.

Worked Bone

A total of six bone objects was recovered, three from the Castle site and three from Bridge Street/Mill Lane.

The Castle

Three items of worked bone were identified: a polished horse tooth, which might have been used as a chess piece or other form of gaming counter (SF5, 1298), and two tibia fragments from a sheep or goat (1495, 5006). The first had a small hole drilled in the proximal shaft (1495) and the second had a segmented effect resulting from being marked at intervals, probably for the production of naturally hollow bone cylinders (which might have been used for a variety of purposes, including as clothing and purse fasteners) and traces of sawing at the narrowest end (5006).

Bridge Street/Mill Lane

Three bone objects were recovered, including two tapered rods with one broad, square-sectioned end and a narrow end with a drilled perforation, perhaps for suspension (SF 5, 2127). The rods might have been connected with weaving or other textile crafts. A small circular bone disc with a central perforation, probably part of a button or other fastening, was also identified (2176).

Recommendations

Although fewer in number than might be expected from the excavation of parts of a major Medieval town and castle, all of the bone objects recovered are well-preserved and most are deserving of further study, including illustration. Further research will include a search of published material such as the major collection of Medieval worked bone from Winchester (Biddle 1990).

Potential of the Overall Assemblage

The overall small finds assemblage represents material ranging widely in date, from the medieval period to the early-20th century. The assemblage is perhaps surprisingly small, given the quite large areas of the castle and town excavated, though it is unlikely that this reflects a significant level of recovery bias in the assemblage. It probably, more significantly, reflects the nature of the zones excavated.

However, the assemblage does have considerable potential for further study, though much of it will simply require cataloguing and listing for the final report. Those groups of material and individual items that will require more detailed recording and contextualisation through research into parallels have been highlighted above. Significant groups of medieval and post-medieval metalwork, post-medieval vessel glass, clay pipes, Civil War munitions, and architectural fragments from both the medieval and post-medieval periods fall into this latter category. Interesting individual items include the medieval honestone and lava quern fragments that are imported items, from Scandinavia and Germany respectively, whose presence here attests to the high-status nature of the castle site, as may perhaps be also expected to be reflected in the pottery and animal bone assemblages.

A functional and chronological grouping of the small finds may allow trends to be identified. It is likely that the issues of zoning and status may be addressable at the castle site, from the medieval period up to the Civil War, through comparison with the small finds assemblages recovered by Fasham and particularly by Rodwell. The curious lack of personal items, such as jewellery etc, at all periods perhaps indicates a distinction between public and private use of space here. In the Bridge Street/Mill Lane area the bottle and vessel glass assemblage and large clay pipe group provide tangible props to the documented drama of drinking and leisure that took place in this area among the river and later canalside workers on Banbury's geographical and social pale before the cleaning up of the area by the Temperance campaign.

Further analysis of the small finds assemblage will help to fulfill research aims 1, 2, 3, 5, 7, and 8 (see section 8).

Cataloguing, Reporting and Illustration Requirements

Brick and Tile report: 1 day (E.M.).

Illustration (1-2 items): 1 day (M.B.).

Charcoal specialist: 1 day (T.B.A.).

Clay pipe report: 15 days (L.B.).

Illustration: 10 days (M.B.).

Geological identification: 2 days (R.I.).

Glass report: 8 days (L.B.).

Illustration (20 items): 10 days (M.B.).

Leather report: 2 days (E.M.).

Illustration (4 items): 2 days (M.B.).

Loomweight report: 0.5 day (L.B.).

Illustration: 0.5 day (M.B.).

Metalwork:

Copper alloy report: 6 days (L.B.).

Illustration (10 objects): 5 days (M.B.).

Iron report: 12 days (L.B.).

Illustration required (8 objects): 4 days (M.B.).

Lead report: 1 day (L.B.).

Leaded iron report: 2 days (L.B.)

Civil War specialist: 1 day (TBA)

Illustration: 1 day (M.B.)

Photography: 1 day (G.N.)

Silver report: 1 day (L.B.).

Illustration (1 item): 0.5 day (M.B.).

Stone report: 10 days (L.B.).

Illustration (12 objects): 6 days (M.B.).

Wood report: 2 days (E.M.).

Specialist consultation : 1 day (S.A.)

Illustration: 1 day (M.B.)

Worked Bone report: 2 days (L.B.).

Illustration (6 objects): 3 days (M.B.).

Calculations of time and costs required for conservation of materials, delivery and collection of artefacts for conservation, and dendrochronological dating appear in the project budget.

Staff are: Lynne Bevan (L.B); Erica Macey (E.M.); Mark Breedon (M.B.); Rob Ixer (R.I); Graham Norrie (G.N); Steve Allen (S.A).

Table 13
The Artefactual Assemblage

Basic Quantification

[Databases on which they are recorded in italics]

MATERIAL	Test Pits (<i>Barbury</i>)	Castle		Canal	Tooleys * (<i>TBO</i>)	Cuttie Mill (<i>CMO</i>)	Mill Lane/ Bridge Street (<i>Ban2098</i>)	TOTAL
		Evaluation (<i>Barbury1a</i>)	Excavation (<i>BCO</i>)	Evaluation (<i>Barbury1a</i>)				
Tile	26	7	27	6	3	18	33	120
Brick		7	14	3			1	25
Fired Clay/Daub			21		1			22
Building stone			14		4	16	13	49
Mortar			18			4	6	28
Roman pottery		2	9					11
Saxon pottery			51					51
Medieval pottery	32	523	3269	8	4	199	88	4123
Post-Medieval pottery	180	67	110	28	120	58	827	1390
Clay pipe		57	35	4	31	13	303	443
Other ceramic					1			1
Coins		1	3		1		5	10
Iron nails	23	4	25	3	17	2	97	171
Other Iron	5	8	40		6	2	124	185
Copper alloy	5		12		2	2	47	68
Lead (and leaded Iron)		2	12			2	1	17
Other metal (Silver)							1	1
Slag		3	11			8	2	24
Bottle glass			56		18	3	119	196
Other vessel glass			1				72	73
Window glass			19		1	8	78	106
Other glass	1					1		2
Flint		19	52		1	8		80
Other stone	2		9		2		6	19
Worked bone			3				3	6
Human bone		1						1
Animal bone (weight in g)		16012	78993	7466	650	14189	7797	125107
Shell			54		2	24	84	164
Leather						12	19	31
Wood			8	2		7		17
Charcoal	18	4				1		23
TOTAL (without bone)	292	704	3874	54	214	390	1929	7457

* Finds from work at Tooley's Boatyard are quantified here, but note that this site comprises a separate contract from the present assessment.

6.2.4 The Animal Bone by Ian L. Baxter

Recovery

The majority of the bones were collected by hand. A total of 41 samples was taken from the Castle site. Of these, 25 comprise mainly bone and charcoal-rich deposits with good dating evidence. One dry sample from Bridge Street/Mill Lane is worth further examination.

Residuality and Contamination

Little information is presently available about residuality, but this is not considered to be a major problem for Phases 1-3 of the Castle site or for Bridge Street/Mill Lane and Cuttle Mill. Phases subsequent to Phase 3 at the castle site are known to be very mixed (Steve Litherland *pers. comm.*) and are omitted from this assessment. Contexts that span more than one phase have also been omitted (see below and Appendix 4).

Context

Many of the animal bones from the Castle Site derive from the various moat fills, but some also come from pits, gullies, construction trenches, layers and other features.

Preservation

The preservation of the bone surface was on average fairly good, although in a few contexts some badly-damaged bones were noted alongside well-preserved specimens. The level of fragmentation was typical of assemblages mostly deriving from butchery and kitchen refuse.

Quantity

The total weight of the hand-collected bone from the Castle Site is 78.7kg. Only 578g of animal bone was recovered from the Dry Dock (Area B) and the outer moat of the Phase 3 Castle (Area C) and these are omitted from the assessment. In line with the criteria outlined above, the following quantities were selected for evaluation:

Evaluation – 11689g
Area A – 24709g
Area AD – 34086g
Total = 70484g or 70.5kg

The total weight of the hand-collected bone from the Bridge Street/Mill Lane excavation is 7.6kg. Of this total, 5.2kg were selected for evaluation.

The total weight of the hand-collected bone from the Cuttle Mill excavation is 14.2kg. Out of this total, 9.6kg were selected for evaluation.

Assessment

Methods

Between 27- 36% of the total weight of bones from Phases 0/1 and 3 of the Castle site have been selected for assessment. Numbers of “countable” bones, ageable mandibles and measurable bones are recorded in Tables 14-16. For the Bridge Street/Mill Lane

excavation between 28-33% were selected for assessment and between 30-38% for Cuttle Mill. Full details are given in Appendix 4. The counting system is based on Davis (1992) and Albarella, Beech and Mulville (1997) and is explained in Appendices 2 and 3.

Variety

As would be expected from a high status site, pig remains are especially frequent from the Castle contexts and, to a lesser extent, domestic bird species. Horse and dog are also frequent. Wild species would seem to be absent apart from roe deer and hare. No rabbit or fallow deer bones were seen. Bird remains are absent from the assessed Cuttle Mill contexts (see Tables 14-18). The horncores of unimproved longhorn cattle were present in 17th and late-18th-early 19th-century town boundary ditch contexts at Cuttle Mill. No fish bones were seen in any of the assessed contexts, although it is possible that they may occur in the sample bone. (*N.B. Fish bones were indeed present in a number of sample residues*).

Quantity

The Castle Site assemblage is a medium-sized assemblage and should provide useful quantitative information between Phases (1-3) and similar sites nationally. Bridge Street/Mill Lane and the Cuttle Mill should provide useful background information relating to the town during various stages of its development and, perhaps, its relationship to the castle.

Potential

There should be enough material to compare areas spatially within the Castle Site and also, to a limited extent, the castle area with other areas of the town through time. The castle assemblage is probably sufficient in quantity to afford comparison with other sites of similar status nationally.

Recommendations

The assemblages from Phases 1 to 3 of the Castle, including the sieved samples, are worth full investigation. So are Phases 1, 3, 5, and 6 from Bridge Street/Mill Lane, and Phases 1, 2, 4a, 5, and 6 from the Cuttle Mill. All the other animal bone and sieved samples should be scanned to check for specimens of particular interest

Further analysis of the bone assemblage will help to fulfill research aims 1, 2, 3, 4, 5, 7, and 8 (see section 8).

Table 14. The Castle and Canal Evaluation.

Hand-collected assemblage. Number of "countable" bones (Davis 1992; Albarella, Beech and Mulville 1997) used for assessment and estimates of their total.

The estimated total is calculated on the basis of the percentage of bone weight used for assessment. In general this is 30-33%. For details see text and Appendix 4.

PERIOD	COUNTABLE BONES						Comments
	Cattle	Sheep/Goat	Pig	Others	Bird	Total	
Phase 1 (Saxo-Norman) assessment	5	5	5	1	1	17	Includes horse, fowl
<i>Phase 1 (Saxo-Norman) estimated total</i>	15	15	15	3	3	51	
Phase 2 (c.1150-1250) assessment	3	1	3	1	-	8	Includes horse
<i>Phase 2 (c.1150-1250) estimated total</i>	9	3	9	3	-	24	
Phase 3 (1250-1640) assessment	5	3	4	1	1	14	Includes horse, fowl
<i>Phase 3 (1250-1640) estimated total</i>	15	9	12	3	3	42	
Phase 4 (Civil War) assessment	1	-	1	-	-	2	
<i>Phase 4 (Civil War) estimated total</i>	3	-	3	-	-	6	
TOTAL (assessment)	14	9	13	3	2	41	
TOTAL (estimated)	42	27	39	9	6	123	

PERIOD	AGEABLE MANDIBLES				MEASUREMENTS					
	Cattle	Sheep/Goat	Pig	Total	Cattle	Sheep/Goat	Pig	Others	Bird	Total
Phase 1 (Saxo-Norman) assessment	-	1	1	2	2	3	2	1	1	9
Phase 1 (Saxo-Norman) estimated total	-	3	3	6	6	9	6	3	3	27
Phase 2 (c.1150-1250) assessment	1	-	-	1	1	1	1	1	-	4
Phase 2 (c.1150-1250) estimated total	3	-	-	3	3	3	3	3	-	12
Phase 3 (1250-1640) assessment	-	-	-	0	1	3	1	1	1	7
Phase 3 (1250-1640) estimated total	-	-	-	0	3	9	3	3	3	21
Phase 4 (Civil War) assessment	-	1	-	1	1	1	-	-	-	2
Phase 4 (Civil War) estimated total	-	3	-	3	3	3	-	-	-	6
TOTAL (assessment)	1	2	1	4	5	8	4	3	2	22
TOTAL (estimated)	3	6	3	12	15	24	12	9	6	66

Table 15. The Castle Excavation Area A.

Hand-collected assemblage. Number of "countable" bones (Davis 1992; Albarella, Beech and Mulville 1997) used for assessment and estimates of their total.

The estimate is calculated on the basis of the percentage of bone weight used for assessment. In general this is approximately 30-33%. For details see text and Appendix 4.

PERIOD	COUNTABLE BONES						Comments
	Cattle	Sheep/Goat	Pig	Others	Bird	Total	
Phase 1a (Saxo-Norman) assessment	3	3	4	1	1	12	Includes horse, goose
Phase 1a (Saxo-Norman) estimated total	9	9	12	3	3	36	
Phase 1b (Saxo-Norman) assessment	12	11	7	4	1	35	Includes horse, dog, fowl, roe deer
Phase 1b (Saxo-Norman) estimated total	36	33	21	12	3	105	
Phase 2 (c.1150-1250) assessment	1	3	3	5	-	12	Includes horse, dog (skeleton)
Phase 2 (c.1150-1250) estimated total	3	9	9	15	-	33	
Phase 3 (1250-1640) assessment	13	16	7	2	7	45	Includes horse, hare, goose, fowl
Phase 3 (1250-1640) estimated total	39	48	21	6	21	135	
TOTAL (assessment)	29	33	21	12	9	104	
TOTAL (estimated)	87	99	63	36	27	312	

PERIOD	AGEABLE MANDIBLES				MEASUREMENTS					
	Cattle	Sheep/Goat	Pig	Total	Cattle	Sheep/Goat	Pig	Others	Bird	Total
Phase 1a (Saxo-Norman) assessment	-	2	-	2	1	2	2	1	1	7
Phase 1a (Saxo-Norman) estimated total	-	6	-	6	3	6	6	3	3	21
Phase 1b (Saxo-Norman) assessment	2	2	-	4	7	6	1	1	1	16
Phase 1b (Saxo-Norman) estimated total	6	6	-	12	21	18	3	3	3	60
Phase 2 (c.1150-1250) assessment	-	-	-	-	1	1	1	5	-	8
Phase 2 (c.1150-1250) estimated total	-	-	-	-	3	3	3	15	-	24
Phase 3 (1250-1640) assessment	1	-	1	2	3	11	2	2	4	22
Phase 3 (1250-1640) estimated total	3	-	3	6	9	33	6	6	12	66
TOTAL (assessment)	3	4	1	8	12	20	6	9	6	53
TOTAL (estimated)	9	12	3	24	36	60	18	27	18	159

Table 16. The Castle Excavation Area AD.

Hand-collected assemblage. Number of "countable" bones (Davis 1992; Albarella, Beech and Mulville 1997) used for assessment and estimates of their total.

The estimated total is calculated on the basis of the percentage of bone weight used for assessment. In general this is 30-33%. For details see text and Appendix 4.

PERIOD	COUNTABLE BONES						Comments
	Cattle	Sheep/Goat	Pig	Others	Bird	Total	
Phase 1a (Saxo-Norman) assessment	4	8	4	-	-	16	
Phase 1a (Saxo-Norman) estimated total	12	24	12	-	-	48	
Phase 1b (Saxo-Norman) assessment	22	24	20	2	2	70	Includes horse, fowl
Phase 1b (Saxo-Norman) estimated total	66	72	60	6	6	210	
Phase 2 (c.1150-1250) assessment	28	32	53	5	8	126	Includes horse, dog, hare, fowl, duck
Phase 2 (c.1150-1250) estimated total	84	96	159	15	24	378	
Phase 3 (1250-1640) assessment	2	2	7	1	-	12	Includes horse
Phase 3 (1250-1640) estimated total	6	6	21	3	-	36	
TOTAL (assessment)	56	66	84	7	12	225	
TOTAL (estimated)	168	198	252	21	36	675	

PERIOD	AGEABLE MANDIBLES				MEASUREMENTS					
	Cattle	Sheep/Goat	Pig	Total	Cattle	Sheep/Goat	Pig	Others	Bird	Total
Phase 1a (Saxo-Norman) assessment	-	1	-	1	-	5	1	-	-	6
Phase 1a (Saxo-Norman) estimated total	-	3	-	3	-	15	3	-	-	18
Phase 1b (Saxo-Norman) assessment	-	-	4	4	2	12	6	2	1	23
Phase 1b (Saxo-Norman) estimated total	-	-	12	12	6	36	18	6	3	69
Phase 2 (c.1150-1250) assessment	2	3	7	12	3	17	16	3	3	42
Phase 2 (c.1150-1250) estimated total	6	9	21	36	9	51	48	9	9	126
Phase 3 (1250-1640) assessment	-	-	-	-	1	1	1	1	-	4
Phase 3 (1250-1640) estimated total	-	-	-	-	3	3	3	3	-	12
TOTAL (assessment)	2	4	11	17	6	35	24	6	4	75
TOTAL (estimated)	6	12	33	51	18	105	72	18	12	225

Table 17. The Bridge Street/Mill Lane Excavation.

Hand-collected assemblage. Number of "countable" bones (Davis 1992; Albarella, Beech and Mulville 1997) used for assessment and estimates of their total.

The estimated total is calculated on the basis of the percentage of bone weight used for assessment. In general this is 30-33%. For details see text and Appendix 4.

PERIOD	COUNTABLE BONES						Comments
	Cattle	Sheep/Goat	Pig	Others	Bird	Total	
Phase 1-2 (Medieval) assessment	1	-	-	-	1	2	Includes fowl
Phase 1-2 (Medieval) estimated total	3	-	-	-	3	6	
Phase 3 (Tudor) assessment	-	6	1	-	-	7	
Phase 3 (Tudor) estimated total	-	18	3	-	-	21	
Phase 5 (C18th) assessment	2	1	-	1	-	4	Includes hare
Phase 5 (C18th) estimated total	6	3	-	3	-	12	
Phase 6 (C19th) assessment	4	6	1	1	-	12	Includes horse
Phase 6 (C19th) estimated total	12	18	3	3	-	36	
TOTAL (assessment)	7	13	6	2	1	29	
TOTAL (estimated)	21	39	18	6	3	87	

PERIOD	AGEABLE MANDIBLES				MEASUREMENTS					
	Cattle	Sheep/Goat	Pig	Total	Cattle	Sheep/Goat	Pig	Others	Bird	Total
Phase 1-2 (Medieval) assessment	-	-	-	-	1	-	-	-	1	2
Phase 1-2 (Medieval) estimated total	-	-	-	-	3	-	-	-	3	6
Phase 3 (Tudor) assessment	-	-	1	1	-	4	-	-	-	4
Phase 3 (Tudor) estimated total	-	-	3	3	-	12	-	-	-	12
Phase 5 (C18th) assessment	-	-	-	-	2	1	-	1	-	4
Phase 5 (C18th) estimated total	-	-	-	-	6	3	-	3	-	12
Phase 6 (C19th) assessment	-	-	-	-	1	2	2	1	-	6
Phase 6 (C19th) estimated total	-	-	-	-	3	6	6	3	-	18
TOTAL (assessment)	-	-	1	1	4	7	2	2	1	16
TOTAL (estimated)	-	-	3	3	12	21	6	6	3	48

Table 18. The Cuttle Mill Excavation.

Hand-collected assemblage. Number of “countable” bones (Davis 1992; Albarella, Beech and Mulville 1997) used for assessment and estimates of their total.

The estimated total is calculated on the basis of the percentage of bone weight used for assessment. In general this is 30-33%. For details see text and Appendix 4.

PERIOD	COUNTABLE BONES						Comments
	Cattle	Sheep/Goat	Pig	Others	Bird	Total	
Phase 2 (Medieval) assessment	-	6	-	1	-	7	Includes dog
Phase 2 (Medieval) estimated total	-	18	-	3	-	21	
Phase 3 (late Medieval) assessment	-	3	-	1	-	4	Includes horse
Phase 3 (late Medieval) estimated total	-	9	-	3	-	12	
Phase 4 (C17th) assessment	3	1	-	-	-	4	
<i>Phase 4 (C17th) estimated total</i>	9	3	-	-	-	12	
Phase 5 (C18th) assessment	1	1	-	-	-	2	
Phase 5 (C18th) estimated total	1	1	-	-	-	2	
Phase 6 (C19th) assessment	2	3	1	5	-	11	Includes horse, dog
<i>Phase 6 (C19th) estimated total</i>	6	9	3	15	-	33	
TOTAL (assessment)	6	14	1	7	-	28	
TOTAL (estimated)	18	42	3	21	-	84	

PERIOD	AGEABLE MANDIBLES				MEASUREMENTS					
	Cattle	Sheep/Goat	Pig	Total	Cattle	Sheep/Goat	Pig	Others	Bird	Total
Phase 2 (Medieval) assessment	-	-	-	-	-	6	-	1	-	7
Phase 2 (Medieval) estimated total	-	-	-	-	-	18	-	3	-	21
Phase 3 (late Medieval) assessment	-	-	-	-	-	1	-	1	-	2
Phase 3 (late Medieval) estimated total	-	-	-	-	-	3	-	3	-	6
Phase 4 (C17th) assessment	-	-	-	-	3	1	-	-	-	4
Phase 4 (C17th) estimated total	-	-	-	-	9	3	-	-	-	12
Phase 5 (C18th) assessment	1	-	-	1	-	-	-	-	-	-
Phase 5 (C18th) estimated total	3	-	-	3	-	-	-	-	-	-
Phase 6 (C19th) assessment	-	-	1	1	1	1	1	3	-	6
<i>Phase 6 (C19th) estimated total</i>	-	-	3	3	3	3	3	9	-	18
TOTAL (assessment)	1	-	1	2	4	6	1	5	-	16
TOTAL (estimated)	3	-	3	6	12	18	3	15	-	48

Table 19. Banbury Sites Assessment: estimated totals
(based on tables 14-18)

The Castle Site

Taxon	Cattle	Sheep/Goat	Pig	Others	Bird	Total
NISP	297	324	354	63	69	1107
Mandibles	18	30	39	-	-	87
Measurements	69	189	102	54	36	450

The Bridge Street/Mill Lane Urban Landscape

Taxon	Cattle	Sheep/Goat	Pig	Others	Bird	Total
NISP	21	39	18	6	3	87
Mandibles	-	-	3	-	-	3
Measurements	12	21	6	6	3	48

The River and Canalside Waterfronts

Taxon	Cattle	Sheep/Goat	Pig	Others	Total
NISP	18	42	3	21	84
Mandibles	3	-	3	-	6
Measurements	12	18	3	15	48

Banbury all sites

Taxon	Cattle	Sheep/Goat	Pig	Others	Bird	Total
NISP	336	405	375	90	72	1278
Mandibles	21	30	45	-	-	96
Measurements	93	228	111	75	39	546

6.2.5 The Charred Plant Remains by Wendy Smith

Samples for charred plant remains were collected from Saxon and Medieval pits, moats, organic layers, floor surfaces and beam slot features during excavations at Banbury. In total, 27 samples were assessed from the Banbury Castle site and one sample was assessed from the Bridge Street/Mill Lane excavation. Some areas on site were waterlogged, and this assessment has included observation of any evidence for waterlogged plant remains as well.

The archaeobotanical samples were assessed for charred plant remains in order to determine:

- If charred plant remains are present.
- If the charred plant remains recovered provide information on human activity at the site, in particular food production or other industrial activities.
- If the charred plant remains provide information on the surrounding environment.

Method

The samples were processed by a BUFAU environmental assistant, using water flotation. The flots (the material which floats on the water's surface) were sieved to 500µm and the heavy residues (the material which does not float) were wet sieved to 1mm. Both were air dried at room temperature and bagged when fully dry. Those flots which were not fully dry in time for the assessment were dried in an oven at 40°C. The heavy residues were sorted by Marina Ciaraldi (BUFAU). The charred seeds recovered from the heavy residues have not been examined for this assessment, but their presence was noted in Table 20. The results presented here are, therefore, solely based on the flots.

The flots were scanned using a low-powered binocular microscope at magnifications between x12 and x25. The assessment was carried out through rapid scanning of samples and, therefore, the results presented below should be considered provisional. Preliminary identifications were made without consulting a reference collection, and the speed of assessment may mean that some seeds, especially smaller sized seeds, may have been overlooked. Nomenclature for the plant remains follows Stace (1997) for indigenous species and Zohary and Hopf (1994) for the cultivated species. The traditional binomial system for the cereals has been used here, following Zohary and Hopf (1994: Table 3 p24 and Table 5 p58).

Results

Table 14 summarises the main assessment results. The charred plant remains were dominated by cereal grain, but cereal rachis internodes and weed seeds are also present in many samples. Barley, oat, rye, and free-threshing wheat have all been identified in the samples. The precise proportions of cereal grain to cereal chaff to

weed seeds, however, does vary from sample to sample. Out of the 28 samples assessed here, 20 have produced assemblages suitably rich to merit further analysis.

Some of the samples (BCO 98 samples 1, 4, 10, 11, 14, 16, 24, 33, 35, 37, and 38) contained bone. In all cases the bone was sorted from that portion of the flots which was scanned for the assessment. Some of the samples also contained small amounts of charcoal. It is not known what charcoal was recovered in the heavy residues, but based on the flots, only sample 15 [BCO 98 1394] appears to be worthwhile for charcoal analysis. This sample's flots also produced unidentified vitreous objects, which may be informative in terms of any industrial activities taking place at, or near, the castle.

Several samples (BCO 98 samples 5, 17, 21, 22, 27, 33, 34, and 35) appeared to have come from waterlogged deposits. In some cases (samples 21, 22 and 27) waterlogged material has been accidentally processed for charred plant remains, rather than waterlogged plant remains. In the case of samples 21 and 22, waterlogged material from the same feature (sample 20) is still available. This is also the case for sample 27, where waterlogged material from the early moat (sample 28) is also still available. All other dried-out waterlogged samples assessed here also contained charred plant remains.

Recommendations

The deposits sampled at Banbury have proven to be quite rich in terms of charred plant remains. Only one other study of Medieval carbonised plant remains from Banbury has been published (Robinson 1991). As a result, the material recovered from BUFAU excavations at Banbury is extremely valuable and will make a clear contribution to the archaeobotanical history of Banbury and the region.

The twenty samples recommended for further analysis (see Table 20) are not fully dated yet. However, those which have provisional dates appear to range from the Early Saxon to Medieval period. Analysis of this assemblage is likely to provide information on:

- changes in cereal crops cultivated over time
- cereal-based activities taking place on, or near, the site
- crop husbandry methods
- soil conditions of cereal crops
- crop processing activities
- patterns of waste disposal on site

Further analysis of the charred plant assemblage will help to fulfill research aims 1, 2, 3, 4, and 5 (see section 8).

Table 20. Summary of assessment results for charred plant remains from Saxon and Medieval deposits at Banbury

Site Code	Sample Number	Context	Feature	Description & Period	Sample Volume	Flot Volume	Further Analysis	Comments
B20 98	1	-	F173	n/a	n/a	16 ml	yes	100% flot scanned. Charred seeds observed included: free-threshing wheat grain, pea (cf. <i>Pisum</i> sp.), vetch/ pea (<i>Vicia</i> sp./ <i>Lathyrus</i> sp.), stinking chamomile (<i>Anthemis cotula</i> L.), Rye (<i>Secale cereale</i> L.) rachis internode, Hazel (<i>Corylus avellana</i> L.) nutshell, clever (<i>Galium</i> sp.), and wheat/rye (<i>Triticum</i> sp./ <i>Secale cereale</i> L.) grain. Assessed as GOOD to RICH.
BCO 98	1	1207	F167	Late Saxon/ Early Norman thin vein of charcoal in early pit	3 L	175 ml	yes	100% flot scanned. Modern root present. Charcoal +. Bone sorted from flot. Charred seeds observed included: free-threshing wheat (<i>Triticum</i> sp.) grain, barley (<i>Hordeum</i> sp. - some clearly hulled) grain, oat (<i>Avena</i> sp.) grain, indeterminate cereal rachis, vetch/ pea (<i>Vicia</i> sp./ <i>Lathyrus</i> sp.), cereal culm node, knapweed (<i>Centaurea</i> sp.), wheat (<i>Triticum</i> sp.) rachis internode, stinking mayweed (<i>Anthemis cotula</i> L.), possible tufted vetch or hairy tare (<i>Vicia</i> cf. <i>cracca</i> L./ <i>Vicia</i> cf. <i>hirsuta</i> L.), corncockle (<i>Agrostemma githago</i> L.), possible rye (<i>Secale cereale</i> L.) grain, and eyebright/ bartsia (<i>Euphrasia</i> sp./ <i>Oodintites</i> sp.). Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as RICH.
BCO 98	2	1030	F109	Late Saxon/ Early Norman pit	8 L	30 ml	yes	100% flot scanned. Modern root present. Charcoal +. Charred seeds observed include: free-threshing wheat (<i>Triticum</i> sp.) grain, knapweed (<i>Centaurea</i> sp.), unidentified large pulse (<i>Pisum</i> sp./ <i>Vicia</i> sp./ <i>Lathyrus</i> sp.), hulled barley (<i>Hordeum</i> sp.), oat (<i>Avena</i> sp.) grain, hazelnut (<i>Corylus avellana</i> L.) nutshell and possible rye (<i>Secale cereale</i> L.) grain. Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as GOOD to RICH.
BCO 98	3	1031	F109	Late Saxon/ Early Norman pit	8 L	450 ml	yes	25% flot scanned. Large quantity of modern root present. Charcoal +. Charred seeds observed included: free-threshing wheat (<i>Triticum</i> sp.) grain, barley (<i>Hordeum</i> sp.) grain, and oat (<i>Avena</i> sp.). Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as GOOD to RICH.
BCO 98	4	1032	F109	Late Saxon/ Early Norman pit	8 L	22 ml	yes	100% flot scanned. Bone sorted from flot. Charcoal +. Charred seeds observed include: free-threshing wheat (<i>Triticum</i> sp.) grain, barley (<i>Hordeum</i> sp.) grain, stinking chamomile (<i>Anthemis cotula</i> L.), rye (<i>Secale cereale</i> L.) grain, wheat (<i>Triticum</i> sp.) rachis internode, oxtongue (<i>Picris</i> sp.), clever (<i>Galium</i> sp.), vetch/ pea (<i>Vicia</i> sp./ <i>Lathyrus</i> sp.), dock (<i>Rumex</i> sp.), knapweed (<i>Centaurea</i> sp.), and corncockle (<i>Agrostemma githago</i> L.) calyx tip. Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as RICH.
BCO 98	5	1227	F160	Late Saxon/ Early Norman pit	10 L	10 ml	no	100% flot scanned. Sample may have been waterlogged. Modern root. Charred seeds observed include: free-threshing wheat (<i>Triticum</i> sp.) grain, vetch/ pea (<i>Vicia</i> sp./ <i>Lathyrus</i> sp.), knapweed (<i>Centaurea</i> sp.), barley (<i>Hordeum</i> sp.) grain, oat (<i>Avena</i> sp.) grain, and stinking chamomile (<i>Anthemis cotula</i> L.). Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as GOOD.

Table 20. Summary of assessment results for charred plant remains from Saxon and Medieval deposits at Banbury continued...

Site Code	Sample Number	Context	Feature	Description & Period	Sample Volume	Flot Volume	Further Analysis	Comments
BCO 98	10	1141	-	layer below orange layer below wall not dated	20 L	60 ml	yes	20% of flot scanned. Bone present, but only sorted from portion of flot that was scanned. Charcoal +. Charred seeds observed include: possible common vetch (<i>Vicia cf. sativa</i> L.), free-threshing wheat (<i>Triticum</i> sp.) grain, vetch/ pea (<i>Vicia</i> sp./ <i>Lathyrus</i> sp.), dock (<i>Rumex</i> sp.), rye (<i>Secale cereale</i> L.) rachis internode, goosefoot (<i>Chenopodium</i> sp.), barley (<i>Hordeum</i> sp.) and stinking chamomile (<i>Anthemis cotula</i> L.). Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as RICH.
BCO 98	11	1264	-	'layer' not dated	50 L	50 ml	yes	50% flot scanned. Bone present, only sorted from scanned portion of flot. Charcoal ++. Charred seeds observed include: rye (<i>Secale cereale</i> L.) grain, barley (<i>Hordeum</i> sp. - some clearly hulled) grain, free-threshing wheat (<i>Triticum</i> sp.) grain, corncockle (<i>Agrostemma githago</i> L.), vetch/ pea (<i>Vicia</i> sp./ <i>Lathyrus</i> sp.), brome grass (<i>Bromus</i> sp.), and cereal culm node. Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as RICH.
BCO 98	12	1302	F186	Early Mediaeval hearth	20 L	225 ml	yes	Sample was oven-dried at 40°C. 10% of flot scanned. Charcoal +. Charred seeds observed include: barley (<i>Hordeum</i> sp.) grain, oat (<i>Avena</i> sp.) grain, corncockle (<i>Agrostemma githago</i> L.), rye (<i>Secale cereale</i> L.) grain, cereal culm node, brome grass (<i>Bromus</i> sp.), knapweed (<i>Centaurea</i> sp.), knotweed/ knotgrass (<i>Persicaria</i> sp./ <i>Polygonum</i> sp.), and wild radish (<i>Raphanus raphanistrum</i> L.). Heavy residue clearly contained charred seeds, but was not sorted by MC. Assessed as RICH.
BCO 98	14	1090	F196	pit not dated	n/a	22 ml	yes	100% flot scanned. Bone sorted from flot. Charcoal +. Charred seeds observed include: free-threshing wheat (<i>Triticum</i> sp.) grain, indeterminate cereal rachis internode, brome grass (<i>Bromus</i> sp.), vetch/ pea (<i>Vicia</i> sp./ <i>Lathyrus</i> sp.), possible common vetch (<i>Vicia cf. sativa</i> L.), oat (<i>Avena</i> sp.) grain, barley (<i>Hordeum</i> sp.) grain, clever (<i>Galium</i> sp.), possible pea (cf. <i>Pisum</i> sp.), possible tufted vetch or hairy tare (<i>Vicia cf. cracca</i> L./ <i>Vicia cf. hirsuta</i> L.), possible cultivated plum (cf. <i>Prunus domestic</i> L.) fragment, and knapweed (<i>Centaurea</i> sp.). Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as RICH.
BCO 98	15	1394	-	Late Saxon/ Early Norman 'layer'	20 L	125 ml	no	Sample dried at 40°C. Charcoal ++. 100% of flot scanned. Unidentified vitreous material sorted from flot. Charred seeds observed include: possible oat (<i>Avena</i> sp.) grain and free-threshing wheat (<i>Triticum</i> sp.) grain. Assessed as POOR. Possibly worthwhile having charcoal from this sample assessed.

Table 20. Summary of assessment results for charred plant remains from Saxon and Medieval deposits at Banbury continued...

Site Code	Sample Number	Context	Feature	Description & Period	Sample Volume	Flot Volume	Further Analysis	Comments
BCO 98	16	1245	F241	Early Mediaeval 'layer'	50 L	225 ml	yes	10% of flot scanned. Bone present, but only sorted from portion of flot that was scanned. Charred seeds observed include: free-threshing wheat (<i>Triticum</i> sp.) grain, vetch/ pea (<i>Vicia</i> sp./ <i>Lathyrus</i> sp.), cereal culm node, bread wheat-type (<i>Triticum aestivum</i> type) rachis internode, field gromwell (<i>Lithospermum arvense</i> L.), knapweed (<i>Centaurea</i> sp.), hulled barley (<i>Hordeum</i> sp.) grain, possible pea (cf. <i>Pisum</i> sp.), and stinking chamomile (<i>Anthemis cotula</i> L.). Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as RICH .
BCO 98	17	1416	F241	Early Mediaeval middle moat	50 L	125 ml	no	Sample appears to have been waterlogged. 35% of flot scanned. Charred seeds observed include: oat (<i>Avena</i> sp.) grain, hulled barley (<i>Hordeum</i> sp.), possible Rye (cf. <i>Secale cereale</i> L.) grain, and free-threshing wheat (<i>Triticum</i> sp.) grain. Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as POOR to GOOD .
BCO 98	18	1209	-	Early Mediaeval possible floor surface	20 L	42 ml	yes	50% of flot scanned. Charred seeds observed include: oat (<i>Avena</i> sp.) awn, free-threshing wheat (<i>Triticum</i> sp.) grain, cereal culm node, barley (<i>Hordeum</i> sp.) grain, field gromwell (<i>Lithospermum arvense</i> L.), black-bindweed (<i>Fallopia convolvulus</i> L.), wheat (<i>Triticum</i> sp.) rachis internode, and rye (<i>Secale cereale</i> L.) grain and rachis internode. Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as RICH .
BCO 98	19	1426	F245	Late Saxon/ Early Norman re-cut of moat	20 L	115 ml	yes	50% of flot scanned. Charcoal ++. Charred seeds observed include: campion (<i>Silene</i> sp.), free-threshing wheat (<i>Triticum</i> sp.) grain, barley (<i>Hordeum</i> sp.) grain, oat (<i>Avena</i> sp.) grain, stinking chamomile (<i>Anthemis cotula</i> L.), and rye (<i>Secale cereale</i> L.) rachis internode. Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as RICH .
BCO 98	21	1429	F244	Mediaeval later outer moat	50 L	150 ml	no	Waterlogged material which was treated as charred in error. Fresh-water molluscs present. No charred seeds observed. 40% of flot scanned. Dried-out waterlogged material included: dock (<i>Rumex</i> sp.), seeds belong to the dead-nettle family (LAMIACEAE), common nettle (<i>Urtica dioica</i> L.), knotweed (<i>Persicaria</i> sp.), oxtongue (<i>Picris</i> sp.), gypsywort (<i>Lycopus europaeus</i> L.), and thistle (<i>Cirsium</i> sp.). No small-seeded plants such as rushes (<i>Juncus</i> spp.) were observed. Assessed as POOR for charred plant remains and GOOD to RICH for dried-out waterlogged plant remains.

Table 20. Summary of assessment results for charred plant remains from Saxon and Medieval deposits at Banbury continued...

Site Code	Sample Number	Context	Feature	Description & Period	Sample Volume	Flot Volume	Further Analysis	Comments
BCO 98	22	1430	F244	Mediaeval later outer moat	40 L	125 ml	no	Waterlogged material which was treated as charred in error. Fresh-water molluscs present. Small amount of charred free-threshing wheat observed. Dried-out waterlogged seeds observed include: dock (<i>Rumex</i> sp.), hedge-parsley (<i>Torilis</i> sp.), pondweed (<i>Potamogeton</i> sp.), nightshade (<i>Solanum</i> sp.), bur-reed (<i>Sparganium</i> sp.), bramble (<i>Rubus</i> sp.), and goosefoot (<i>Chenopodium</i> sp.). No small-seeded plants such as rushes (<i>Juncus</i> spp.) were observed. Assessed as POOR for charred plant remains and GOOD to RICH for dried-out waterlogged plant remains.
BCO 98	24	1449	F125	? Late Saxon/ Early Norman early moat	50 L	35 ml	no	100% flot scanned. Charcoal ++. Bone sorted from flot. Charred seeds observed include: free-threshing wheat (<i>Triticum</i> sp.) grain, hulled barley (<i>Hordeum</i> sp.) grain, possible rye (<i>Secale cereale</i> L.) grain, and vetch/ pea (<i>Vicia</i> sp./ <i>Lathyrus</i> sp.). Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as POOR to GOOD.
BCO 98	26	1469	F245	Late Saxon/ Early Norman re-cut of early moat	20 L	20 ml	yes	100% flot scanned. Charred seeds observed include: rye (<i>Secale cereale</i> L.) grain, free-threshing wheat (<i>Triticum</i> sp.) grain, hulled barley (<i>Hordeum</i> sp.) grain, and corncockle (<i>Agrostemma githago</i> L. - some of which clearly still in seed head). Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as RICH.
BCO 98	27	1475	F125	Late Saxon/ Early Norman early moat	50 L	45 ml	no	25% of flot scanned. Material clearly was waterlogged. No charred seeds observed. Dried-out waterlogged material includes: bristle club-rush (<i>Isolepis setacea</i> (L.) R. Br.), sedge (<i>Carex</i> spp.), thistle (<i>Carduus</i> sp./ <i>Cirsium</i> sp.), buttercup (<i>Ranunculus</i> spp.), gypsywort (<i>Lycopus europaeus</i> L.), common nettle (<i>Urtica dioica</i> L.), campion (<i>Silene</i> sp.), and sweet-grass (<i>Glyceria</i> sp.). No small-seeded plants such as rushes (<i>Juncus</i> spp.) were observed. Assessed as POOR for charred plant remains and GOOD to RICH for dried-out waterlogged plant remains.
BCO 98	31	1517	F291	pit not dated	20 L	20 ml	yes	50% flot scanned. Charred seeds observed include: barley (<i>Hordeum</i> sp. - some clearly hulled) grain, oat (<i>Avena</i> sp.) grain, corncockle (<i>Agrostemma githago</i> L.), free-threshing wheat (<i>Triticum</i> sp.) grain, unidentified large pulse (<i>Pisum</i> sp./ <i>Vicia</i> sp./ <i>Lathyrus</i> sp.), and stinking chamomile (<i>Anthemis cotula</i> L.). Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as GOOD to RICH.
BCO 98	32	1536	F295	pit not dated	20 L	250 ml	yes	10% flot scanned. Charred seeds observed include: hulled barley (<i>Hordeum</i> sp.) grain and rachis internode, free-threshing wheat (<i>Triticum</i> sp.) grain, oxtongue (<i>Picris</i> sp.), and oat (<i>Avena</i> sp.) grain. Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as EXTREMELY RICH.

Table 20. Summary of assessment results for charred plant remains from Saxon and Medieval deposits at Banbury continued...

Site Code	Sample Number	Context	Feature	Description & Period	Sample Volume	Flot Volume	Further Analysis	Comments
BCO 98	33	1497	F279	Late Saxon/ Early Norman beam slot (? Saxon)	20 L	40 ml	yes	100% flot scanned. Bone sorted from flot. Sample appears to have been waterlogged. Charred seeds observed include: possible pea (cf. <i>Pisum</i> sp.), barley (<i>Hordeum</i> sp. - some clearly hulled) grain, free-threshing wheat (<i>Triticum</i> sp.) grain, possible rye (<i>Secale cereale</i> grain), brome grass (<i>Bromus</i> sp.), and vetch/ pea (<i>Vicia</i> sp./ <i>Lathyrus</i> sp.). Assessed as GOOD .
BCO 98	34	1494	F276	Late Saxon/ Early Norman beam slot (? Saxon)	20 L	60 ml	yes	100% flot scanned. Sample appears to have been waterlogged. Charred seeds observed include: oat (<i>Avena</i> sp.) grain, stinking chamomile (<i>Anthemis cotula</i> L.), free-threshing wheat (<i>Triticum</i> sp.) grain, corncockle (<i>Agrostemma githago</i> L.) seed and calyx, vetch/ pea (<i>Vicia</i> sp./ <i>Lathyrus</i> sp.), barley (<i>Hordeum</i> sp.) grain, and possible rye (<i>Secale cereale</i> L.) grain. Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as GOOD .
BCO 98	35	1543	F297	pit not dated	20 L	30 ml	no	100% flot scanned. Charcoal +. Bone sorted from flot. Sample appears to have been waterlogged. Charred seeds observed include: free-threshing wheat (<i>Triticum</i> sp.) grain and stinking chamomile (<i>Anthemis cotula</i> L.). Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as POOR .
BCO 98	36	1512	F231 on bag (F 233.3 on sheet)	ditch not dated	20 L	78 ml	yes	25% flot scanned. Charcoal ++. Charred seeds observed include: free-threshing wheat (<i>Triticum</i> sp.) grain, barley (<i>Hordeum</i> sp.) grain, oat (<i>Avena</i> sp.) grain, vetch/ pea (<i>Vicia</i> sp./ <i>Lathyrus</i> sp.), and cereal culm node. Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as RICH .
BCO 98	37	1481	-	'layer' not dated	20 L	70 ml	yes	100% flot scanned. Charcoal +. Bone sorted from flot. Charred seeds observed include: free-threshing wheat (<i>Triticum</i> sp.) grain and rachis, oat (<i>Avena</i> sp.) grain, barley (<i>Hordeum</i> sp.) grain, black bindweed (<i>Fallopia convolvulus</i> L.), and dock (<i>Rumex</i> sp.). Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as RICH .
BCO 98	38	1513	-	'layer' not dated	20 L	60 ml	yes	60% flot scanned. Bone present, but only sorted from portion of flot that was scanned. Charred seeds observed include: free-threshing wheat (<i>Triticum</i> sp.) grain, barley (<i>Hordeum</i> sp.) grain, and plantain (<i>Plantago</i> sp.). Charred seeds also present in 1mm heavy residue (sorted by MC). Assessed as RICH .

6.2.6 The Insect Remains by David Smith

Introduction

The insect remains discussed here were recovered from a range of samples collected by BUFAU during 1997, 1998 and 1999 field seasons from a variety of deposits within the castle precincts at Banbury.

The majority of the samples examined were associated with the larger moats surrounding the medieval castle at Banbury. Table 21 provides the details of the samples assessed. The selection of samples was designed in order to produce an adequate spread of dated material across all of the phases of activity on site.

It was hoped that an assessment of the insect remains from these deposits would address the following:

1. Were the remains of insects present? If so, are the faunas of interpretative value?
1. Would a study of the insect remains would provide information on the hydrology and water conditions within these moats and how these changed through time?
2. Could the insect remains from these moats provide information on the nature of the surrounding environment and land use at the time of their deposition and how these changed through time?
3. Do the insects provide information on the nature of living conditions and settlement within the nearby structures?
4. Do the insect faunas recovered suggest that settlement material may have been dumped into these moats?

Methods

The insect fragments examined here were recovered from general biological samples. The weights and volumes of these samples are listed in Table 21. The samples was then processed using the standard method of paraffin flotation as outlined in Kenward *et al.* (1980).

The faunas were assessed using the 'scanning' system as outlined by Kenward *et al.* (1985). On average the time taken to scan each sample was around 20 minutes. All the taxa present have been identified as far as was possible.

When discussing the faunas recovered two considerations should be taken into account:

1. The identifications of the insects present are provisional. Equally, many of the taxa present could be identified down to species during a full analysis, producing more detailed information. As a result, these faunas should be regarded as incomplete and possibly biased.
2. The various proportions of insects presented in Table 21 are very notional and subjective.

Results

Only six samples (4032 upper, 4032 lower, 6010, 25/1, 1428, 1511) out of the ten assessed produced insect remains.

The insect taxa recovered are listed in Table 21. The majority of the species present are beetles (Coleoptera), although several of the samples also contain caddis fly (Tricoptera) head capsules. The numbers of individuals present is estimated in the following way: * = 1-2 individuals ** = 2-5 individuals *** = 5-10 individuals **** = 10+ individuals. The taxonomy used for the Coleoptera (beetles) follows that of Lucht (1987).

Discussion

All of the samples that contained insects produced reasonably sized but not diverse faunas. The size of the faunas recovered and the possible interpretation of the insects present suggests that further limited analysis is warranted.

Despite the fact that the moats examined date to different phases, the insect faunas are essentially similar. As such, they appear to tell a story of environmental continuance. As a result of the similarity of the faunas a number of general, rather than specific, comments is made below.

Hydrology and Water Conditions

The majority of the species present throughout all of the moats and there various phases are water beetles from slow-flowing or still water environments. In particular the *Hydroporus*, *Ochthebius* and aquatic *Cercyon* species are typical of these conditions. The Phase 1 and Phase 3/4 moats, or the surrounding environment, seem to also have contained emergent vegetation such as rushes and water reeds, to judge from the number of phytophage (plant feeding) insects present, such as the *Donacia* and *Plateumaris* reed beetles and the *Limnobaris* and *Notaris* weevils. The 18th-century moat and its surrounding environment, on the other hand, seem to have been free of these species. A more detailed reconstruction of the environment of this late phase of the moat would result from a full identification of these species.

Surrounding Environment and Land-use

In terms of the environments near to the moat, the insects in these faunas clearly suggest rough grassland and pasture were present. In particular, there are relatively large numbers of *Aphodius*, *Geotrupes* and *Onthophagus* dung beetles in all of the phases of the moats sampled. *Pyllopertha horticola* also indicates the presence of grassland since the larvae of this species are often found feeding at the base of grasses in old meadowland. In addition, some of the phytophage species such as the *Sitona* and *Apions*, which are present in large numbers, are associated with clovers, docks and plantains commonly found in open grassland. A full identification of these species would allow a more detailed reconstruction of the vegetation and ground conditions present around these moats.

There are only a few indicators for the presence of trees in the samples that date to the later periods. The "shot borer" *Hylesinus* is usually associated with ash trees, and *Phyllobius* species are associated with the leaves of a wide variety of trees.

Human settlement

No synanthropic insects (associated with humans) were recovered from any of the moat fills. This suggests that it is unlikely that domestic or settlement material was dumped into the moat. Equally, it suggests that the area around the moat must have been relatively clear of settlement or waste. There is also no sign of settlement waste or insect species that would indicate the presence of human sewage in the fauna from sample 1471 which was thought to represent the outflow of a garderobe chute.

Conclusions and recommendations for further research.

The insect faunas assessed clearly have the potential to be informative as to water conditions, the landscape and land-use of the area surrounding these moats during the time of their deposition. The study of these insect remains should form a valuable set of comparable data to that produced by the pollen and plant macro-fossil analysis from this site. Equally, there are no other insect faunas recovered from this period, or indeed any other, from Banbury. This suggests that these faunas have regional importance, at least as a baseline study for future work in Banbury. It is recommended that the insect faunas examined in this assessment are fully identified and quantified, as far as is applicable. Given that these faunas are very similar in their nature, and that the present range of faunas present appears to cover the majority of the phases present, it is not recommended that more samples than those mentioned here are examined.

Further analysis of the insect remains assemblage will help to fulfill research aims 1, 2, 3, 4, and 5 (see section 8)

Table 21. Details of the Samples Assessed from Banbury Castle.

Sample no.	Context no.	Feature no.	Description	Phase	Weight (K.g)	Volume (L.)	Insects present
-	2007	F202	Ditch	?	8.3	7	-
-	6010	F600	Moat 3 rd inner	7	6	6	X
-	6011	F600	Moat 3 rd inner	4/6	8	6	-
-	6012	F600	Moat 3 rd inner	4/6	10	6	-
-	4032 upper	F407	Moat	2	6.4	7.5	X
-	4032 lower	F407	Moat	2	6	7	X
6	Layer 25/1	F324		?	11	10	X
20	1428	F224	Late Outer Moat	4/5	12	9	X
28	1471	F245	Early Moat	4/5	13	11	-
30	1511	F241	Middle Moat	3/4	12	11	X

Table 22. The Insects Recovered from the Samples from Banbury Castle.

	4032 upper	4032 lower	6010	25/1	1428	1511
Weight Kg	6.4	6	6	11	12	12
volume L	7.5	7	6	10	9	11

COLEOPTERA

Carabidae

<i>Nebria</i> spp.	+	++	-	+	+	+
<i>Dyschirius</i> spp.	-	+	-	-	-	-
<i>Bembidion</i> spp.	++	+++	++	-	++	+
<i>Trechus</i> spp.	+	++	-	-	-	+
<i>Harpalus</i> spp.	-	++	-	-	-	+
<i>Pterotichus madidus</i> (F.)	-	-	+	-	-	-
<i>P.</i> sp.	+	-	-	+	-	+
<i>Calathus fuscipes</i> (Goeze)	-	++	-	-	-	-
<i>Agonum</i> spp.	-	+	+	-	-	-
<i>Amara</i> spp.	+	-	+	-	+	+

Dytiscidae

<i>Hydroporus</i> spp.	++	+	-	-	-	+
<i>Agabus</i> spp.	-	+	-	-	+	-
<i>Noterus</i> spp.	-	-	+	-	-	-

Hydraenidae

<i>Ochthebius minimus</i> (F.)	-	+	-	-	-	-
<i>O.</i> spp.	++	++++	-	-	-	++
<i>Hydraena</i> spp.	-	-	-	+	-	-
<i>Limnebius</i> spp.	-	-	+	+	-	++
<i>Heloporus</i> spp.	-	++++	+	++	++	+

Hydrophilidae

<i>Coelostoma orbiculare</i> (F.)	+	-	-	-	+	-
<i>Cercyon</i> spp.	++	++	++	+	++	-
<i>Megasturum boleotophagum</i> (Marsh.)	-	++++	+	+	+	++
<i>Anaecaena</i> spp.	-	-	-	-	-	+
<i>Laccobius</i> spp.	-	-	-	-	+	+
<i>Hydrobius fusipes</i> (L.)	+	-	-	-	+	+
<i>Enochrus</i> spp,	-	+	-	-	-	-

Staphylinidae

<i>Micropeplus</i> spp.	-	-	-	-	+	-
<i>Megarthus</i> spp.	+	-	-	-	-	-
<i>Olophrum</i> spp.	+	-	-	-	-	-
<i>Lesteva.</i> spp.	-	+	+	+	+	++
<i>Coprophilus striatulus</i> (F.)	-	-	-	+	-	-
<i>Trogohloeus</i> spp.	-	-	-	++	++	+
<i>Oxytelus</i> spp	+	+	++	+++	+	+
<i>Platystethus</i> spp.	+	-	-	+	-	+

	4032 upper	4032 lower	6010	25/1	1428	1511
<i>Stenus</i> spp.	+++	++	+++	+	+	+
<i>Stilicus</i> spp.	-	-	-	-	-	+
<i>Gyrophymus</i> spp.	-	-	-	+	-	-
<i>Xantholinus</i> spp.	-	++	+	-	-	-
<i>Lathrobium</i> spp.	-	-	-	-	+	-
<i>Philonthus</i> spp.	+	-	+	+	-	+
<i>Tachyphorus</i> spp.	-	+	+	-	+	-
Aleocharinae Gen. & spp. Indet.	-	-	+	+	+	-
Elateridae						
Elateridae spp.	-	+	-	-	-	+
Helodidae						
<i>Cyphon</i> spp.	-	-	-	-	-	+
Nitidulidae						
<i>Brachypterus</i> spp.	-	-	-	-	-	+
<i>Melagethes</i> spp.	-	-	-	-	-	+
Dryopidae						
<i>Dryops</i> spp.	+	-	+	-	-	-
Heteroceridae						
<i>Heterocerus</i> sp.	-	-	+	-	-	-
Lathridiidae						
<i>Lathridius minutus</i> (Group)	-	-	-	+	-	+
<i>Corticaria</i> spp.	-	-	-	-	+	-
Cryptophagidae						
<i>Cryptophagus</i> spp.	-	-	-	-	-	+
Anobiidae						
<i>Anobium punctatum</i> (Geer)	-	-	-	-	-	+
Scarabaeidae						
<i>Onthophagus</i> sp.	-	+	-	-	-	-
<i>Geotrupes</i> sp.	-	++	-	-	-	-
<i>Aphodius</i> spp.	+++++	+++	++	+++	++	+
<i>Pyllopertha horticola</i> (L.)	++	+++	-	-	-	-
Chrysomelidae						
<i>Donacia</i> spp.	++	++++	-	-	+	-
<i>Plateumaris</i> spp.	-	+	-	-	-	-
<i>Lema</i> spp.	-	+	-	-	-	+
<i>Hydrophassa glabra</i> (Hbst.)	-	+	+	-	-	-
<i>Prasocuris phellandri</i> (L.)	-	+	-	-	-	+
<i>Phyllotreta</i> sp.	+	+	++	+	+	+

	4032 upper	4032 lower	6010	25/1	1428	1511
<i>Chaetocnema</i> spp.	-	+	-	-	-	+
<i>Cassida</i> spp.	-	-	-	-	-	+
Scolytidae						
<i>Hylastinus</i> spp.	-	-	-	++	-	-
Cuculionidae						
<i>Apion</i> spp.	++++	++	-	++	+	+++
<i>Sitona</i> spp.	+	+	+	+	+++	+++
<i>Phylobius</i> spp.	-	-	-	-	-	+
<i>Barynotus</i> spp.	-	-	-	-	-	+
<i>Tanysphyrus lemnae</i> (Payk.)	+	+	-	-	-	-
<i>Notaris acridulus</i> (L.)	-	++	-	-	-	-
<i>N.</i> spp.	+	-	+	-	-	-
<i>Hypera</i> sp.	+++	+	-	-	-	-
<i>Limnobaris</i> spp.	-	-	+	-	-	-
<i>Ceutorynchus</i> sp.	+	++	-	+++	+++	+++
<i>Rhinoncus</i> spp.	-	-	-	+	+	+
<i>Gymnetron</i> spp.	+	+	-	-	-	+
TRICOPTERA						
Genus and spp. Indet.	++	+++	++	-	-	-

7.0 ASSESSMENT OF RESULTS

This section is intended as a brief statement on the character of the excavation results, following the completion of the initial post-excavation assessment. Broadly speaking, the new evidence is particularly strong for the earlier and later episodes of development *c.*1000 to 1900. There are lacunae, in the later-medieval period in particular, but when the evidence from the 1970s excavations is also considered, then it becomes possible to reconstruct an almost uninterrupted chronological sequence at the castle, and for the development of those parts of the town so far excavated. The outcome of this is that it will be necessary to re-assess, and then to integrate, the relevant evidence from the 1970s excavations with that of the most recent discoveries. This is especially important for the ceramic and structural evidence.

It seems clear that the most crucial step to be resolved by forthcoming post-excavation analysis is that of establishing as firm a chronology as is possible for the excavations. This has to be based upon stratigraphic analysis as there is a number of difficulties in establishing a chronological sequence based upon the ceramic evidence (See Section 6.2.1, above). These difficulties are principally due to the extent of post-depositional disturbance, a common feature of urban excavations, but here compounded by the presence of an unusually large number of modern services. So far, it has been possible to reconstruct a number of stratigraphic sequences which represent the archaeological development of discrete parts of the excavations. These need to be drawn together wherever possible. A major aid to this process is provided by the historical documentation, which records a number of major development events. For example, the construction of Bishop Alexander's Castle, or the Civil War refortification, sieges and subsequent slighting of the castle are all recorded events for which equivalent archaeological evidence has been found. Again, comparison with the archaeological phasing established by the previous excavations in the 1970s will also be a great help, but it is important to guard against the possibility of constructing a set of circular arguments. The potential rewards of this exercise are high, with ramifications including a refinement of the chronology of ceramic development in the crucial late-Saxon to early-Norman period in the surrounding region.

7.1 Wider Significance of Results

This section is intended to provide an overview of the results of the recent campaign of excavations in Banbury, set against the background of relevant local, regional and national research issues. The excavations have covered a larger geographic area of the town than has been previously studied. In addition, the results enhance and refine those of the previous excavations on the Castle site, carried out in the 1970s.

A significant opportunity now exists to test the archaeological evidence against previous models for the development of the town, which were mainly derived from documentary and cartographic analysis (e.g. Lobel 1969). Perhaps, the most significant contributions which the recent excavations have the potential to make concern the early development of the burgh and the Castle in late-Saxon or early-Norman times. Following on from this there is also clearly a need to reassess the published discussions of the earlier phases of development of the Castle. Another important research issue, which feeds directly into on-going research into the town,

lies in the potential of the archaeological evidence to provide a new angle on understanding the industrial development of the town from the late 1700s (Trinder 1982).

In regional terms, again the results of the excavations will contribute to further understanding of later-Saxon settlement, including nuclei based upon royal and episcopal estates which, like Banbury, became market centres in the Middle Ages (Hassall 1986). The potential for the related matter of refining the chronology of late-Saxon and early-Norman ceramic development has already been mentioned. New information about the development of the castle will also feed into regional debate concerning the development of castles and other fortified sites in the region (Bond 1986).

Research at Banbury also has potential to further debate into nationally important research themes; including the development of the smaller market town (English Heritage 1991, 40), the study of the urban castle (Drage 1987), and the distribution of craft and industry (English Heritage 1991, 42).

8.0 UPDATED RESEARCH AIMS

The results of the excavation campaign have shown the potential complexity of the development story of an area roughly equivalent to nearly ten percent of the medieval town. Much of the basic data from the programs of evaluation, excavation, building recording and documentary research of the three distinct zones of activity within that overall area is also densely interwoven. However, for the purposes of this assessment it is necessary to simplify this story and to unravel and distill the data. This is to enable clear and structured project research aims and objectives to emerge, from which a structured academic report can be written. While each of the three zones, Castle, Canal, and Market frontage were identified as having their own characteristics, and therefore separate research aims, it is time to integrate that evidence to attempt an holistic overview.

It is possible to restate, enhance and refocus the general research aims as being to:

- 1. Further refine the archaeological sequence across the whole development area from pre-Castle times up to the late-19th century and complete the characterisation of the research areas.**
- 2. Engage with specific issues of continuity and transition from the late-Saxon to early-Norman periods. Integrate the new evidence into our understanding of the form and function of the Saxon burgh and the early Norman town and Castle. Reconstruct the changing geography and spatial relations between the Castle, town and river crossing and to consider the inter-relationship of the Castle and the town against the background of the changing role of the urban Castle.**
- 3. Address issues relating to trade and economy, health and diet, status, emulation and power-relationships and their change over time.**

4. Investigate the impact of human activity upon the environment, particularly in terms of water management, and the environmental impact on the geography and planning of the town.
5. Discuss the archaeological evidence for the impact of major documented episodes of change, including the Civil War and the arrival of the canal, upon this part of the town.
6. Examine the pottery chronology and compare the assemblage with those from the previous Castle excavations in particular.
7. Study site formation and destruction processes including acquisition and discard within the overall finds assemblage, groundwork preparation, demolition, retention/reuse and foundation design within the Castle and the buildings on Bridge Street.

For the Castle, specific research issues include, to:

8. Consider the structure, workings and context of the various phases of the Castle in terms of social and administrative change, in addition to various military functions, particularly issues arising from the remodelling events of the 12th and 13th centuries.

While for Bridge Street and Mill Lane, specific research issues, to:

9. Examine the development of the urban vernacular tradition of building in Banbury from the 16th century onwards in ironstone-rubble and, later, in brick, and investigate how this responded to changes in building practice, commerce and population. Interrogate the buildings for evidence about the 19th century social history of the area, and examine the changing relationship between domestic, industrial and commercial buildings within Bridge Street and Mill Lane and investigate the dynamic behind social improvement of this part of Banbury in the later-Victorian period.

9.0 PUBLICATION PROPOSALS

It is proposed that the report will be published as a volume in the British Archaeological Reports (British Series), Birmingham University Field Archaeology Unit Monograph Series entitled *Excavations in Banbury, Oxon, 1989-1999*. British Archaeological Reports have agreed, in principle, to publish the report. The provisional lengths of the individual contributions are given below.

By Steve Litherland and Kirsty Nichol

With contributions by Lynne Bevan, Megan Brickley, Marina Ciaraldi, James Greig, Erica Macey, Stephanie Ratkai, David Smith.

Illustrations by Mark Breedon, Nigel Dodds, and Chris Hewitson

Photographs by Graham Norrie

Summary by Steve Litherland/Kirsty Nichol

750 words

Introduction by Steve Litherland/Kirsty Nichol
1000 words 2 figures 2 plates

Aims and Methods by Steve Litherland/Kirsty Nichol
750 words 1 figure

The site and its context by Steve Litherland/Kirsty Nichol
2000 words 2 figures 2 plates

Summary of previous excavations by Steve Litherland/Kirsty Nichol

a. Fasham

b. Rodwell

1000 words 2 figures 2 plates

Description of Results by Steve Litherland/Kirsty Nichol
25,000 words 30 figures 20 plates

Interpretation of the Evidence by Phase by Steve Litherland/Kirsty Nichol
10,000 words 12 figures 10 plates

Brick and Tile by Erica Macey
750 words 1 figure

Clay pipe by Lynne Bevan
2000 words 2 figures 1 plates

Coins by Lynne Bevan
500 words

Flint by Lynne Bevan
2500 words 2 figures

Glass by Lynne Bevan
2000 words 2 figures 1 plate

Human bone by Megan Brickley
250 words

Leather by Erica Macey
1000 words 2 figures 1 plate

Metalwork by Lynne Bevan
2000 words 2 figures 1 plate

Other Small Finds by Lynne Bevan
750 words 1 figure

Shell by Lynne Bevan
200 words

Slag by Lynne Bevan
500 words 1 figure

Stone by Lynne Bevan
2000 words 2 figures 1 plates

Wood by Erica Macey
750 words 1 figure 1 plate

Worked bone by Lynne Bevan
500 words 1 figure

Pottery by Stephanie Ratkai
a. Roman pottery
b. Saxo-Norman pottery
c. Medieval pottery
d. Post-Medieval pottery
9000 words 7 figures 3 plates

Animal Bone by TBA
5000 words 6 figures 1 plates

Fishbone by TBA
2000 words 2 figures

Charred Plant Remains by Marina Ciaraldi
5000 words 2 figures

Insect Remains by David Smith
4000 words 2 figures

Pollen Analysis by James Greig
2000 words 1 figures

Discussion and conclusions by Steve Litherland/Kirsty Nichol
5000 words 6 figures

Bibliography
3000 words

Illustrations by Mark Breedon, Nigel Dodds, Chris Hewitson

TOTAL: 91,200 words; 92 figures; 46 plates; *** tables.

10.0 TASK LIST

The task numbers below give the names of individuals responsible for the completion of the task, and number of days allocated.

PHASE 1: Preparatory	Person	Days
Integrate archive/ check phasing	SL	20
	KN	30
Prepare information for specialists	SL	5
	KN	10
Phasing database	KN	25
Figure roughs for site narrative	SL	20
Draught figures for site narrative -plans	ND	20
	CH	10
	EN	10
Commissioning of specialists + overall finds coordination	LB	8
Documentary research	SL	15
Delivery/collection of finds, conservation liaison	EM	5
PHASE 2: Shorter specialist reports		
Brick and Tile report	EM	1
Coin report	LB	1
Charcoal	TBA	1
Civil War Specialist	TBA	1
Clay pipe report	LB	15
Fishbone report	TBA	2.5
Flint report	LB	5
Glass	LB	8
Identify stone geology	RI	1
Leather report	EM	2
Loomweight	LB	0.5
Metalwork (various) reports	LB	21
Stone reports	LB	10
Wood report	EM	2
Wood Specialist	SA	1
Worked Bone	LB	2
Edit shorter specialist reports	IF	5
Small finds illustration	ND	44
Photography	GN	2
Documentary research report	JH/JB	5
PHASE 3: Structural/Stratigraphic Text		
Introduction and methodology	SL	5
	KN	5
Phases 1-7 Texts	SL	40
	KN	40
PHASE 4: Longer Specialist Reports		
Animal bone report	TBA	
a) Bone recording	TBA	15

b) Data processing and analysis	TBA	4
c) Preparation of report	TBA	5
d) Final editing	TBA	1
Total number of days	TBA	25
Beetle report	DS	
a) Identification of faunas	DS	6
b) Preparation of report	DS	2
Total number of days	DS	8
Charred plant remains report	MC	
a) Sorting flots and preliminary identifications	MC	10
b) Final identification and full quantification	MC	2.5
c) Preparation of report	MC	2.5
Total number of days	MC	15
Medieval pottery report	SR	
a) Sort pottery into fabric groups, process, record etc;	SR	45
b) Search for cross joins	SR	1
c) Data entry	SR	5
d) Analysis/manipulation of data	SR	5
e) Source fabrics:		
Consult Oxford type series	SR	1
Consult Northants type series	SR	1
Consult Warks type series	SR	1
f) Research	SR	5
g) Integration of info from other artefact/ecofact classes	SR	1
h) Preparation of report	SR	10
i) Edits/proofing	SR	1
j) Sort pottery for drawing	SR	1
k) Check drawings	SR	1
l) Admin	SR	2
Total number of days	SR	80
Stratascan Survey report	PB	
a) Reinterpretation of radar	PB	5
b) Preparation of report	PB	5
Total number of days	PB	10
Preparation of drawings		
a) Pottery illustration for c.250 drawings	ND	30
b) Pottery illustration 7 figures	ND	5
c) Report illustration	ND	20
d) Photographic integration	GN	3
e) Survey integration	CH	15
Edit longer specialist reports	IF	8

PHASE 5: Report Compilation

Integrate finds data into main text	KN	10
Prepare discussion text	SL	30
Mounting of drawings	ND	10
Collation of report	KN	15
Integrate editorial comment	SL	5
	KN	5
Desk-top publishing	EH	30
Liaison with publishers	IF	3
Proof reading	IF	4
Final archiving and deposition of archive	KN	5
	KM	10

11.0 COSTING

Name	Days Alloc.	Daily Cost	Total
1. University-based staff			
(SL) Steve Litherland	140	126	17, 640
(KN) Kirsty Nichol	145	96	13, 920
(IF) Iain Ferris (including overall project management element)	25 (+10)	193	5, 790
(ND) Nigel Dodds	129	101	13, 029
(CH) Chris Hewitson	25	70	1, 750
(EN) Edward Newton	10	92	920
(LB) Lynne Bevan	70.5	126	8, 883
(EM) Erica Macey	10	77	770
(MC) Marina Ciaraldi	15	85	1, 275
Bone specialist	25	85	2, 125
Sub-Total			67, 447

2. Management and secretarial staff

5 % of £ 67 447 3, 372

3. External project staff

(SA) Steve Allen	1	120	120
(PB) Peter Barker	10	150	1, 500
(JG) James Greig	3	250	750*
(EH) Liz Hooper	desk-top publishing (all inclusive)		7, 000
(JH) John Hunt	5	200	1, 000

(RI) Rob Ixer	1	120	120
(GN) Graham Norrie	5	150	750
(SR) Stephanie Ratkai	81	135	10,800
(DS) David Smith	8	150	1,200
other specialists to be arranged (TBA)			
Charcoal			250*
Dendrochronology			250
Fishbones	2.5	140	350*
Molluscs	2	120	240*
Textile	1	120	120*
Civil War specialist	1	120	120*
Sub-Total			24,570

4. Other costs

Materials, dedicated computer, office costs, etc.			2,150
Travel			800
Conservation		Wood	550
		Bowl	1,250
		Other (incl. x-rays)	1,000*
		Archive storage	675
		Thin-sectioning	132
Sub-Total			6,557

5. University overheads

28,328

Grand-Total **£ 130,274**

* Contingency figures (totaling £2,830)

12.0 ACKNOWLEDGEMENTS

The project was commissioned by Banbury Shopping Centre Limited on behalf of Raglan Properties plc, MPM Adams and Pillercaisse. Thanks are due to Richard Cannacott of Raglan, and the security staff at Banbury Shopping Centre for their co-operation and assistance throughout the project. Thanks are also due to Paul Smith and Carol Rosier who monitored the project on behalf of Oxfordshire County Council, Kevin Murphy, of Lyons, Sleaman and Hoare. Work on site was carried out by too many people to mention here, nevertheless, individuals to whom special thanks should be offered include Bob Burrows, Gary Coates, Derek Moscrop, Edward Newton, Eleanor Ramsey, Jon Sterenberg Specialists to whom thanks are due are Ian Baxter, Lynne Bevan, Erica Macey, Stephanie Ratkai, David Smith, and Wendy Smith. Steve

Litherland, and Kirsty Nichol produced the written report, which was illustrated by Nigel Dodds and Chris Hewitson, and edited by Iain Ferris who monitored the project for BUFAU.

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Appendix 2

The Part Of Skeleton Always Counted (POSAC)

(based on Davis 1992, Albarella *et al* 1997)

Measurements

BONE/TOOTH	SPECIES	MEASUREMENT
Horn core	Caprine, Cattle	L, Wmax, Wmin
dP ₄	Pig	L, WP
M ₁ , M ₂	Pig	WA, WP
M ₃	Pig	L, WA, WC
M ₃	Cattle	L, W
dP ₄ , M ₁ , M ₂ , M ₃	Caprine	W
Scapula	Caprine	SLC, ASG
Scapula	Cattle, Pig	SLC
Humerus	Caprine, Cattle, Pig	GLC, BT, HTC
Metacarpal	Caprine	GL, Bd, SD, WC, WT, DV
Metacarpal	Cattle	GL, Bd, 3, SD, BatF, a, b
Tibia	Pig, Caprine, Cattle	GL, Bd
Astragalus	Caprine, Cattle	GLI, Bd, DI
Astragalus	Pig	GLI
Metatarsal	Caprine	GL, Bd, SD, WT, DV
Metatarsal	Cattle	GL, Bd, 3, SD, BatF, a, b

In addition: the GL, GLC or LI (equids) of all complete long bones is measured, the SD of complete radius and LA or LAR of pelvis. For dog long bones MSD is measured, and dog crania are measured using the system of Harcourt (1974).

POSACS

Horn cores

If both Wmax and Wmin are measurable and/or ageing or sexing information can be obtained.

Zygomaticus (malar)

Maxillary teeth

When more than half is present – recorded but not counted. Used in the sexing of equids and suids.

Isolated mandibular tooth

When more than half is present.

Mandible

If it has one or more countable teeth. Teeth in mandibles are recorded separately in parentheses.

Atlas

When more than half is present

Axis

When more than half is present

Scapula

If more than half the glenoid articulation is present.

Distal humerus

The *medial half of the trochlea* including enough bone adjacent to the shaft to identify the state of fusion of the distal epiphysis.

Distal humerus metaphysis (when epiphysis not fused)

A portion which includes at least half of the epiphyseal-diaphyseal junction surface of the *distal part of the shaft (i.e. the metaphysis)*.

Distal radius

The *medial half of the articular surface* including enough bone adjacent to the shaft to identify the state of fusion of the distal epiphysis.

Distal radius metaphysis (when epiphysis not fused)

As for “distal humerus metaphysis”.

Proximal ulna

Only recorded if the part including the tuber is preserved.

Proximal ulna metaphysis (when epiphysis unfused)

Only recorded when the state of fusion is identifiable.

Radiale

When *more than half* is present.

C2+3

When *more than half* is present. The C3 of equids.

Distal metacarpal

The *condyles* plus at least a small part of the region of fusion of the epiphysis (i.e. enough of the distal end to identify the state of fusion of the epiphysis). A single condyle is recorded as “1/2”. At least half of a single condyle should be present. Each of the two central pig metacarpals (Mc 3 and 4) are recorded as halves. Pig lateral metacarpal condyles (Mc 2 and 5) are not recorded. Carnivore metapodials are divided by their anatomical frequency, i.e. 5. So an isolated dog metacarpal would be counted as 1/5.

Distal metacarpal metaphysis (when epiphysis not fused)*

As for “distal humerus metaphysis”, except that a single artiodactyl metaphysis is counted as a “1/2” as for distal metacarpal above.

Ischium

That part of the *acetabulum rim* which is formed by the *ischium*. At least half should be present.

Distal femur

More than half of the *lateral condyle* including enough bone adjacent to the shaft to identify the state of fusion of the distal epiphysis.

Distal femur metaphysis (when epiphysis not fused)

As for “distal humerus metaphysis”.

Distal tibia

Medial part of the articulation provided this consists of half or more of the total articular surface and including enough bone adjacent to the shaft to identify the state of fusion of the distal epiphysis.

Distal tibia metaphysis (when epiphysis not fused)

As for “distal humerus metaphysis”.

Astragalus

Half or more of the *lateral surface*.

Calcaneum

Only recorded if the state of fusion of the tuber calcis can be established.

Centrotarsale

When *more than half* is present.

Distal metatarsal*

See distal metacarpal.

Distal metatarsal metaphysis (when epiphysis not fused)*

See distal metacarpal metaphysis.

Proximal first and second phalanx

Half or more of the *articular surface* including enough bone adjacent to the shaft to identify the state of fusion of the epiphysis. For counting equid phalanges are doubled.

Proximal first and second phalanx metaphysis (when epiphysis not fused)

A portion of the *proximal part of the shaft* (i.e., the metaphysis) which includes at least half of the epiphyseal- diaphyseal junction surface.

Third phalanx

The *articular surface* if half or more is present.

NB: Some poorly preserved metapodials, and broken pig metapodials, cannot be identified as metacarpals or metatarsals. These are recorded as “metapodials”.

Counting

To calculate the total count of bones for a particular species in an assemblage all recorded bone fragments, mandibles, isolated teeth but NOT teeth in mandibles are summed.

In order to take into account their anatomical frequency, isolated metapodial condyles of artiodactyls and central pig metapodials (Mc/Mt III-IV) are counted as halves. Carnivore metapodials are counted as quarters, and equid phalanges are doubled.

Appendix 3

Bird Bones Recorded
(based Albarella, Beech and Mulville 1997)

	Measurements
Coracoid (<i>proximal part</i>)	<i>Not measured</i>
Scapula (<i>glenoid articulation</i>)	<i>Not measured</i>
Ulna (<i>proximal part</i>)	<i>Not measured</i>
Distal humerus	GL,Bd,SC
Carpometacarpus (<i>proximal part</i>)	<i>Not measured</i>
Distal femur	GL,Bd,Dd,SC,Lm
Distal tibiotarsus	GL,Bd,Dd,SC,La
Distal tarsometatarsus	GL,Bd,SC

All **measurements** based on von den Driesch (1976)

Appendix 4 Contexts Used For Assessment.

Including provisionally assigned material but not material spanning more than one phase

Only well dated contexts chosen for assessment

B1097/B2097 Castle/Canal Evaluaton

Phase	Weight (g)	Date	Assessment Contexts	Weight (g)	Context types	%
1	4987	Saxo-Norman	half 4009; 4008	1622	moat;layer	33
2	1305	c.1150-1250	half 4007	399	layer	31
3	2890	1250-1640	half 4016	920	pit	32
4	2397	Civil War	5011	679	moat	29
5	101	C18th	} omitted			
6	9	C19th	}			
	11689g			3620g		31%
Total =						
	21419g					

BCO 98 Castle Excavation

Area A						
Phase	Weight (g)	Date	Assessment Contexts	Weight (g)	Context types	%
1a	1565	Saxo-Norman	one third 1415	450	layer	29
1b	8579	Saxo-Norman	1309;1310;1366;1370	3095	pit;pit;ditch;	36
2	9674	c.1150-1250	1178	2609	ditch	27
3	4891	1250-1640	half 1170;1173;1275;1311;1312;F166	1514	layer;levelling;pit;pit;pit;pit	31
	24709g			7258g		29%
Total =						
	41120g					

Area AD

Phase	Weight (g)	Date	Assessment Contexts	Weight (g)	Context types	
0/1a	1672	Saxo-Norman	half 1495	531	ditch/gully	3
1b	10427	Saxo-Norman	1381;1396;1401	3655	pit;ditch/gully;moat fill	3
2	19598	c.1150-1250	1013;1020;1028;1037;1413	6526	layer;layer;pit;layer;wall build	3
3	2389	1250-1640	1142;1260;1265	852	construction trench;make-up;surface	3
	34086g			11564g		34

Total = 45647g

Area B
 Total bone weight = 573g
 Area C
 Total bone weight = 5g

} excluded
 } from evaluation
 }

Bridge Street/Mill Lane Excavation

Phase	Weight (g)	Date	Assessment Contexts	Feature type	Weight (g)	%
1-2	269	Medieval	one third F173	ditch	87	32
2-3	42	late Medieval	Omitted		0	
3	487	Tudor	half 2156	ditch	161	33
4	29	C17th	Omitted		0	
5	592	C18th	half 2201	robber trench	180	30
5-6	229	late C18th- early C19th	Omitted		0	
6	2662	C19th	2095;2010	layer;draina ge cut	757	28
7	443	Modern	} Omitted		0	
7	432	Demolition	}		0	
	4010g				1185g	30%

**Total =
5185g**

Weight of total assemblage = 7651g

CMO 99 Cuttle Mill Excavation

Phase	Weight (g)	Date	Assessment Contexts	Feature type	Weight (g)	%
1-2	826	Medieval	3064	ditch	290	35
3	927	late Medieval	half 3004	ditch	327	35
4	36	Civil War	Omitted			
4	2890	C17th	one third 3059	ditch	884	31
5	373	C18th	one third 3039	ditch	110	30
6	4563	1C19th	half 3047	ditch	1733	38
	9579g				3344g	35%
Total =	14189g					

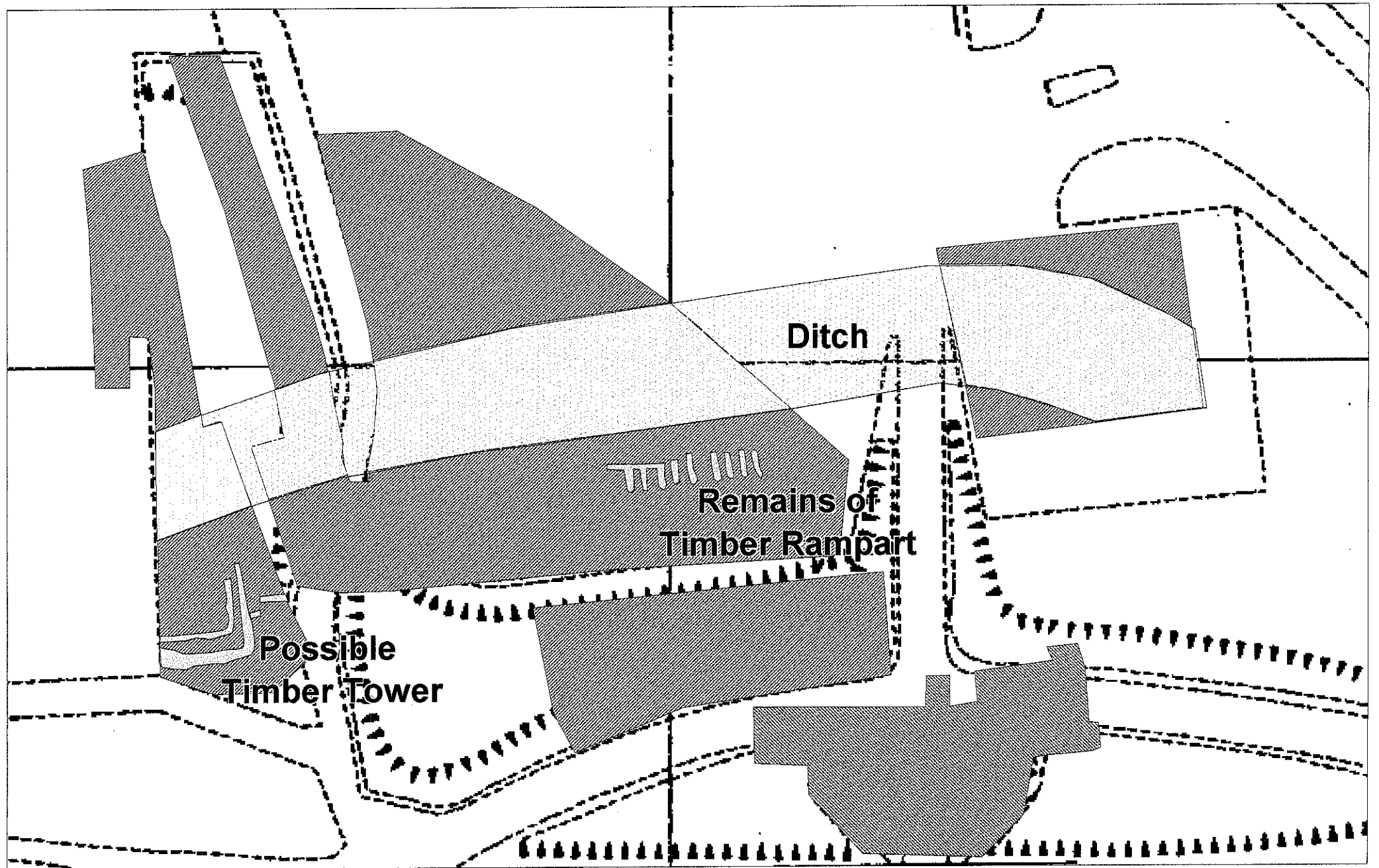


Fig. 4 Phase 1a, details (Scale 1:500)

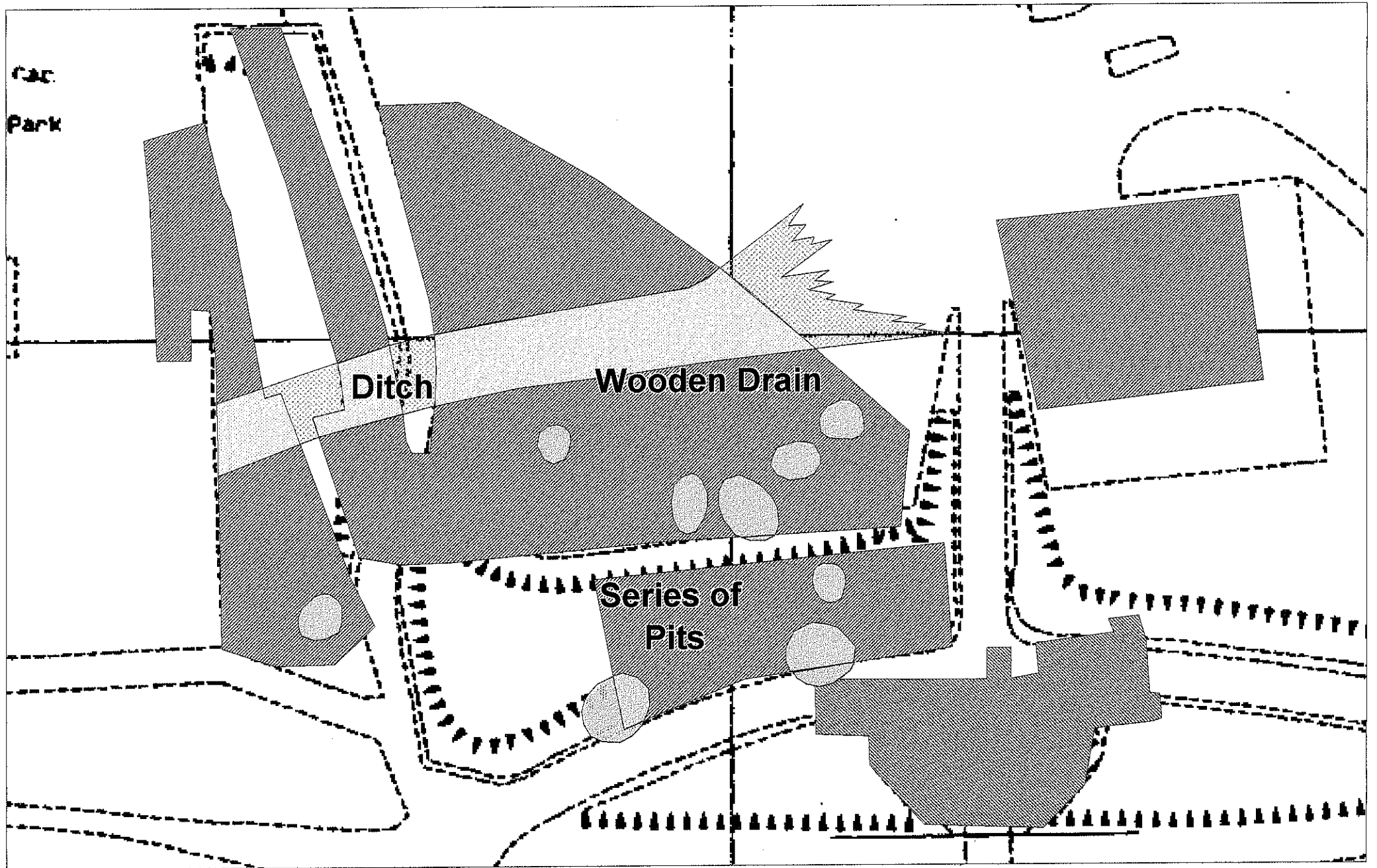
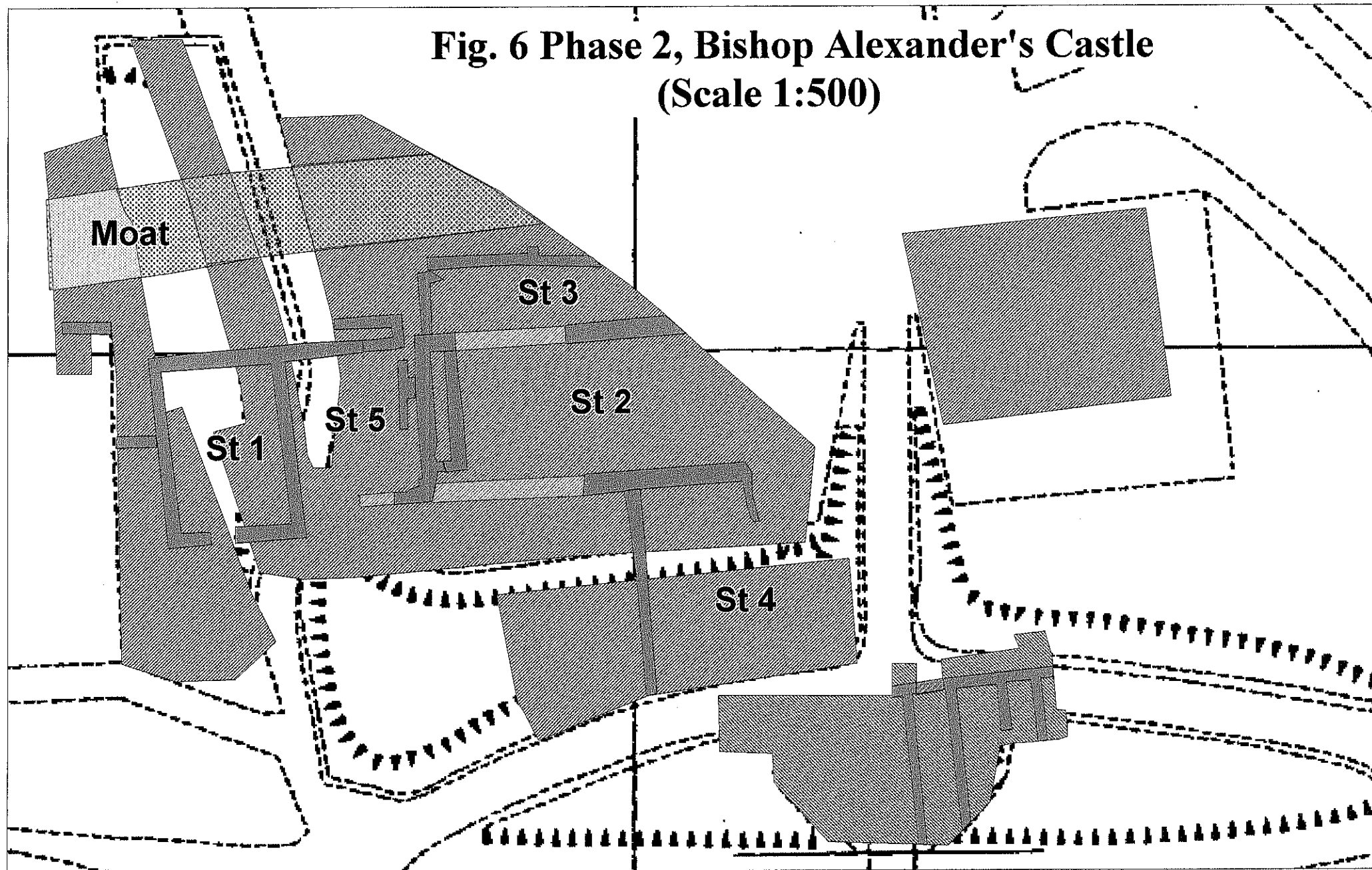


Fig. 5 Phase 1b, Alteration to the Timber Castle (Scale 1:500)

**Fig. 6 Phase 2, Bishop Alexander's Castle
(Scale 1:500)**



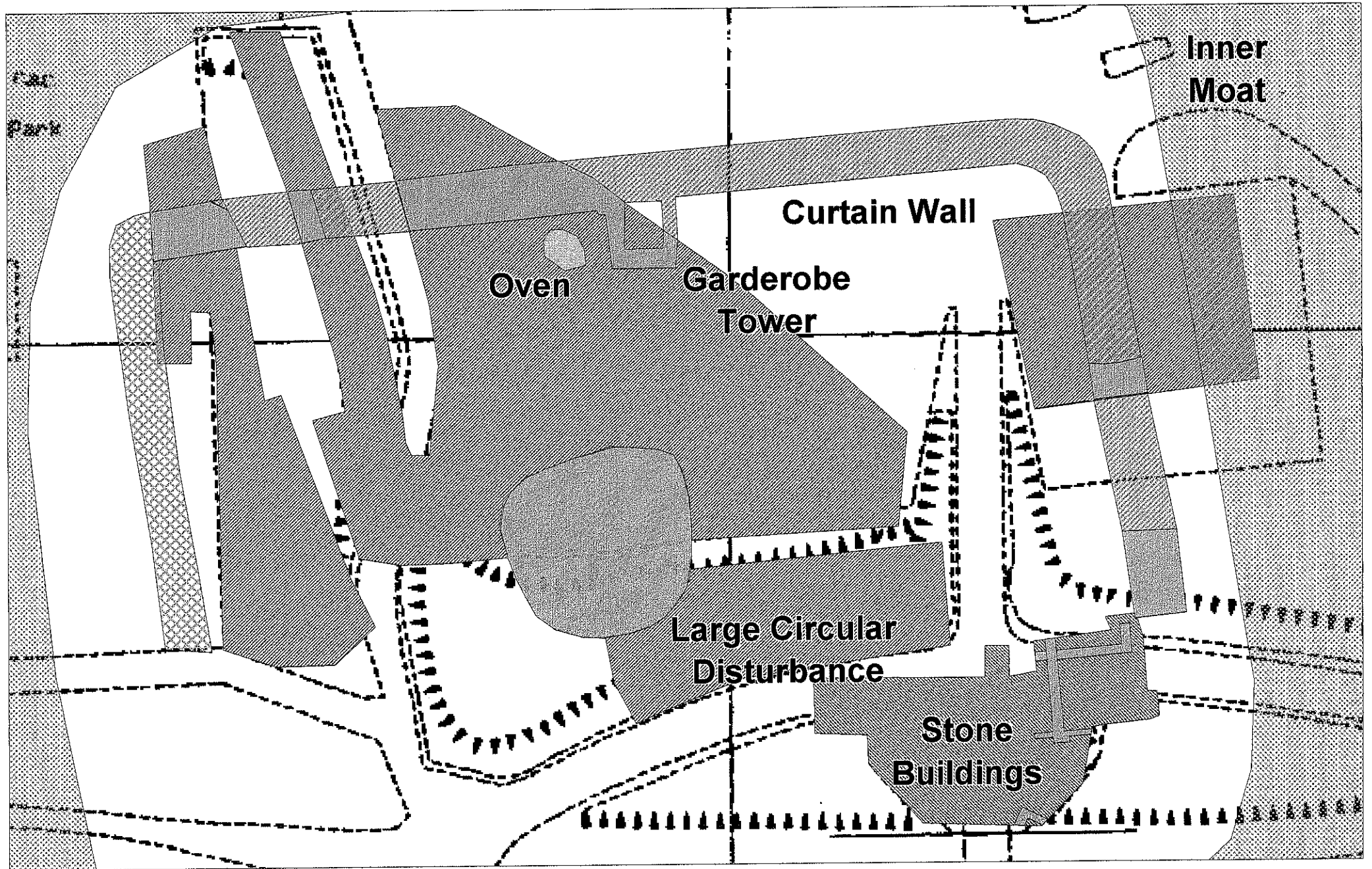
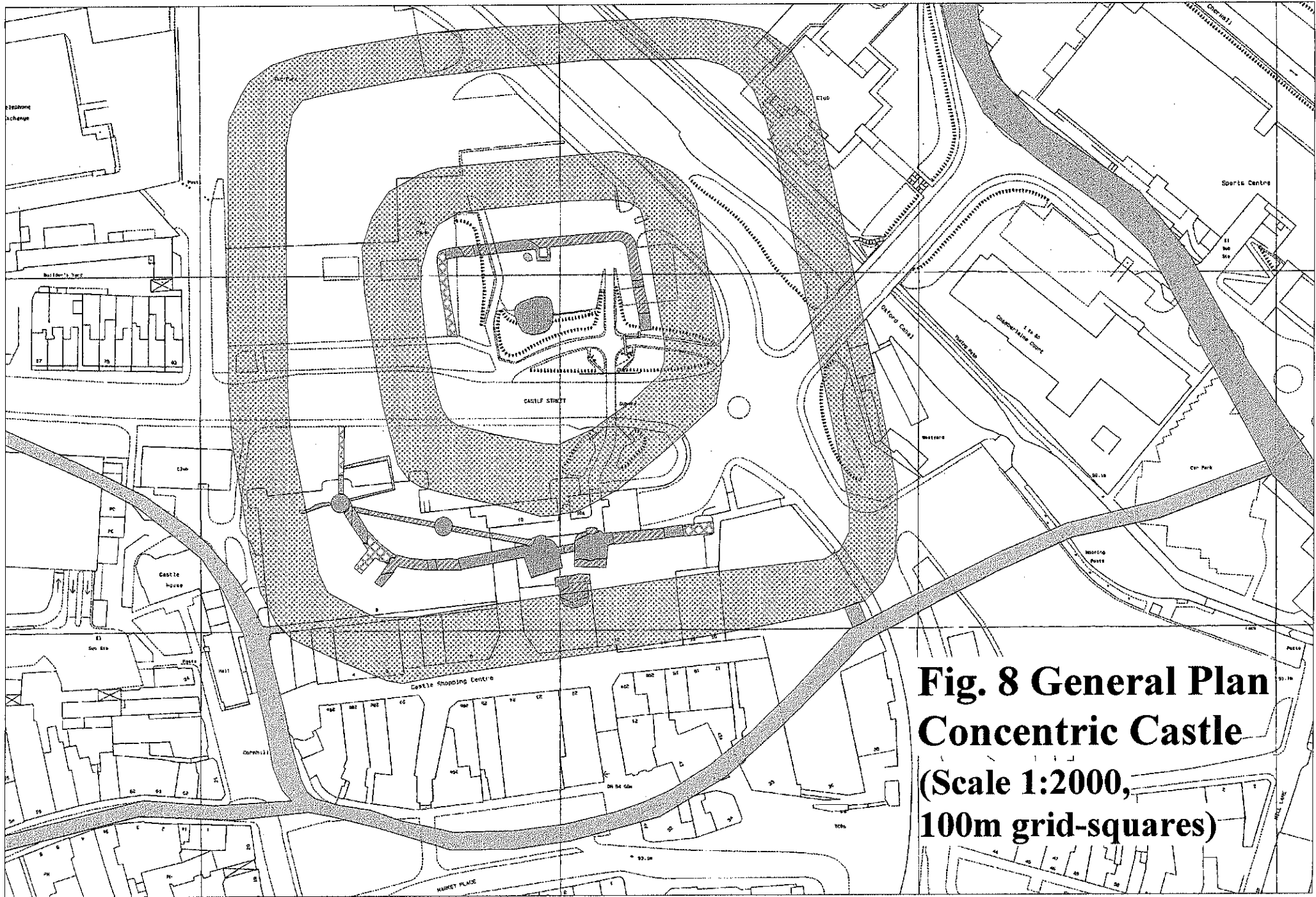


Fig. 7 Phase 3, Concentric Castle (Scale 1:500)



**Fig. 8 General Plan
Concentric Castle
(Scale 1:2000,
100m grid-squares)**

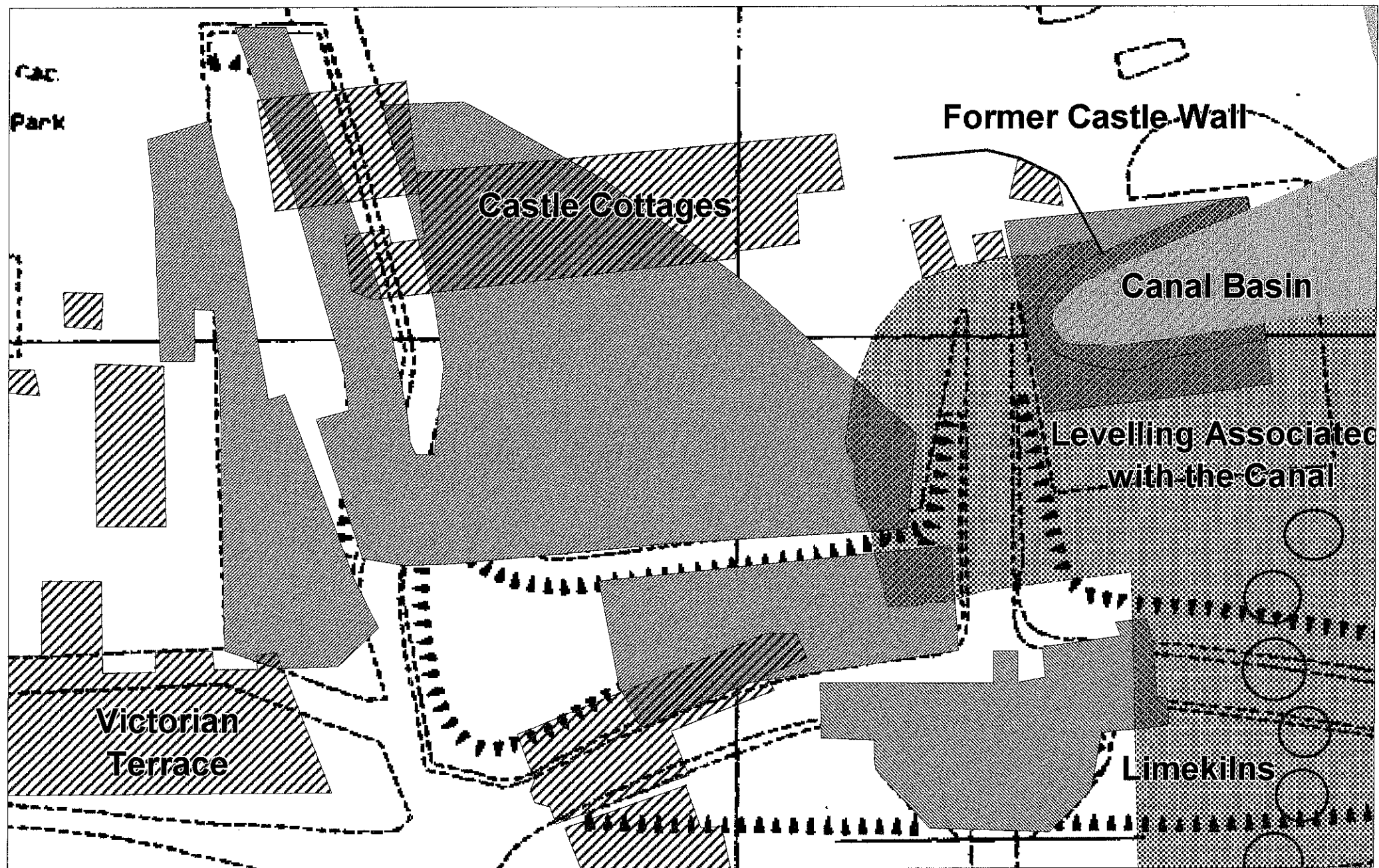


Fig. 9 Post-Castle Redevelopment (Scale 1:500)

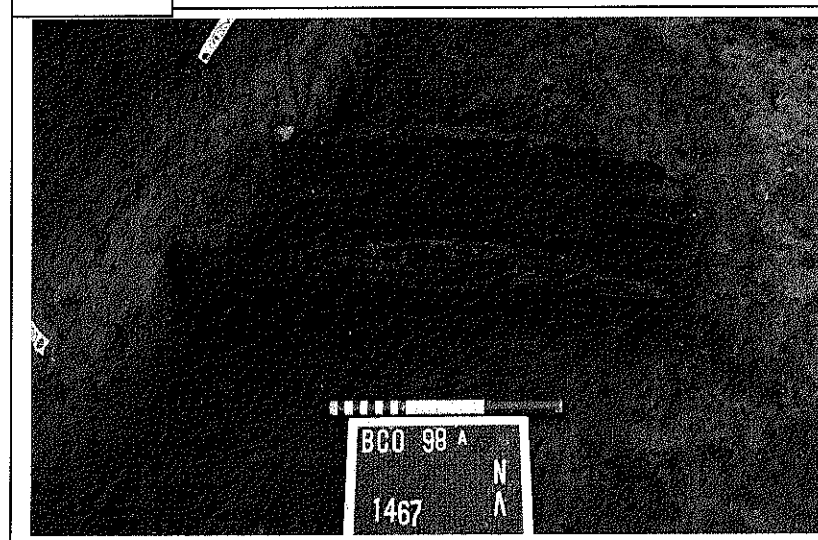
Plate 1



Plate 2



Plate 3



Plates 1 and 2

General views of the Phase 1 moat.

Plate 3

Detail of the timber garderobe chute within the Phase 1 moat.



Plate 4
Section through
Alexander's moat
with the curtain
wall of the later
concentric Castle
sitting in it.

Plate 5
General view showing the
early moat with structures
contemporary with
Alexander's Castle
overlying the ditch.

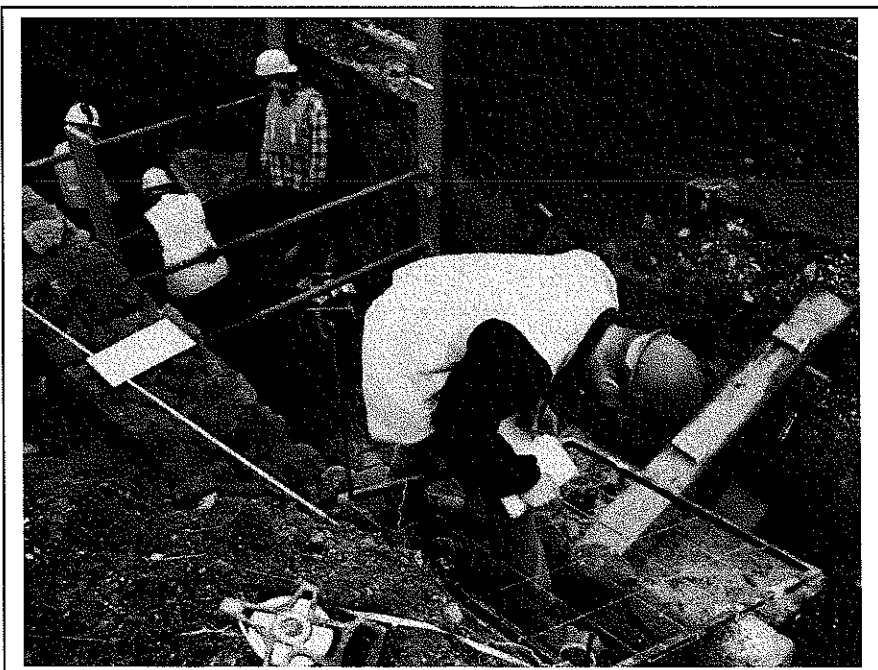


Plate 6
Planning the
walls of structure
3/1 that remained
standing to a
height of six
courses at this
point.



Plate 7
Detail of the
Copper Alloy
bowl *in-situ*.

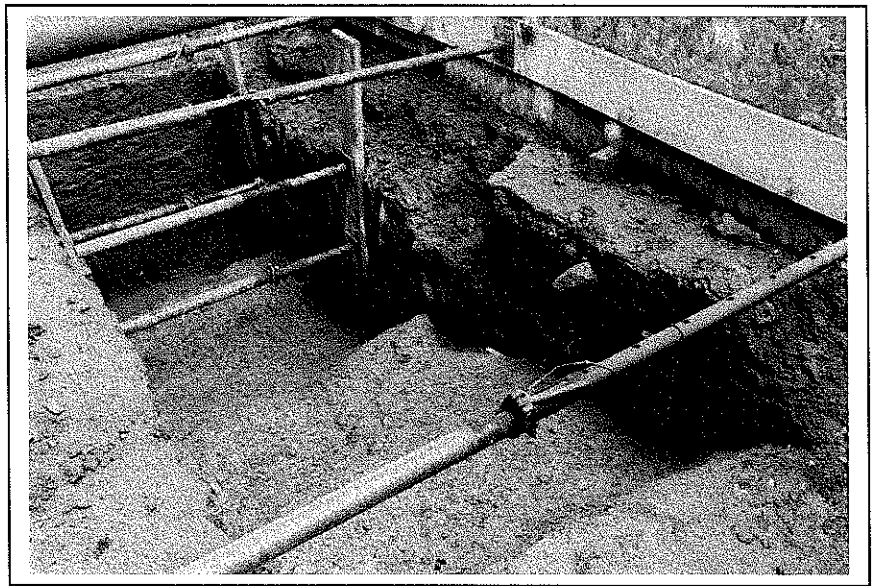


Plate 8
The inside lip of
the inner moat
had a slightly
stepped profile.

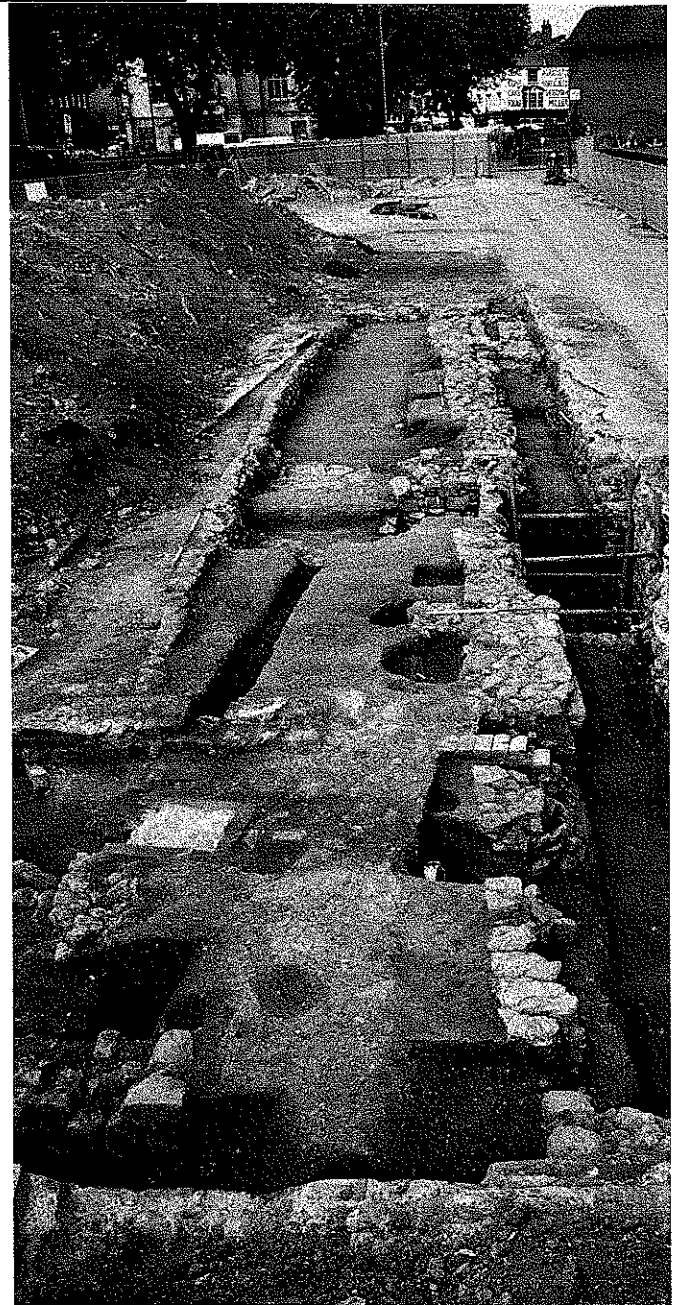


Plate 9
The curtain wall
was cut on the
eastern side of the
excavation by a
Dry Dock
associated with the
canal.

Plate 10



Plate 11



Plates 10 and 11
General views of Bridge Street and Mill Lane
respectively.



Plate 12
General site view
showing the
frontages of the
southern side of
Bridge Street.

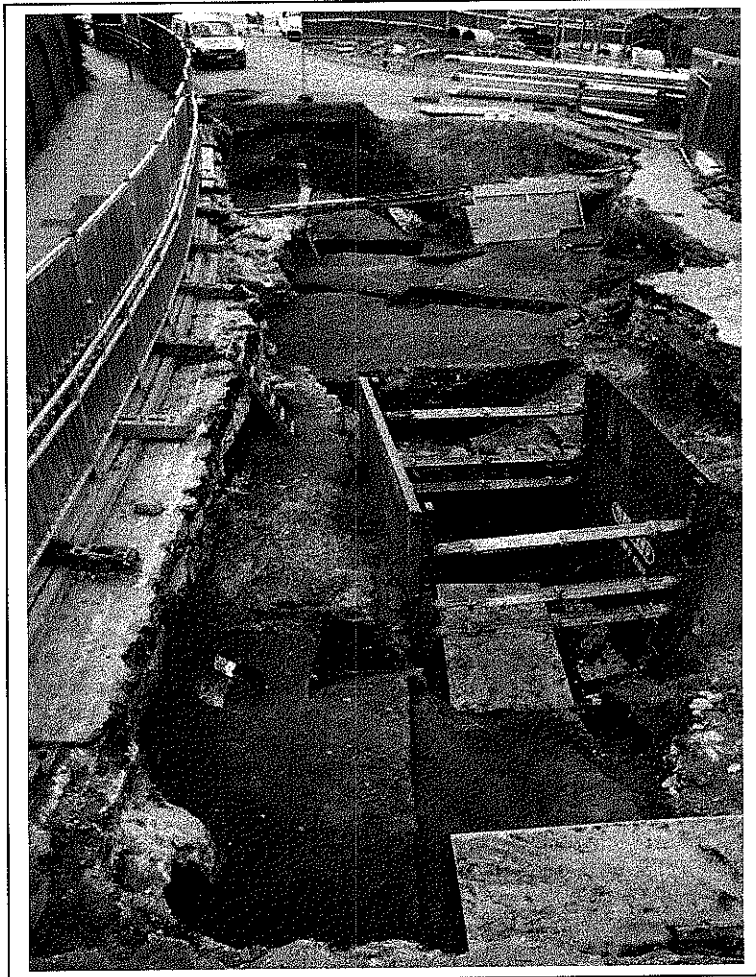


Plate 13

General view north up Castle Street towards the site of the Castle, with the line of the Cuttle Brook in the foreground.

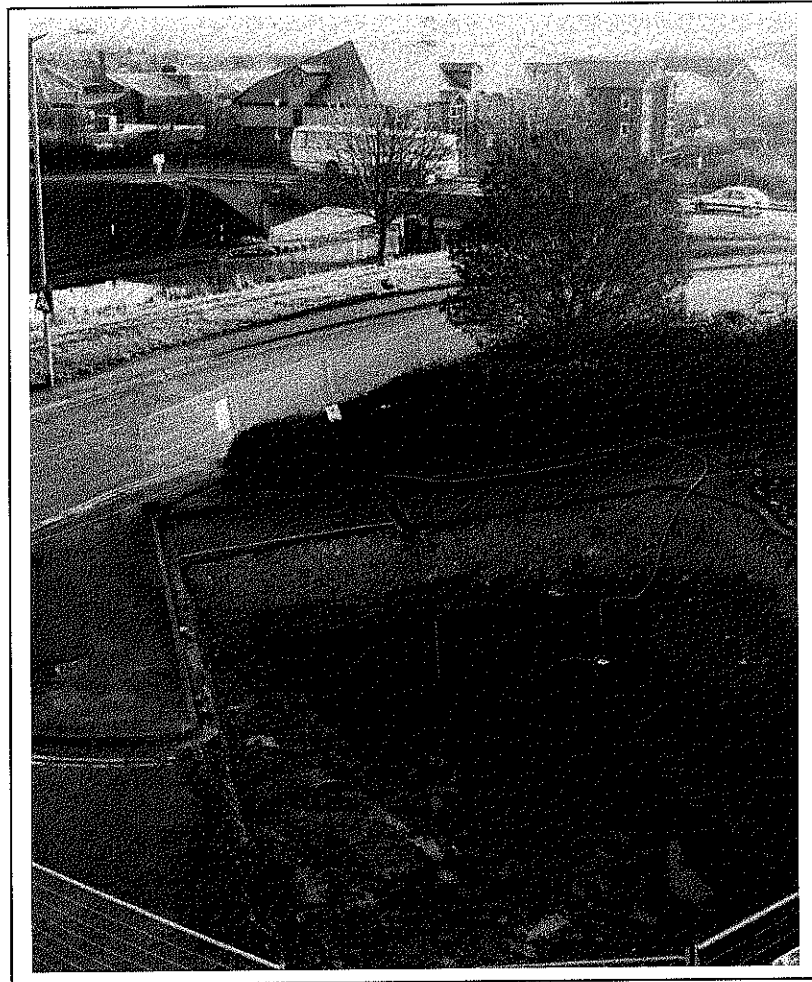


Plate 14

General view of the Dry Dock with the canal in the background and Tooley's boatyard to the top right.



Plate 15

Aerial view of the Dry Dock showing the re-used boat timbers as a floor surface. It is seen cutting the curtain wall of the Castle on the left of the figure.

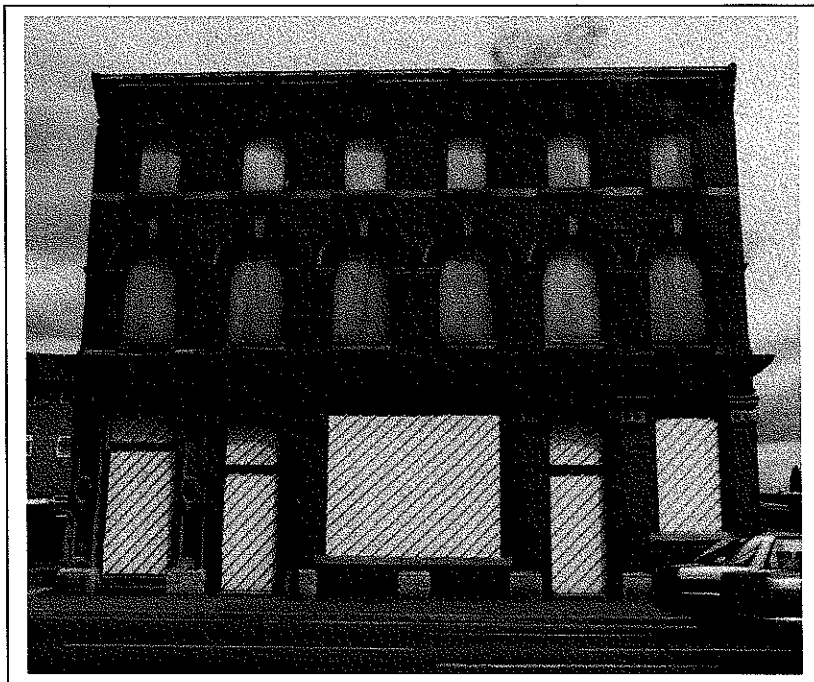


Plate 16
The façade of the
Temperance Hall.

Plate 17
The facades of
numbers 53 and 54
Bridge Street.



Plate 18
Early ironstone
walls and timber
roof incorporated
in number 53
Bridge Street.
Observed during
demolition.