

# Excavations At Elstow Abbey, 1995

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## SUMMARY

*Evidence for medieval leets, bridge abutments and post-medieval blocking of one of two parallel stream courses running south of Elstow Abbey was recorded during drainage widening works. A geophysical survey of the whole site added to information obtained from excavations between 1965 and 1972.*

## INTRODUCTION

In 1993 it was decided that the proposal to construct the Bedford Southern Bypass required the Bedfordshire and River Ivel Internal Drainage Board (IDB) to undertake remedial work along the Elstow Brook to reduce the risk of flooding south east of Bedford. Where the Brook flows past the site of Elstow Abbey widening works provided an opportunity to record a section through the monastic and later landscape.

Geophysical survey was carried out as evaluation work prior to the finalisation of widening plans on both banks of the Brook in 1994. The survey covered much of the previously partially excavated monastic site to the north (Geophysical Surveys of Bradford, Reports 94/83; 94/100). Appraisal of the evaluation survey in the light of documentary and earlier excavation evidence led to the design of a mitigation strategy in which widening took place on the south bank of the brook preceded by archaeological recording.

## TOPOGRAPHY AND GEOLOGY

The solid geology of the region consists of Oxford Clay between the Jurassic Ridge to the north and the Lower Greensand Ridge to the south. In the post glacial period, the River Great Ouse laid down extensive gravel beds, forming a wide low-lying valley west of Bedford. Elstow is located on the divide between this valley and the flat featureless landscape of the clay vale to the west.

The Elstow Brook is a minor tributary of the River Great Ouse and follows a meandering course, cutting into the gravel to form a shallow valley, south of Bedford town, falling from approximately

26m OD at its source to 23m at its confluence. The Brook rises from a spring line at the base of the Lower Greensand Ridge, south west of Bedford. It flows north eastwards and enters the parish of Elstow from the west, following an easterly course for c.300m, before turning abruptly south for approximately 60m and approaching Elstow Abbey from the south west. It passes immediately to the south of the Abbey and medieval village of Elstow before meandering along an originally braided course, on the north east edge of Elstow parish towards Harrowden.

## ARCHAEOLOGICAL BACKGROUND

Extensive archaeological investigation has taken place in the Elstow area over the past four decades. In 1965-1972 (Baker 1966, 1969, 1971) excavations south and east of the present parish church revealed the remains of a large Saxon inhumation cemetery as well as extensive evidence relating to the monastic period. In 1976 excavations at Peartree Farm shed further light on the Saxon origins of the village and provided evidence of Romano-British occupation (Woodward 1978). Recently work associated with the Bedford Southern Bypass at Village Farm and Medbury Farm has extended the area of known early medieval settlement (BCAS 1995/14).

Elstow Abbey was founded in c1078. Map evidence and the current landscape attests the widespread development of fishponds and flood meadows along the Brook during the life of the abbey. It was dissolved in 1539 and the history of the site becomes obscure until the 17th century. In 1620-30 a mansion was built for Thomas Hillersden incorporating parts of the 14th century south and west ranges of the cloister. An estate map of 1767 (Beds CRO: X 1/6/1) showing Thomas Hillersden's estate, illustrates the extent to which the landscape had been changed. Reflecting 18th century taste the environs of the mansion were fronted by parterres and included a walled garden to the south. The estate was bought by the Whitbread family in the late 18th century and the mansion was partially



Fig 1 Location of excavations at Elstow Abbey, see Fig 2 for details



Plate 1 Detail of the 1767 estate map showing (centre) Hillersden Mansion with parterres to east and the Elstow Brook and fishponds to the south (Beds CRO X 1/6/1)

dismantled, probably in the 1770s. Today only the north facade and parts of the east, including the porch, survive.

#### METHOD STATEMENT

Scheduled Monument Consent for the evaluation and to widen the Elstow Brook was obtained from the Department of National Heritage with the condition that archaeological recording take place in accordance with a brief and specification approved by English Heritage.

The geophysical survey established that the area of greatest archaeological survival was on the north bank. Widening was therefore planned on the south bank, where the archaeological excavation took place.

The archaeological objectives of the Elstow Brook scheme were: to establish the date range of archaeological features; to determine their nature and function; to establish the nature of any relationship with the abbey, to recover palaeoenvironmental remains; to determine local environmental conditions and to recover artefacts. The archaeological strategy was designed to address these aims and to integrate with the subcontractors ground works. During the course of widening the aims were modified by the ground conditions and by the extent of the widening scheme. In particular it became clear that until full publication of the results of excavations at the Abbey relationships between the two areas will remain preliminary, and further the excavation did not recover significant environmental data.

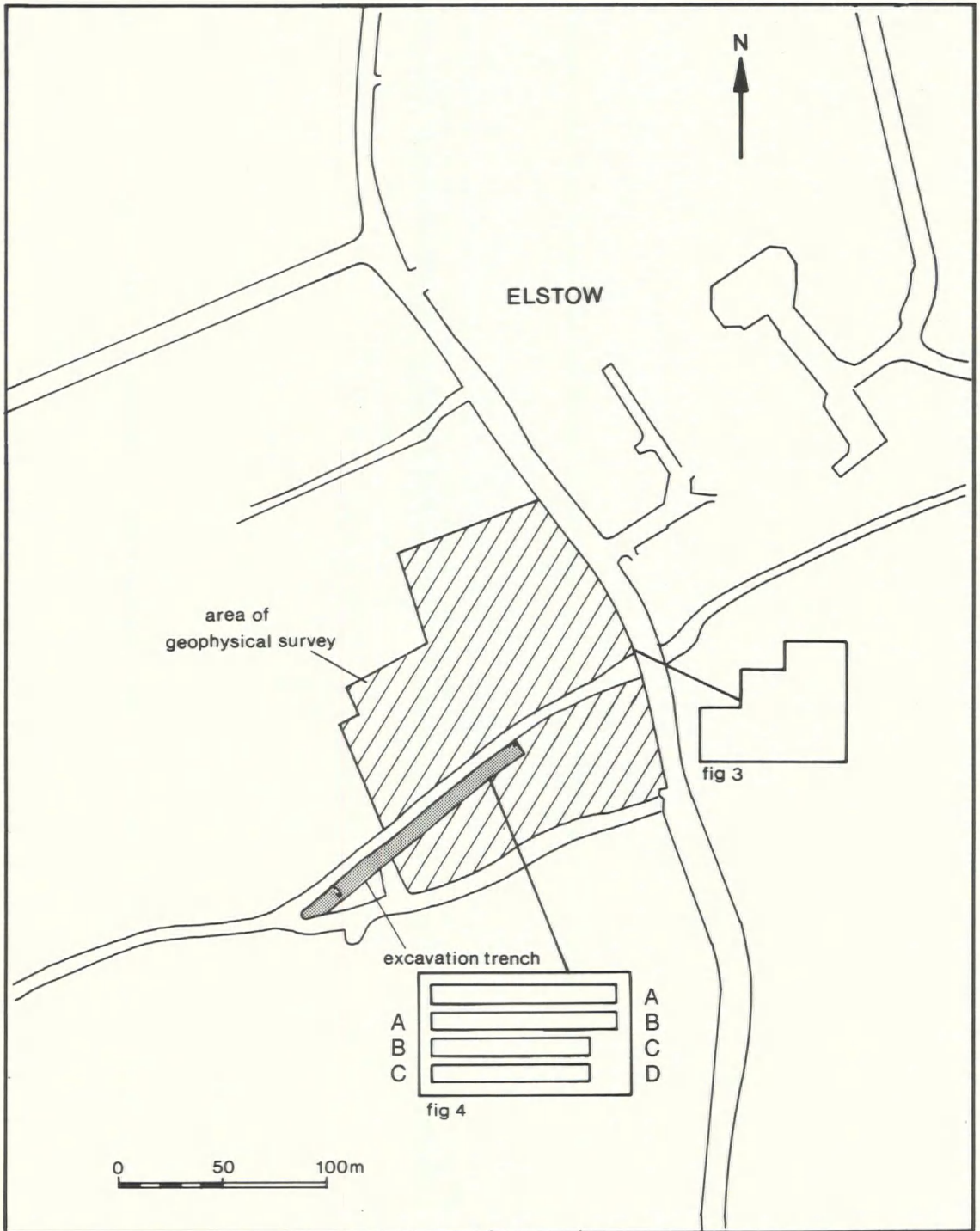


Fig 2 Location of archaeological areas: geophysical survey and excavation

The archive of finds and records will be lodged with Bedford Museum, Accession No 1995/5

### THE GEOPHYSICAL SURVEY

Geophysical survey was restricted by the presence of trees, shrubs and dense undergrowth (Fig 3). It was carried out on two separate occasions during autumn 1994 using a fluxgate gradiometer: Geoscan FM36.

The survey covered areas to the east and south of the abbey and on the south side of the Elstow Brook. In front of the Abbey, on the east, numerous linear high resistance anomalies were recorded indicating the possible remains of buildings and garden features, although some of the anomalies probably result from use of the area as a bulk petrol store in the Second World War. South west of the Abbey, ground conditions contributed high levels of magnetic disturbance which obscured any archaeological evidence. South of the Elstow Brook the survey was dominated by two discrete areas of strong magnetic disturbance. Both these areas, on the east side of the site, may be the remains of fishponds shown on the 1767 estate map and backfilled with a variety of material with a high brick content. A second concentration of more restricted linear anomalies suggests ditched features possibly boundaries or drains.

### THE ARCHAEOLOGICAL EVIDENCE

The results of the geophysical survey led to excavation on the south side of the Elstow Brook, west of Wilstead Road. Excavation was confined to a narrow strip of land, approximately 150m long and 10m wide, on the bank of the Brook, in an area that has been extensively modified, suggesting the present course is almost entirely artificial.

In addition the depositional sequence of the area was made more complex because the upper most layers (150) of the entire excavation area had been inverted by dumping from recent desilting.

### CHRONOLOGICAL FRAMEWORK

At the western end of the excavation the background material (173, 157, 217) comprised a surviving remnant of the monastic landscape. Further eastwards there was a stream course, blocked after 1767, and beyond this an area of mixed imported material which represents straightening of the Brook course. Two bridge abutments dating to the monastic period were also investigated.

### The monastic period

#### *The leets*

The earliest evidence of activity was at the west end of the excavations where the remains of two stone lined leets were recovered. These were truncated by the Elstow Brook to the north and a smaller field ditch to the south, with later robbing responsible for the removal of stones from both structures (156, 158). The leets were founded in an extensive deposit of homogenous greenish grey silty sand (157) which contained sherds of 13th and 14th century date.

The two leets (161) and (181) ran perpendicular to the present Brook. The first (Fig 5) survived for 1.4m and was built in a shallow trench (162). It was formed from a double row of flat limestone slabs set on edge creating a channel 200mm wide. The second leet had been inserted through the first but was slightly offset from the earlier line. This leet was similarly constructed of two uprights and a third lining slab to form a channel 350mm wide. It survived for 1500mm and had been allowed to silt up with grey silty sand.

The leets drained to the south and probably formed part of a drainage system serving the monastic complex. The line of the leet was not picked up on the geophysical survey although earthworks still visible to the north of the Brook may represent a continuation of the line. Finds from the silts within the first leet suggest it was constructed during the 14th century.

#### *The bridges*

The most substantial structures on site were the abutments of two stone built bridges. Approximately 70m apart, both were set slightly back into the stream bank. The first was located at the east end of the excavation, the second further west near to filled course of the Brook (Figs 4, 6, 7). Both bridge abutments were similar in size and both were constructed from a mixture of dressed and slab limestone.

#### Bridge 1 (Fig 6)

Bridge 1 comprises two bridge abutments at the east end of the site. The first abutment was excavated between 1968 and 1970 (Baker 1971, 63) and comprised a rubble limestone core, between layered facings. It was not investigated in 1995, being on the north side of the Brook.

The second abutment, which was re-excavated, was set into layers of brown silty clay (164, 187, 188). The structure was limestone masonry (163),

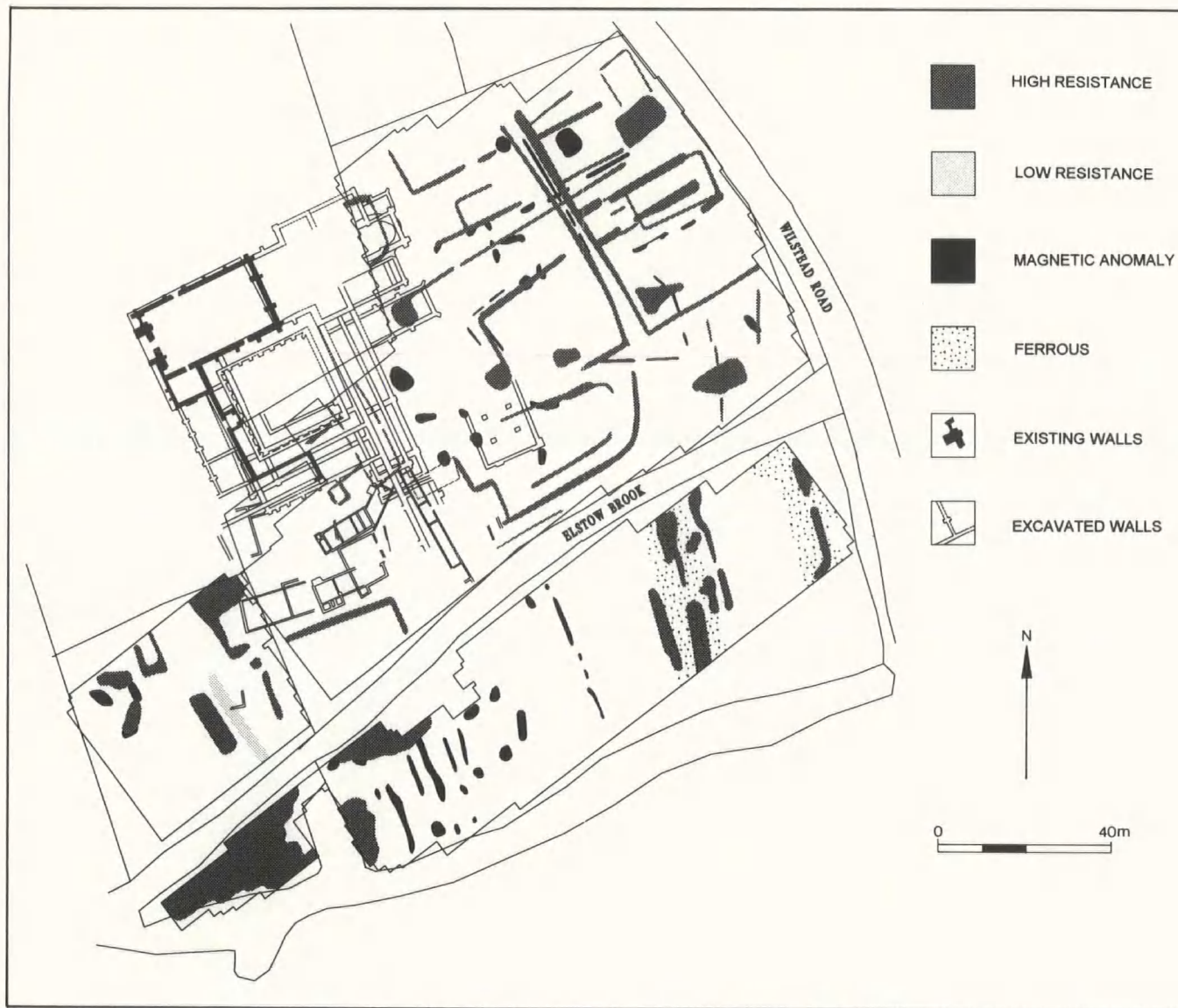


Fig 3 The results of geophysical survey

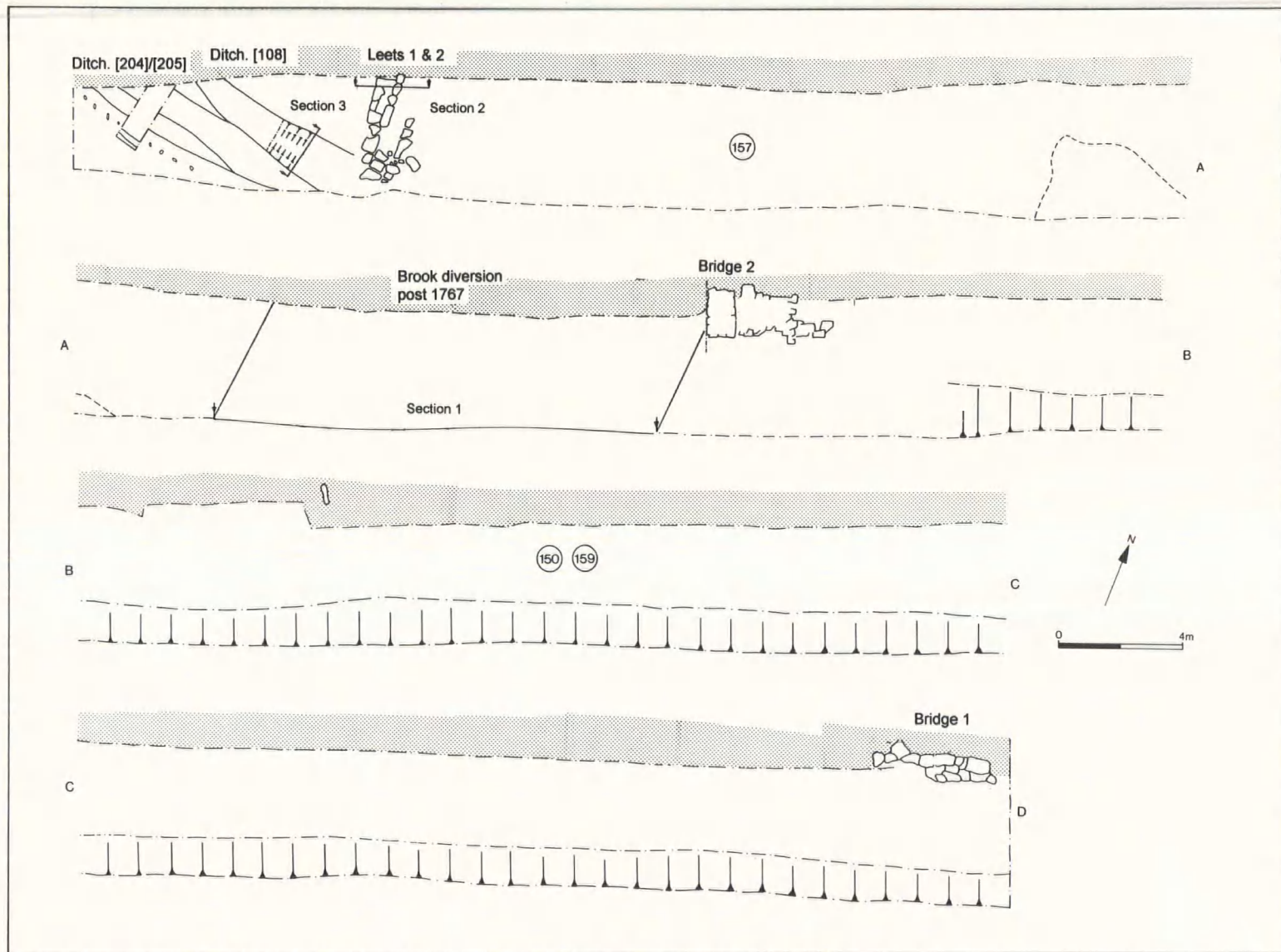


Fig 4 The results of archaeological excavations

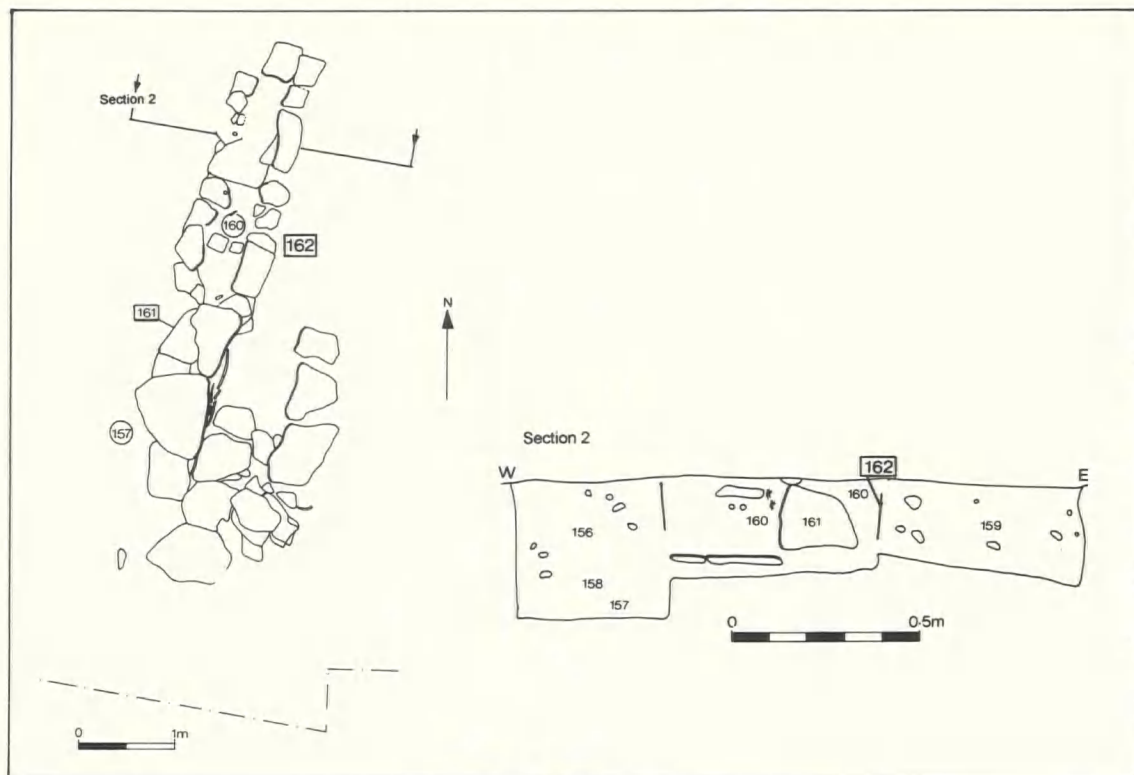


Fig 5 The monastic period leets

with undressed slabs forming the core and roughly hewn ashlars the exterior courses. The abutment was 2.5m wide, but had been truncated and only survived to 1.8m high. The whole was mortar bonded.

#### Bridge 2 (Fig 7)

The second bridge was situated west of the first, adjacent to the earlier stream course. The foundations were cut into the stream bank (213, 214, 216, 217) but the bulk of the structure projected slightly into the course of the Brook. At the base of the abutment a course of roughly squared stones provided the foundation and were visible at the base of the western end. The fabric of the abutment comprised limestone blocks with the core made of unfaced randomly placed ashlars (211, 219).

The masonry survived to 950mm high on the west side whilst on the east preservation was much poorer where extensive robbing had taken place. This abutment was 2800mm wide. On the west side of the bridge was a triangular cutwater projecting

2500mm forward of the pier (212, 218). Above and behind the abutment three layers of sandy gravel (hoggin) may be the remains of a pathway (167, 193, 195).

There is limited dating evidence for the second bridge. The stream bank deposit cut by Bridge 2 (217), contained a sherd of Medieval Shelly ware (BO7) dating to the thirteenth century and providing a *terminus post quem* for construction of the bridge. Sherds from the two gravel surfaces, probably paths (193, 195) associated with the bridge, were of the same date.

#### *The late 18th and early 19th centuries*

On the 1767 estate map (Pl 1) the channel of the Brook is shown to divide opposite the site of the Hillersden Mansion. The northern channel now forms the main course of the Brook whilst the southern arm survives only as a shallow depression running north to south, perpendicular to the present Brook. It ends approximately 5m south of the Brook where it was blocked.

The blocking material in the earlier course was



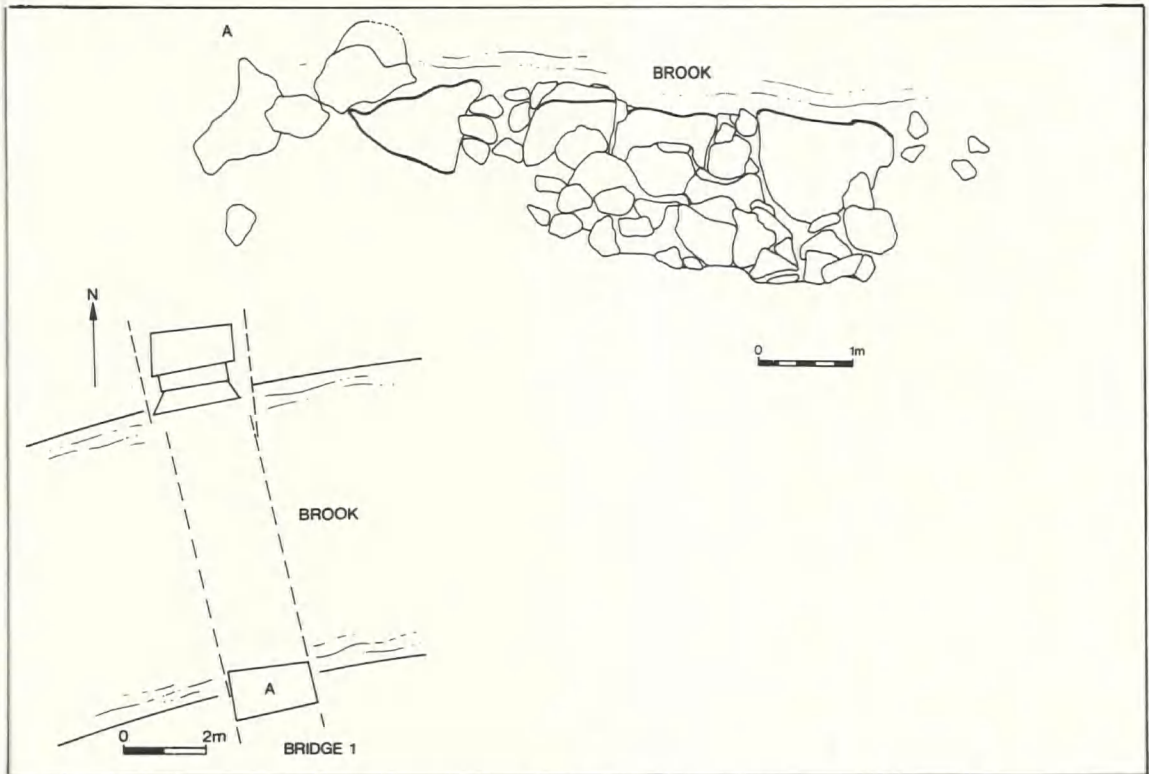


Fig 6 Bridge 1, showing the relationship between the 1970s excavation and that of 1995

sectioned (Fig 8) and comprised layers (173, 175, 176, 177, 178) of imported material, whilst the stream bed was briefly examined (189, 191) and found to have comprised clays and gravels. Landscaping as part of the infilling of the course is represented by (172) which encroaches on Bridge 2.

The latest activity on the site was the excavation of a series of minor ditches aligned obliquely to the Brook at the west end. The earliest ditch [206] (205) was subsequently replaced by [204] (203, 202, 201) and by a third ditch [180] Fig 9). The latest ditch [180] contained finds in its upper fills (151, 152) ranging from the fourteenth to eighteenth centuries.

## THE ARTEFACTUAL EVIDENCE

### The Pottery

A total of 116 sherds, representing the remains of 61 vessels and weighing 1988g, was recovered from the excavation. Quantification was by vessel count, sherd count, EVE's and weight; the full record may be found in the site archive. Quantification used in the following report is vessel and sherd count.

Twelve pottery types were recognised, falling into two broad chronological periods: medieval and post-medieval. These types are listed below in chronological order and are identified by the standard codes in the Bedfordshire Ceramic Type Series (held by BCAS).

Standard conventions have been used to depict the pottery, with an external view on the right and an internal view and section on the left. All vessels are wheel-thrown and therefore have their sections blacked in. The pie diagram at the base of each illustration shows the proportion of the vessel which survives.

### Type Series

#### C61 Calcareous inclusions

Fabric: fairly smooth, grey-brown fabric with buff-grey core. Characterised by the presence of frequent chalky inclusions; quartz and iron ore are also present.

Forms: hand made vessels; represented at Elstow by one jug fragment, residual in 159, the disuse of leet 1.

Date: 11th-12th century

This type was first recognised at the deserted medieval village of Stratton (BCAS, in prep).

Illustrations: Fig 10, no 2.

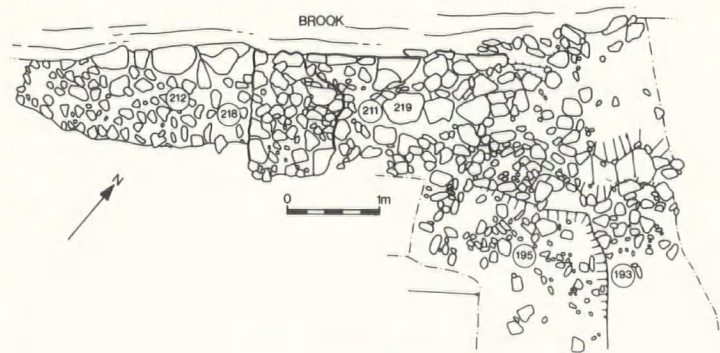


Fig 7 Bridge 2

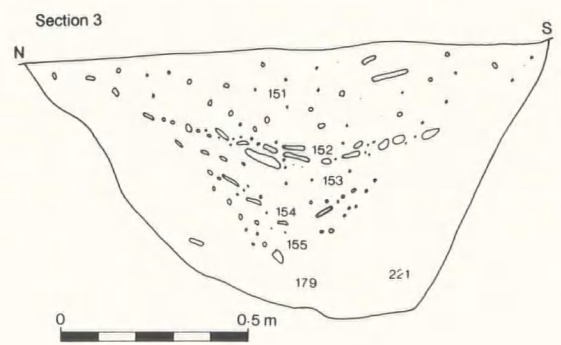


Fig 9 Section through the late ditch [180]

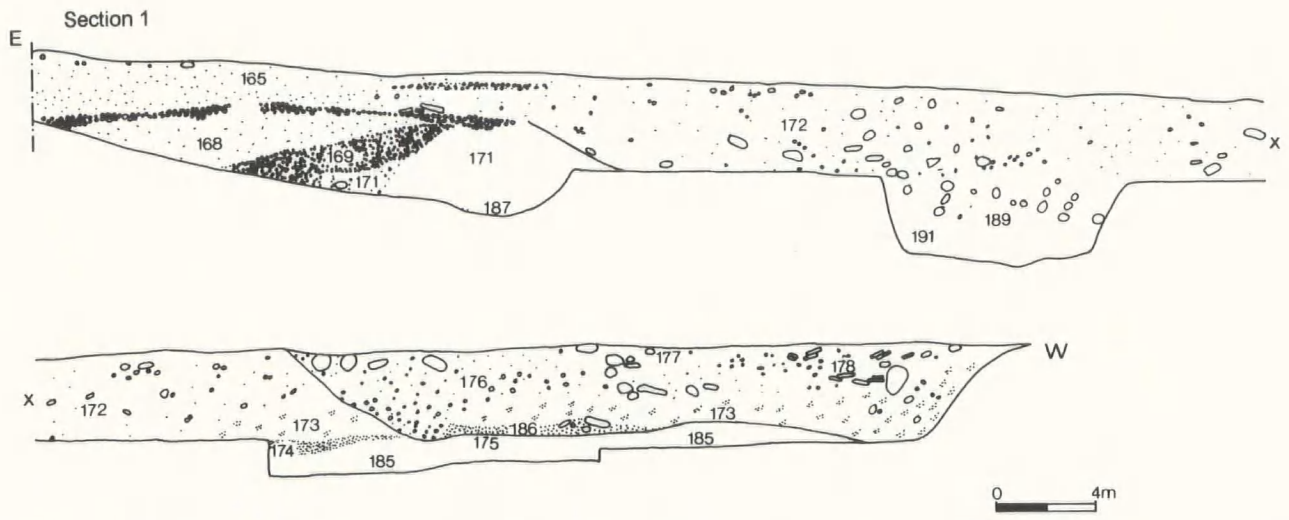


Fig 8 Section through the course of the Elstow Brook which was filled in between 1767 and 1884

**B07 Medieval Shelly ware (developed St. Neots-type)**

Fabric: hard, fairly smooth fabric with orange surfaces and distinctive blue-grey core. Predominantly shell tempered, with sparse quartz and iron ore.

Forms: wheel-thrown vessels; represented at Elstow by five jug fragments, of which two had internal white residue, and eighteen undiagnostic body sherds from eleven vessels, one of which was reduced. Number 4, although surviving to a substantial amount, is residual in a post-medieval layer.

Date: 12th-13th century.

This type is described by Hall (1972); examples from Bedford are published by Baker and Hassall (1979, 167).

Illustrations: Fig 10, no 4.

**C60 Hertfordshire-type Greyware**

large south Fabric: a hard, light grey fabric, which contains poorly sorted frequent quartz and sparse red and black iron ore. Forms: mainly wheel-thrown, although some may have been partly hand-made. This type is represented at Elstow by a single jug fragment, which has worn thumbing round the base, and eight undiagnostic body sherds from six vessels.

Date: 12th-13th century

Examples from Bedfordshire are described by Brine (1988, 43); a fuller discussion of the type is found in Havercroft and Turner-Rugg (1987) Grove Priory (BCAS in prep).

**C59a Early medieval hand-made type**

Fabric: hard, gritty fabric with grey-brown surfaces and a grey core, containing frequent, well sorted quartz, sparse red iron ore and occasional mica.

Forms: hand made; one fragment of a jug, with a grid stamp over applied strip.

Date range: 12th-13th century, possibly starting in the 11th century.

Examples are known from Grove Priory (BCAS in prep) and Chalgrave (Brine 1988, 43).

**C59b Medieval sandy harsh type**

Fabric: rough, sandy fabric with a grey core and patchy orange or grey surfaces, depending on reduction. Characterised by an abundance of rounded quartz inclusions which give the fabric a harsh texture. Also contains sparse, coarse, blackened organic voids and occasional grog.

Forms: predominantly wheel-thrown; one jug fragment and single body sherds from two separate vessels were found.

Date: 11th-13th century.

Examples are known from Grove Priory (BCAS in prep) and Chalgrave (Brine 1988, 43).

**C09 Brill-Boarstall ware**

Fabric: fine, smooth fabric, usually pink-orange in colour, equating to Ivens' Fabric 2 (1981, 144).

Forms: wheel-thrown; twenty five sherds representing eleven jugs. The most substantial jug (no. 1) consists of twelve sherds, found in three contexts (see below).

Date range: 13th-14th century

A source was first recognised at the kiln site at Brill and then at Boarstall (Buckinghamshire); the type the type is discussed fully by Jope (1953) and more recently by Ivens (1981).

Illustrations: Fig 10, no 1.

**C10 Potterspurry ware**

Fabric: a smooth fabric, with pale orange-pink or grey surfaces and a distinctive dark grey core. Contains inclusions of well-mixed quartz, grog and mica.

Forms: wheel-thrown; nine sherds representing six jugs and eight undiagnostic body sherds were recovered.

Date range: 13th-14th century

Kilns are known in Potterspurry, Northamptonshire; the type is fully discussed by Mynard (1970).

**C05 Medieval sandy type**

Fabric: distinctive fabric with dark grey-black surfaces, grey core and characteristic red margins. Contains frequent, well sorted quartz, and sparse red iron ore and mica.

Forms: wheel-thrown; three undiagnostic body sherds were discovered.

Date: 12th-14th century.

This type was first recognised at Bedford (Baker and Hassall 1979, 172).

**E01 Late medieval reduced ware**

Fabric: this type has a rough, hard and gritty fabric, and although usually fully reduced, can occasionally be oxidized to a light brown colour. Often has a vesicular appearance caused by the leaching/burning out of calcareous material. Other inclusions consist of variable amounts of quartz, mica and grog.

Forms: wheel-thrown; one jar fragment and eleven undiagnostic body sherds were found. The jar in 159 is phased to the disuse of leet 1, giving a probable 15th-century date to this event.

Date: late 14th-15th century, possibly continuing into the 16th century.

This type is found over a large area of the east Midlands (Moorhouse 1974). Kiln sites producing this type are known in Bedfordshire at Flitwick (Mynard 1983) and Everton (Hassall 1976).

Illustrations: Fig 10, no 3.

**C71 Buff grey cored type**

Fabric: distinctive, rough fabric with buff-orange surfaces and a characteristic buff-grey core. Contains frequent, well-sorted quartz and rare red inclusions, possibly iron ore.

Forms: wheel-thrown; represented at Elstow by three jug sherds, which have worn thumbing around the base.

Date range: ?13th-15th century.

First recognised at Stratton Village (BCAS in prep).

**P01 Unglazed Earthenware**

Fabric: a fine, smooth, hard fabric with quartz and flecks of red inclusions present within the fabric. The fabric is oxidised, with an orange surface and a blue-grey core

Forms: wheel-thrown; represented at Elstow by fifteen jar sherds and two undiagnostic sherds.

Date range: 17-18th century.

Examples from Bedford are described by Baker and Hassall (1979).

**P53 Slipware**

Fabric: reduced grey fabric with oxidized external surface, orange-brown in colour. The fabric consists of frequent ill-sorted quartz, frequent red and black inclusions and iron ore. The white slip decoration has been "swirled" to create a marbled effect. The clear glaze in a reduced atmosphere gives the appearance of a dull olive green.

Forms: represented by one sherd belonging to either a dish or bowl.

Date range: late 17th-18th century.

A possible source for this type may be the kilns at Potterspurry, where bowls and dishes were the predominant forms (Mayes 1968, 55).

An examination of the vessels with sherds from different contexts was made (Table 2). The substantial sherds from the Brill/Boarstall (C09) jug (Fig 10, no.1), dated to the 13th-14th centuries, and the sherds from the Medieval Shelly (B07) vessel and jug (Table 2 on p 141), originate from within the

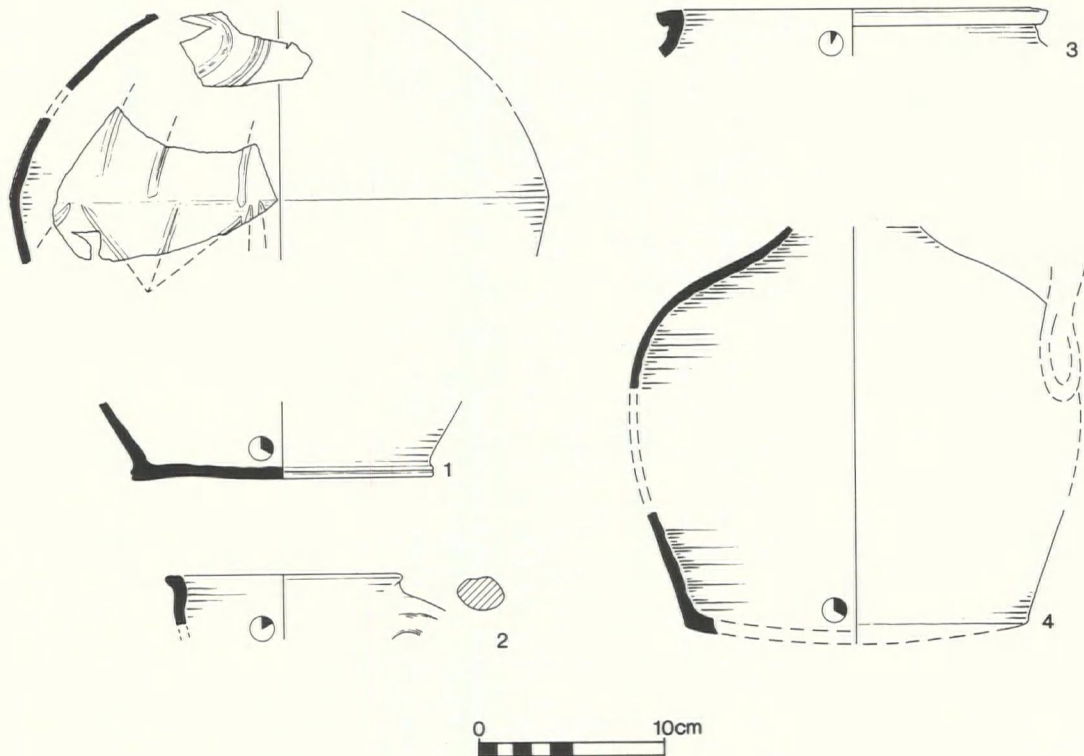


Fig 10 The ceramic assemblage

Fabric type	Monastic landscape		Leet 1			Bridge 2		Brook section		Ditch [180]		Modern desilting	
			Robbing	Disuse/silting		Pathway		In-filling post 1767	Stream bed	Silts			
C61	157	217	158	156	160	193	195	172	189	151	152	150	159
B07	3:4	1:1	0:1	1:6		1:2	1:1			1:1		5:8	1:1
C60	3:4			3:8	1:1								
C59a							1:1						
C59b							2:2						
C09	1:3		1:2	2:3	1:1					1:1		4:6	0:8
C10	1:1			5:8	3:4								1:1
C05							1:1			2:2			
E01								1:2	1:4	1:1	1:1	1:1	3:3
C71								1:3					
P01										2:13	3:4		
P53										1:1			

Table 1 distribution of pottery, quantified by vessel: sherd

Fabric type	Form	Monastic landscape	Leet 1			Ditch [180]	
			Robbing		Disuse/ silting	Silts	
		157	158	156	159	151	152
B07	jug	1	1	2			
B07	vessel	2		3			
C09 (no. 1)	jug	3		1	8		
E01	vessel					3	3
P01	jar					12	3

Table 2 Vessels with cross-context sherds

monastic landscape. Sherds from these vessels were redeposited in later contexts with the robbing of Leet 1. The two vessels with sherds from contexts

151 and 152, the upper silts of ditch 180, indicate some intermixing of these sediments.

Ills no.	Fabric code	Common name	Form	Context	Comments
1	C09	Brill/Boarstall	Jug	157/156/159	cross-contexts: monastic landscape/robbing and disuse of Leet 1
2	C61	Calcareous inclusions	Jug	159	disuse of Leet 1 (residual)
3	E01	Late Medieval Reduced ware	Jar	159	disuse of Leet 1
4	B07	Medieval Shelly	Jug	150	modern desilting (residual)

Table 3 Illustrations in Figure 10

### Building material

#### *Flat roof tile*

A total of 234 fragments of flat tile weighing 8742g, was recovered. Few tiles had any complete measurable dimensions. Four fabric types were identified. All are possibly of late post-medieval date; type B probably has a closer dating to the 18th century. The different types have been described and discussed by Baker and Hassall (1979, 254).

#### Type B Vesicular

Medium to hard fired, with a pink-orange surface and a blue-grey core. This fabric is characterised by voids, particularly on the surface where calcareous inclusions have fired or leached out. Occasionally roughly mixed with gault clay. Only round peg holes are present on this type.

#### Type N Vitrified

A hard, glassy texture, with a red-brown surface and red-orange core. The fabric is quite coarse with occasional flint inclusions. Only round peg holes are present on this type.

#### Type O Sandy

Medium to hard fired, pale pink-red throughout. This fabric has frequent ill-sorted quartz inclusions. Both peg holes and nail holes are evident within this type.

#### Type P Gault clay

Medium to hard fired, with a white surface and core; there are a few pinkish cores present. Inclusions are primarily quartz. Only peg holes can be seen within this type. A few fragments seem to be roughly mixed with fabric type B.

A few fragments of tile are intrusive in earlier contexts; most, however, come from the silting of ditch [180] (table 4). Their post-medieval date and position in these late contexts suggests that they might be demolition debris from the mansion house.

#### *Stone roof tile*

A total of 32 limestone roof tile fragments, weighing 8636g, was recovered. Among the assemblage was a single complete roof tile weighing 1513g. This tile measures: width at top 60mm; width at bottom 190mm; length 300mm.

Limestone roof tiles were in use on high status buildings from the 12th century, suggesting possible re-deposition from the demolition of monastic buildings. Table 5, however, shows the positions of

Fabric type	Monastic landscape			Leet 1				Bridge 1	Bridge 2
	River bank deposits			Robbing		Disuse/silting		Structure	Pathway
B N O P	157	174	190	158	156	159	160	163	195
		1*	1		4		1	2	
	1	2		3	6	1		2	5

Fabric type	Brook section					Ditch [180]			Modern desilting	
	In filling post 1767			Stream bed		Silts				
B N O P	172	177	178	189	185	151	152	201	150	165
	13*	3	5	3		21	8		1	2
	2									
	9	7		4	1	78	32	1	7	2
						1			1	

Table 4 Distribution of flat roof tile quantified by fragment count (\*clay mixtures)

these tiles solely in post-medieval contexts, indicating rather that they may have originated, like the clay roof tiles, from the demolition of the mansion.

#### Medieval Floor Tile

Part of a two colour floor tile was found residual in context 151, the upper silts of ditch 180.

Fabric: hard, well-fired with a reduced core and orange-red margins. The fabric contains moderately sparse small rounded quartz grains, clear and opaque, up to 0.5mm in size; small rounded grains of red and black iron ore; some red iron pellets up to 2mm in size and numerous very small flecks of mica. Also present are voids from rare larger

inclusions, up to 20mm in size, presumably from either clay pellets or small pebbles, and occasional voids left by burnt out organic matter, possibly straw, up to 20mm long.

This tile was identified as a close relative to 14th-century Penn Type 44 (Hohler 1942). This tile type was found during earlier excavations on the Elstow site (Baker in prep), and is catalogued in the BCAS Floor Tile Type Series as Type 517, design 146, shape 97. The pattern is also illustrated in Eames as Design no 2232 (Eames 1980). It is part of a very rich assemblage of 13th and 14th century tiles, mainly line impressed and mosaic, found in monastic contexts in the Benedictine nunnery.

This particular family of Penn designs is very

	Leet 1/ robbing	Brook section: Infilling post 1767		Ditch [180]			Unstratified
Contexts	156	177	196	151	152	207	u/s
No of fragments	13	3	4	9	1	1	1
Comments						complete tile	mortar on one side

Table 5 Distribution of stone roof tile, quantified by fragment count

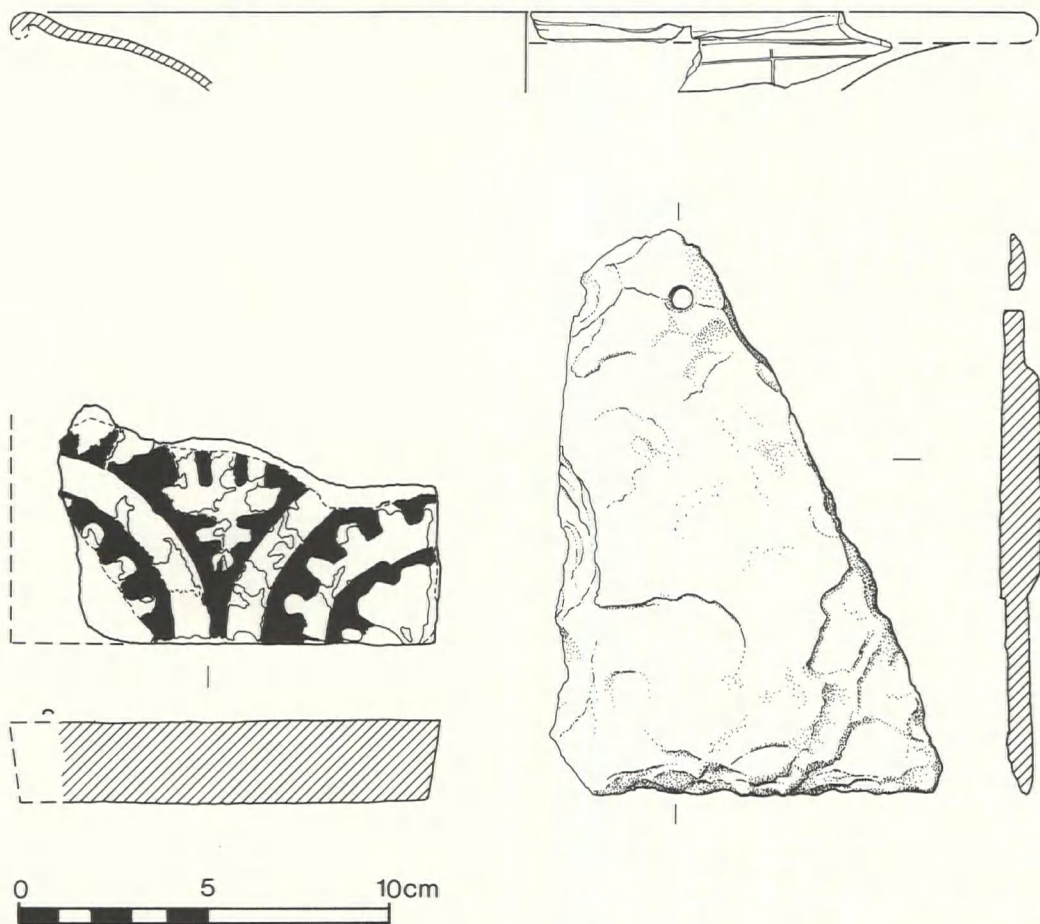


Fig 11 The finds assemblage: floor tile, glass, roof tile

common, and appears in at least seven almost identical forms. Penn 44 has been identified in several sites in Buckinghamshire (including Penn, the production centre), in Berkshire, Hertfordshire, and Northamptonshire, and as a mass produced article, has been found as far away as London, Kent and Oxfordshire.

The example found during the 1995 Elstow Brook excavations is worn, with c 90% lead glaze missing, and the white slip printed design only partly legible. The sides appear to have been moulded and trimmed, and the base was sanded.

#### *Post-Medieval Brick*

Three fabric types were defined. They are comparable to the tile fabrics, and all occur in Bedford (Baker and Hassall 1979, 253-254). Further discussion of the brick industry in Bedfordshire may be found in Cox (1979).

#### *Type B Vesicular*

Medium to hard fired, with a pale pink-orange surface and light blue-grey core. There are frequent ill-sorted quartz inclusions and voids where calcareous matter has fired or leached out.

#### *Type O Sandy*

Medium to hard fired, with pale-orange surfaces and a reddish core. The fabric is fairly coarse with frequent quartz inclusions and occasional calcareous and flint inclusions.

#### *Type N Vitrified*

A hard glassy texture, with a red-brown surface and core. The fabric is coarse and has frequent quartz and occasional flint inclusions.

A total of 11 sherds was found weighing 1981g; all come from post-medieval contexts. All are fragmentary and none have complete dimensions. A single fragment was found in (152) the fill of ditch [180], while the other ten fragments were found in modern desilting layers. The brick fragments cannot be closely dated but the latest date of the pottery from these contexts is 17th-18th century; a closer date can be obtained from a clay pipe fragment dated to 1722-32 (see below). The bricks are probably derive from the demolition of garden features associated with the Mansion.

#### *Plaster/mortar*

A total of 541g of wall plaster and 49g of mortar was recovered, all deposited in contexts phased to the post-medieval period. The plaster fabric was consistent, being a white-cream throughout, with occasional calcareous inclusions present, many of which have leached out. Whitewash surfaces survived, and occasional keying on the underside. Due to the fragmentary survival, the original thickness could not be determined.

The mortar was also a white-cream throughout, with frequent flint and sand, and occasional iron ore and quartz inclusions; as only two pieces survived, both fragmentary, the original thickness could not be discerned.

Context (Brook section)	Plaster	Mortar
177 (Post 1767 in-filling)	41g	
178 (Post 1767 in-filling)	500g	
189 (Stream bed)		49g

Table 6 Distribution and weight of plaster and mortar

#### *Architectural Fragments*

A representative sample of nine pieces of worked stone (AF) was retained from the bridges and the first leet. AF1-8 were limestone ashlar blocks with one or two roughly worked faces: their average dimensions 298mm (L), 139mm (W) and 105mm (H). No tooling was evident. The surviving face of AF 5 however, had random shallow shaped grooves which may be keying for plaster.

A single fragment of clunch (AF 9) retained portions of three dressed faces which were produced by a broad bolster with a notched blade, a technique which post-dates the 12th century.

#### **Clay pipes**

Six stem fragments were found in (151) and (201), in addition to an almost complete clay pipe stamp from (154), fills of ditch [180]. The stamp bears the initials "CM" with three dots below, and originally would have had three dots above the initials. This stamp occurred at Bedford and dates to 1722-32 (Baker and Hassall 1979, 252-253).

#### **Small Finds**

Five registered artefacts and four nails were recovered (Table 7). The majority are undatable because they are either too fragmentary or long-lived forms. These artefacts are not included in this report although a full catalogue accompanies the site archive. The single datable artefact is the fragment of a small glass dish similar to an example from Norwich recovered from early to mid 17th century deposits (Haslam 1993, 97; 109, 112; cat 710-711).

RF 1 Rim and body sherd fragments of a small dish of translucent light green potash glass with surface weathering. Thickness ranging from 1.1mm to 2.2mm. Context: 151.



Registered Find No	Context	Location	Object type
1	151	(Silts of ditch [180])	glass dish
	151	"	4 iron nails
2	154	"	iron rectangular staple
3	190	Stream bed	wood plank
4	207	(Modern de-silting)	iron sheet fragments
5	213	(Modern de-silting)	iron strip

Table 7 Registered finds

### THE FAUNAL ASSEMBLAGE (E Hutchins)

Species	Monastic landscape		Bridge 1	Brook section				Leet 1 Disuse/silting		
	157	208		174	185	172	178	156	159	160
pig	*		*			*			*	
cow	*			*		*			*	
horse		*			*			*		*
gnawed fragments				*	*					
sheep/goat						*		*		*
horn core								*		
dog									*	*
butchery						*	*			

The animal bone from this excavation comprises a limited range of domesticated species including gnawed fragments and those with butchery marks. In (172) both the pig and cow have been chopped whilst sheep/goat bones have knife marks; in (201), cow has been chopped and in (151), the cow has been dismembered, evident from knife marks. Dog remains, including three femurs in (160), indicate that at least two dogs had been thrown into the disused leet.

### CONCLUSION

The archaeological investigation at Elstow Abbey was deliberately limited in scope, and intended to identify areas within the scheduled area where widening of the Brook would cause the least damage. The evaluation strategy resulted in excavation in an area chosen for its lack of archaeological potential. Nevertheless the discovery of the

Species	Ditch[180]			Ditch [202] Silts	Modern de-silting In-filling
	151	152	154		
pig	*				*
cow	*	*		*	*
horse			*		
gnawed fragments				*	
sheep/goat					
horn core		*	*		
dog					*
butchery	*			*	
ribs					

\* indicates presence of animal bone in the context.

Table 8 Distribution of Animal bone

leets and a second bridge add to the already extensive evidence of the monastic complex first investigated in the late 1960s. The geophysical survey, combined with the 1767 estate map evidence, has shown the potential for locating parterres and other garden features of the Mansion as well as further, probably, monastic buildings.

The results of both evaluation and excavation have produced evidence important to the wider interpretation of the monastic and post monastic periods, and which will be fully integrated with the results of the earlier work (Baker in prep).

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