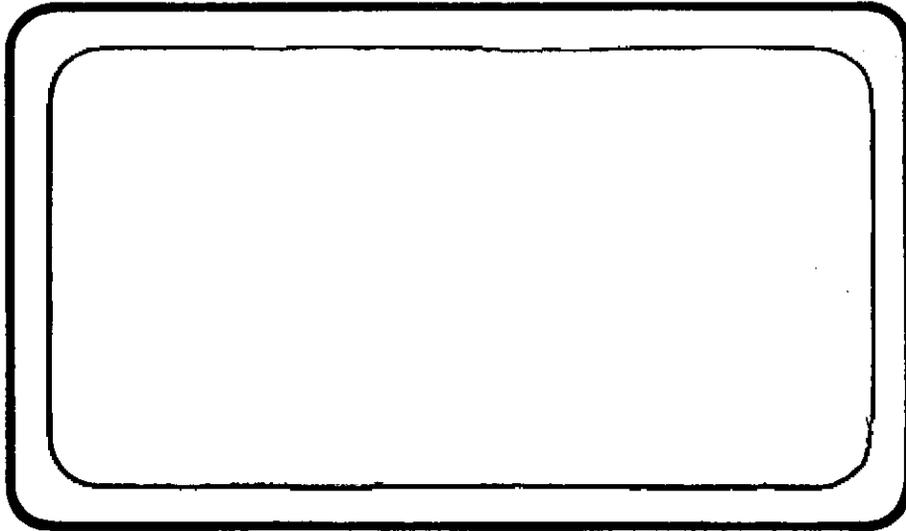


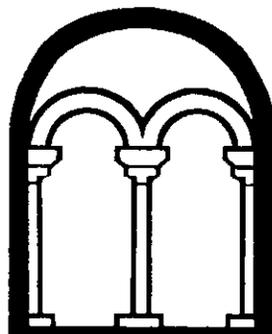
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The Roman Small Town at Sandy
Bedfordshire

Part 1
Post-excavation Assessment of Potential

Bedfordshire County Archaeology Service

February 1996

Report 95/32

THE ROMAN SMALL TOWN OF SANDY, BEDFORDSHIRE

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1 SUMMARY:THE ROMAN SMALL TOWN OF SANDY, BEDFORDSHIRE

1.1 The Roman small town of Sandy lies on the east side of the River Ivel in an embayment of the Greensand Ridge, south of the modern town of Sandy, Bedfordshire. The site was evaluated in 1987 and excavated during 1989 to 1991.

1.2 The site is of national importance because of the information recovered for the growth and decline of a Roman small town. This was due to two factors, the depth of stratigraphy, protected by up to 1m of colluvial soil and extensive recovery of artefacts during excavation. By considering this information in the light of other regional excavations Sandy will contribute to the national research priorities in regard to the relationship between town and country.

1.3 The site is of regional significance for the quantity and quality of information the stratified site will contribute to artefact sequences in the region. The excavations at Sandy have for the first time provided a deeply stratified sequence from which to refine the county's pottery type series. The potential of this area is enhanced by the large number of coins recovered.

1.4 The survival of stratigraphy at Sandy which led to the recovery of contextual data and stratified artefacts has provided an opportunity to develop our understanding of the processes of small town development, including craft/industry, trade/exchange and zoning of activities. These will be explored through the evidence for ironworking, and bronze smithing, through the range and variety of artefact assemblages and the layout of burial evidence. Particular assemblages such as the glass are expected to contribute to a wider understanding of the distribution of such materials.

1.5 In accordance with established practice and the Management of Archaeological Projects 2 (English Heritage 1991) this document presents the results of the post excavation assessment of the data produced by the 1988 - 91 excavations but also considers the results of watching briefs and the results of salvage recording in the field south of the main excavations undertaken in 1994 & 1995.

The report is bound in two separate volumes:

Part 1: Assessment of potential

Part 2: Updated project design

1.6 The aims and objectives, set during the course of excavation, have been assessed in part one, in part 2 they have been recast in the light of the potential explored in the assessment and in this form provide the basis for the Updated Project Design.

2 PROJECT BACKGROUND

2.1 The site is one of only two Roman small towns in Bedfordshire, the other being Dunstable, and is part of a series of such settlements on roads running north from London to East Anglia and Eastern England, comparisons may be sought with Godmanchester, Cambridge, Baldock, Braughing and Great Chesterford.

Previous work at the site has included small excavations (Johnston 1974) and the site was discussed in synthetic articles in 1974/5 (Johnston 1974, 1975). Since the major excavations, which took place in the cemetery of the modern town, opportunities for two further periods of recording occurred; both related to the construction of agricultural buildings in an adjacent field. Recently the site has been re-assessed (Dawson 1995) particularly in the light of its omission from the role of small towns in Burnham and Wachter (1990).

2.2 The excavations at Sandy were funded by English Heritage, Sandy Town Council and Bedfordshire County Council. The site was excavated by Michael Dawson (Senior Archaeological Field Officer). This assessment has been carried out by Michael Dawson, with Holly Duncan (Non-ceramic Artefacts Manager) and Anna Slowikowski (Ceramic Artefacts Manager) and commissioned specialists listed in the text.

2.3 The original aim of the project was to carry out full excavation of an area of the Roman small town before destruction through gravedigging in the present town cemetery. The aims defined in the original research design and as subsequently modified were as follows:

- 2.3.1 To determine whether the settlement had an official function, such as a *mansio*.
- 2.3.2 To determine any degree of continuity of settlement from the Iron Age to the Roman period and from the Roman to the Saxon periods
- 2.3.3 To determine any factors affecting expansion and contraction of the settlement.
- 2.3.4 To develop the Bedfordshire Roman pottery database.
- 2.3.5 To determine the regional role of Roman Sandy through trade and patterns of rural activity.
- 2.3.6 To provide an explanation for the high artefact recovery level, in particular the coinage, and to explore whether this reflects the situation in East Anglia.
- 2.3.7 To explore further the unusual burial customs and confirmation of their date.
- 2.3.8 To provide a coherent explanation of the high coin loss on site, and determine the possibility of a market site.
- 2.3.9 To clarify the spatial and temporal relationships of craft activity against the background of a changing townscape, including the details of the crafts and the origin of raw materials.
- 2.3.10 To examine the floral and faunal remains, largely unstudied for this period in Bedfordshire. An environmental profile of the town can be

compared with that being examined at Warren Villas quarry, about 1km south.

- 2.3.11 To address the wider issues of landscape development in the Ivel valley and to compare the site of Warren Villas in relation to the roadside settlement of Sandy.
- 2.3.12 To address wider issues of landscape development through the excavations at Sandy and those at Warren Villas, Broom and Biggleswade.

3 THE STRUCTURAL EVIDENCE

3.1 FACTUAL DATA

3.1.1 Quantity of material and records

The excavation at Sandy took place within a restricted and unused area of the modern town cemetery following the discovery of parts of a human skeleton, including a skull and other fragments during excavation of a modern grave. This occurred in an area where no modern or earlier burial was previously known.

Work in the area before 1987 (Johnston 1974) had indicated that the Roman town had been largely destroyed by intensive agricultural activity. The 1987 evaluation demonstrated that parts of the settlement survived relatively intact beneath a dense cloak of colluvium or hillwash.

The area of excavation at Sandy occupied 1760m² in a part of the modern cemetery known as Chesterfield. This area had been bought by Sandy Town Council in the 19th century as an extension for the town cemetery. The site sloped gently from east to west and was situated on the north side of a shallow embayment of the Greensand Ridge where past evidence suggested the Roman town was situated.

Contexts	3222
Plans	183
Section sheets	48
Photographs	84 monochrome films/93 colour slide

Table 3.1 Quantification of contextual data

All site records have been entered on to a computerised data base ACCESS for WINDOWS.

3.1.2 Range and Variety

Excavations at Sandy were undertaken in four seasons beginning with evaluation in 1987 and extending to three more extensive excavations in 1989, 1990 and 1991. Due to the nature of the threat 100% excavation was undertaken, much of this was by hand. On two occasions where large contexts were discovered these were recorded and machined away either by Kubota mini excavator (Roman road surfaces) or JCB 3c (silted stream bed).

In all areas a deep covering of colluvial material was found to have sealed the site, initially removed by hand in the evaluation trench, this material was machined away in successive seasons. During the excavation the sandy soil of the area was found to have led to rapid silting of ditches and pits which resulted in comparatively deep stratigraphy in all areas. This was of particular benefit in the survival and identification of otherwise insubstantial structural features such as the dry stone dwarf walls of timber buildings.

During the assessment all context records have been examined and a preliminary phasing constructed using the stratigraphic record and artefactual data.

3.1.3 Site definition

The Roman small town of Sandy comprises several elements which suggest a linear development along the higher ground above the River Ivel possibly focusing on the area of the present excavation and adjacent fields. The full extent of the town possibly stretching over 10ha (Dawson 1995).

3.1.4 Additional data

In addition to excavated data two archaeomagnetic dates were sought from clay lined hearths. The results were anomalous, yielding dates of 14th century AD. As these features were firmly stratified within the Roman sequence the dates play no further part in this assessment.

3.1.5 Provenance: the provisional phasing

The dataset, which comprises the context records and photographs has been assembled for the purpose of assessing its potential for analysis. The structural evidence of human activity at Sandy has been grouped into 7 broad phases (there are 32 contexts u/s or natural).

Phase	PERIOD	DESCRIPTION	Context /phase
1	Late 1st century BC - 1st century AD	Settlement evidence including part of drip gully and several pits and ditches	44
2	1st century AD	Probable expansion of Roman settlement including the establishment of local metalled road flanked by early buildings.	9
3	2nd - 3rd century AD	Development of roadside settlement, including establishment of ditched boundaries	656
4	3rd century AD	Largest body of structural evidence, includes some burial evidence, but comprises the remains of several buildings.	1238
5	4th century AD	Late occupation including timber framed buildings, burial evidence	360
6	Late 4th century	Late occupation including post built structures, hearths and burials	11
7	Later 4th -5th century occupation	Late occupation including post built, timber framed structures and burial evidence, hearths	702

Table 3.2 Summary of principal phases of activity at Sandy

3.2 POTENTIAL FOR FURTHER ANALYSIS

Research aim 1: To determine whether the settlement had an official function, such as a *mansio*.

The structural data did not provide evidence for the presence of a *mansio* within the confines of the excavated area. However a small salvage excavation in an adjacent field recovered evidence of a large mortared stone building possibly aligned on the Roman road and therefore a contender for identification of a *mansio* (Dawson & Crick 1994). This area is currently to be assessed for geophysical survey in an attempt to define the extent of Roman structures in the area known as Chesterfield.

Research aim 2: To determine any degree of continuity of settlement from the Iron Age to the Roman period and from the Roman to the Saxon periods

The structural evidence has produced evidence of occupation in the late Iron Age, in particular a round house drip gully discovered during evaluation in 1987. This drip gully contained an Iron Age coin. Further evidence of Iron Age occupation was found in ditches and pits on the northern side of the excavation. Evidence for continuity of settlement at the site into the Saxon period was not recovered from the excavations despite the recovery nearby of Saxon cinerary urns (Kennet 1970). Evidence suggests instead that the town area was abandoned during the early 5th century.

Research aim 3: To determine any factors affecting expansion and contraction of the settlement.

The limited extent of the excavated area reduced the potential to address this objective however expansion over the course of a silted stream bed indicates pressure on land within the settlement.

Research aim 4: To develop the Bedfordshire Roman pottery database.

The structural evidence has good potential to provide the framework for this study.

Research aim 5: To determine the regional role of Roman Sandy through trade and patterns of rural activity.

The phasing data and structural evidence provide the framework for analysis of finds assemblages on which arguments regarding the economic role of Sandy will be based.

Research aim 6: To provide an explanation for the high artefact recovery level, in particular the coinage, and to explore whether this reflects the situation in East Anglia or other small towns.

The structural data will provide the framework for the analysis of coin data.

Research aim 7: To explore further the unusual burial customs and confirmation of their date.

The evidence of burial from Sandy is complex and extends across all areas of the excavation. None of the burials appear to be part of a recognisable formal arrangement within an enclosed or otherwise defined cemetery. However well defined groups of burials and multiple burials are sufficiently well preserved to provide the basis for detailed comparative study of burial rite based on examples found in other Roman urban centres and in the region (Cf Philpott 1993).

Research aim 8: To provide a coherent explanation of the high coin loss on site, and determine the possibility of a market site.

The structural evidence, once again, provides the framework for this study.

Research aim 9: To clarify the spatial and temporal relationships of craft activity against the background of a changing townscape, including the details of the crafts and the origin of raw materials.

The phasing and structural data provide the framework for spatial analysis of craft activity at the site. The origin of raw materials is a matter for artefact study.

Research aim 10: To examine the floral and faunal remains, largely unstudied for this period in Bedfordshire. An environmental profile of the town can be compared with that being examined at Warren Villas quarry, about 1km south.

The structural remains will provide the temporal framework for this study.

Research aim 11: To address the wider issues of landscape development in the Ivel valley and to compare the site of Warren Villas in relation to the roadside settlement of Sandy.

The structural data from the excavation in addition to that from the recent salvage excavations provides a town focus on which comparisons between town and country can be made.

Research aim 12: To address wider issues of landscape development through the excavations at Sandy and those at Warren Villas, Broom and Biggleswade.

The excavation for the first time, of structural remains related to the Roman small town, has established the location of the settlement and provided a structural sequence for an area close to its focus. The quantity and quality of artefacts recovered from the excavation provide the basis for establishing patterns relating to the economic relationship between town and country in the Sandy area.

3.3 STORAGE AND CURATION

The contextual record is presently held in A4 lever arch files and on Asaflex drafting film at St Mary's Church Archaeology Centre, Bedford. Microfiche copies have been made of context sheets and all other data sheets and paper records relating to the site; there are also paper copies of all site drawings. All copies are held at County Hall, Bedford. The archive is fully indexed.

4 THE CERAMIC ASSEMBLAGE

4.1 FACTUAL DATA

4.1.1 Quantification

The Pottery

The pottery was recorded by fabric type and form within each context. No detailed quantification was done as this was not pinpointed in the original research design as a priority. Contexts with large assemblages were subdivided by fabric and reboxed, resulting in a total of 233 boxes of non-specialist pottery, estimated weight 1165kg. Specialist pottery such as finewares and amphorae, was quantified by sherd; all other quantitative statements throughout the assessment refer to the number of contexts where relevant pottery occurred. These total 1081. Pottery from the original evaluation has not been included in this assessment as the phasing for this part of the site will be done at the analysis stage. The pottery from the evaluation totals 18 boxes, estimated weight 90kg. Material from the topsoil and other unstratified contexts has not been included in the assessment, although it will be scanned at the analysis stage to establish if there are any new fabric types or forms present.

The samian pottery was assessed by B Dickinson. A total of 2182 samian sherds, including 49 stamped plainware vessels and a minimum of 305 decorated bowls, was recovered.

The amphorae were assessed by D Williams. A total of 811 sherds, weighing 107,520g, was recovered.

Building material

Ceramic building material was recorded by fabric type and form. Quantification was by sherd count. The assemblage comprises 5550 sherds, of which 2260 are daub or fired clay fragments, and the remainder brick or tile. The tile is further broken down into Roman forms: *tegula*, *imbrex*, box flue tile and ridge tiles. Floor tile is indistinguishable from brick and the two are recorded together. Undiagnostic fragments are recorded as 'unidentified'. Building material from the original evaluation is omitted from the assessment as the phasing for this part of the site will be undertaken as part of the analysis stage.

Two fragments of box-flue tile with roller stamping were assessed by Ian M Betts.

4.1.2 Provenance

Pottery

Table 1 shows the totals of different types of feature with pottery, and a relative estimate of the size of the assemblage. This estimate is based on the following subjective criteria:

small (S)	less than 10 sherds
medium (M)	10 - 50 sherds
large (L)	50 - over 50 but less than a full box (440x180x220mm)
enormous (E)	one full box or more

Feature type	No of contexts with pottery	Estimate of size			
		S	M	L	E
Natural	1	1			
Robber cuts	1		1		
Ploughsoil	3	2	1		
Internal surfaces	3	2		1	
Masonry	6	5	1		
Pits (rubbish)	8	5	3		
Graves	11	7	3	1	
External surfaces	15	6	8	1	
External dumps	19	6	12		1
Hearths/ovens	26	21	4	1	
Ditches	200	79	76	38	7
Structural cuts	242	212	29	1	
Pits (unspecified)	260	139	78	42	1
Layers	276	109	88	54	25
Undefined	10	6	3	1	
TOTAL	1081	600	307	140	34

Table 4.1 Features with pottery and the estimated size of assemblage

Most of the contexts containing pottery are layers, normally of slight archaeological value because of their unsealed nature and the likelihood of contamination. The layers at Sandy, however, are the result of the dumping rather than the gradual build up of material, making them worthy of at least basic analysis. Large quantities of pottery were recovered from these contexts, 25 of them measuring more than one full box. The pits and ditches comprise 468 contexts, 43.29% of contexts with pottery. Of these 245 contexts, 22.66%, are of medium size or larger. These are the contexts that will yield the most fruitful ceramic information, at least from their bottom-most levels, due to their sealed nature. Despite the nature of most urban sites, with much intercutting of features and consequent disturbance, few of the pits were intercut. This in itself will inform the analysis of the level of occupation and function of this part of the site at different phases.

Phasing and date range

The pottery ranges from the late Iron Age to the late Roman period. With the exception of a very small quantity of post medieval pottery, no firmly dated post Roman pottery was recovered. Although a Saxon bead was found, there is no other

evidence of Saxon activity on the site. The latest pottery is 'Romano-Saxon' oxidised Hadham ware of the late 4th century, a type described by Roberts (1982).

The provisional phasing for the site has been based on the stratigraphy and is shown in table 4.2.

Stratigraphic phase	Date of stratigraphic phase	Number of contexts with pottery
1	late 1stC BC-1stC AD	1
2	1stC	4
3	2ndC-3rdC	181
4	3rd century	415
5	4th century	149
6	Late 4th century	9
7	Later 4th - 5th century	314
unphased		8

Table 4.2 Numbers of contexts per stratigraphic phase

The spotdates allocated to the pottery indicate that these phases can be refined in the analysis stage. The number of contexts with pottery, when totalled by ceramic period, indicates that a more detailed chronology can be determined for the development of the site (table 4.3). Five preliminary ceramic periods have been defined based solely on the spotdate allocated to contexts.

Ceramic period	Date of ceramic period	No of contexts by ceramic period	Equivalent stratigraphic phase	No of contexts by stratigraphic phase
0	Roman	70		
1	late 1stC BC-mid 1stC AD	43	1	1
2	mid 1stC-2ndC	153	2	4
3	2ndC	93	3	181
4	late 2ndC-mid 3rdC	340	} 4-7 }	887
5	mid 3rdC-mid 4thC	126		
6	mid 4thC +	256		
unphased				8

Table 4.3 Numbers of contexts by ceramic period and corresponding stratigraphic phase

Numbers of samian sherds have been calculated for each stratigraphic phase and are shown in table 4.4. When assessed by stratigraphic phase, the samian indicates a high level of residuality, with the majority of sherds coming from phases dated to the 4th century or later. However, reconsideration of the phasing of the site by closer integration of the ceramic phasing of the non-specialist pottery (see table 4.3) and

contextual evidence will probably increase the dating potential of the samian. In turn this will allow a further refinement of the stratigraphic phasing.

Stratigraphic phase	Samian sherds
1	1
2	1
3	101
4	694
4/5	3
4/7	4
5	377
6	134
7	862
unphased	5
TOTAL	2182

Table 4.4 Quantity of samian by stratigraphic phase

Apart from one Augustan piece, the assemblage ranges from the Claudio-Neronian period to the first half of the third century, but there are fluctuations in the quantities of sherds discarded during that period. This can sometimes be explained by changes in the availability of samian at given times, but the apparent scarcity of material of *c.*AD85-100 seems significant, since it is reflected neither in the non-specialist pottery (table 4.3) nor in Britain as a whole. A further refinement of the phasing will seek to confirm this situation.

Building material

Category	Daub	Box flue	Brick	<i>Imbrex</i>	<i>Tegula</i>	Flat	Ridge	Mod	UNID	TOTAL
Layers	805	209	506	283	457	129	0	2	68	2459
Ditches	363	113	231	105	197	29	4	0	32	1074
Pits	559	44	156	51	126	36	1	0	13	986
Topsoil?	102	49	45	31	43	14	22	2	28	336
Hearths	266	0	9	2	2	0	0	0	0	279
Structural	62	16	25	14	48	13	0	0	6	184
External surface	5	7	35	22	20	1	0	0	1	91
External dump	75	1	9	1	4	0	0	0	0	90
Grave	13	5	4	2	3	1	0	0	1	29
Masonry	0	1	5	1	5	0	0	0	0	12
Pits (rubbish)	6	0	0	0	0	0	0	0	0	6
Internal surface	4	0	0	0	0	0	0	0	0	4
TOTAL	2260	445	1025	512	905	223	27	4	149	5550

Table 4.5 Building materials by feature type

The large quantity of building materials of all kinds recovered from layers is largely explained by the preservation of horizontal stratigraphy. Although normally to be regarded as of minimal archaeological value due to the risk of contamination and their unsealed nature, many of the layers at Sandy represent dumping of material rather than a gradual build up.

Phasing and date range

Stratigraphic phase	Date of stratigraphic phase	Number of fragments	% Total
1	late 1stC BC-1stC AD	3	0.05%
2	1stC	2	0.03%
3	2ndC-3rdC	842	15.18%
4	3rdC	863	15.55%
5	4thC	829	14.95%
6	late 4thC	250	4.5%
7	late 4thC-5thC	2758	49.69%
unphased		3	0.05%
TOTAL		5550	100%

Table 4.6 Building material by provisional stratigraphic phasing

Table 4.6 shows the quantity of building material from each stratigraphic phase. This cannot, however, be regarded as a definitive scheme; pottery spotdates indicate a more detailed chronology and a number of refinements will have to be made to the phasing at the analysis stage. As the provisional phasing stands at present, it appears that most of the building material occurs in the final phases of the site.

Phase	3	4	5	6	7
Fabric 1	35.53%	42.05%	35.98%	50.9%	44.11%
Fabric 5	31.14%	26.17%	37.8%	30%	30.17%
Fabric 3	4.95%	12.75%	7.19%	10.45%	13.43%
Fabric 4	7.69%	8.27%	6.06%	5%	4.56%
Fabric 2	4.13%	5.36%	7.75%	1.8%	4.15%
Other fabrics	16.56%	5.4%	5.22%	1.85%	3.58%
TOTAL	100%	100%	100%	100%	100%

Table 4.7 Percentages of the dominant brick and tile fabrics by phase.

An assessment of the five most common brick and tile fabric types, which together make up just over 95% of the total assemblage, reveals a fairly constant rate of occurrence throughout the Roman period (table 4.7). Typological differences which may be significant chronologically, do occur. At Harrold, north Bedfordshire, a kiln site which almost certainly exported brick and tile to Sandy, proportional differences were noted in *tegula* flange form between the 2nd-century material and that dated to the 3rd and 4th centuries (Brown 1994). Further work at the analysis stage may determine such patterns in the Sandy material.

Phase	unphased	1	2	3	4	5	6	7	TOTAL
Daub	3	3	0	721	416	300	30	787	2260
Box flue	0	0	0	9	37	65	30	304	445
Brick	0	0	2	62	155	189	70	547	1025
<i>Imbrex</i>	0	0	0	15	84	87	30	296	512
<i>Tegula</i>	0	0	0	26	116	126	67	570	905
flat	0	0	0	8	32	36	21	126	223
Ridge	0	0	0	1	7	3	1	15	27
Mod	0	0	0	0	1	1	0	2	4
UNID	0	0	0	0	15	22	1	111	149
TOTAL	3	3	2	842	863	829	250	2758	5550

Table 4.8 Building materials by phase

An assessment of the daub/fired clay fabric similarly reveals little significance in terms of chronology, based on the provisional stratigraphic phasing. The daub/fired clay occurs throughout the provisional phases with the exception of phase 2, but appears to decrease with time (table 4.8). This suggests increased sophistication, in terms of building practice, in the later phases. The structural evidence for these phases suggests

an increased use of stone, probably in the form of dwarf walls, designed to support a timber superstructure above.

Small scale intrusion is indicated by the presence of modern fragments in phases 4, 5 and 7. Residuality, although it must occur to a certain degree throughout the phases, is difficult to detect in the ceramic building material assemblage. The occurrence of abrasion on the brick/tile was examined, with over one quarter of the abraded total occurring in phase 6. However, abrasion is likely to be affected by more than one factor, including the resilience of the fabric and the manner of deposition.

4.1.3 Range and variety

Pottery

A provisional list of fabric types has been defined and these are listed below with the numbers of contexts that contain those types. This total only notes the presence of these types, not the quantities. A number of types has been grouped together for purposes of assessment and will be subdivided at the analysis stage. These are marked with an asterisk (*). Fabric types new to the Bedfordshire Ceramic Type Series are marked with a double asterisk (**). These have been allocated either a temporary fabric code, preceded by SC, or a preliminary type series alpha-numeric code, preceded by R. These will be fully incorporated into the Bedfordshire Ceramic Type Series system at the analysis stage. A number of these new types have been subsequently recovered from other excavations in the county. Samian and amphorae are the subjects of specialist assessment reports, and therefore their contexts are not quantified below.

<u>LATE IRON AGE</u>		<i>Number of contexts</i>
F03	grog/sand	10
F04	organic	1
F05	grog/shell	68
F06	* grog	510
F07	shell	5
F08	shell/grog	12
F09	sand/grog	26
F11	sandy	4
F33	** grog/sand	21
F34	** sandy	16
 <u>ROMAN</u>		
R02	mica gilded	126
R03	whiteware (VRW)	157
R03A	fine whiteware (VRW)	316
R03B	gritty whiteware (VRW)	1
R03C	smooth whiteware (VRW)	80
R04	* ?import	3
R04A	Rhenish	46
R04B	Gallo-Belgic whiteware	31
R05A	orange sandy	217
R06	* greyware	1778
R06A	Nene Valley greyware	8
R06D	micaceous greyware	9

R07B		black sandy	64
R07C	*	BB1/black gritty	297
R08		black micaceous	11
R09A		pink grogged	21
R10A		pink grogged with shell	33
R10B		fine buff gritty	5
R11A	*	whitewares	6
R11D		Oxford colour coat	101
R11E		Oxford mortaria	107
R11F		Oxford mortaria	19
R11G	**	?Oxford	28
R12	*	colour coat	4
R12A		Nene Valley mortaria	85
R12B		Nene Valley colour coat	614
R12C	**	?parchment	4
R13	*	Shelly	1148
R14		red-brown harsh	5
R17		smooth orange (?import)	2
R18		pink gritty	87
R22A		Hadham oxidised	143
R22B		Hadham reduced	7
R23	*	roughcast colour coat	69
R24	**	red quartz	1
R26		Terra Nigra	14
R27	**	white micaceous	12
R28	**	gritty calcareous	1
R31	**	coarse whiteware	1
R32		lead glazed (?import)	8
R33		Verulamium mortaria	3
R35		R/B grog	230
R36	**	orange gritty	9
SC1	**	unrecognised	78
SC2	**	unrecognised	1
SC3	**	unrecognised	3
SC4	**	unrecognised	57
SC5	**	unrecognised	1
SC6	**	unrecognised	4
SC7	**	unrecognised	6
SC8	**	unrecognised	4
SC9	**	unrecognised	2
R	*	miscellaneous	113

POST MEDIEVAL

P01		glazed earthenware	1
P14		blackware	1

The presence of different forms is listed in table 4.9. Undiagnostic body sherds are not tabulated; diagnostic sherds from unusual and as yet unrecognised forms have been listed below as 'unrecognised'.

Forms	No of contexts
beakers	74
butt beakers	14
cornice rim folded beakers	36
everted rim beakers	82
folded beakers	168
globular beakers	3
poppy head beakers	59
melon beakers	2
plain rim beakers	74
flange rim dishes	85
bottles	2
bowls	46
reed rim bowls	43
bead rim bowls	18
carinated bowls	6
flange rim bowls	85
segmental bowls	11
plain rim bowls	323
rectangular rim bowls	55
plain rounded bowls	12
triangular rim bowls	75
castor boxes	34

Forms	No of contexts
flagons	117
jars	46
carinated jars	4
bead rim jars	41
cordoned jars	92
developed lid seated jars	87
everted rim jars	374
reed rim jars	75
grooved rim jars	12
flange rim jars	11
lid seated jars	228
necked jars	115
rectangular rim jars	72
storage jars	233
triangular rim jars	121
undercut rim jars	71
lids	34
mortaria	190
platters	132
tazza	1
vase	1
unrecognised	9

Table 4.9 Numbers of contexts with diagnostic forms

The nature of the pottery, on preliminary assessment, indicates a primarily domestic assemblage, with a preponderance of cooking, storage and table vessels, such as jars, bowls and beakers. A small number of other, rarer, types such as the tazza and the ring vase, do, however, occur.

Examination of the evidence for function, such as sooting, wear, post-firing adaption and presence of residues, will seek to confirm the domestic nature of the assemblage. Evidence of secondary use has also been noted on samian and amphora sherds; these are discussed below. The presence of possible repair holes and lead plugs was noted, and their examination, together with the variety of fabric types and forms throughout the different phases, will determine the availability of pottery and/or the status of the site, or the excavated part of it. The examination of the samian has already pinpointed this even at this assessment stage (see below).

The major sources of supply were local with large quantities of shelly and greywares, production centres of which are known in the county (Brown 1994; Simco 1984). Which of these centres and when they were supplying Sandy will be determined at the analysis stage. In addition imports from further afield were identified, particularly Oxford, Hadham and the Nene Valley. Continental imports were relatively few although at least eight types were identified. There are types present which were

manufactured both on the continent and in Britain; their identification will be confirmed at the analysis stage. A small quantity of unrecognised types, distinctly different from the known local or regional wares, was identified, and further research will have to be undertaken to determine their sources, whether regional or continental.

A 2nd-century kiln, producing predominantly grey but also some red sandy coarsewares, was excavated at Warren Villas, about 1km south of Sandy (Slowikowski and Dawson 1993). The marketing and distribution of its products has not yet been determined, but it is possible that some of the pottery reached Sandy, as sherds that are visually similar to the Warren Villas kiln products were recognised. These have been grouped with the greywares for purposes of assessment but will be subdivided at the analysis stage.

Samian ware

Source	% of samian assemblage
South Gaul	17
Central Gaul (Les Martres-de-Veyre)	7
Central Gaul (Lezoux)	70
East Gaul	6
TOTAL	100

Table 4.10 Sources of samian reaching Sandy

The samian was drawn from a wide range of sources and, though some factories contributed only small amounts, they indicate trading links with the site which will help to place it in the wider context of trade in the Sandy area and Britain as a whole. Six vessels in first-century Lezoux fabrics and two second-century examples from the South Gaulish factory of Montans, are particularly useful in this respect, as they add to a gradually evolving distribution pattern for these wares. The decorated wares include several important pieces which will add to the sum of knowledge of the work of some of the less familiar samian potters.

Another factor which bears investigation, as a possible indicator of the status of the site, is the number of vessels showing signs of heavy wear or riveting, and the number of sherds which have seen secondary use. These comprise 4.3% of the assemblage. Dickinson has noted that, in the Antonine period and the third century, some less prosperous sites, particularly, but not exclusively, rural settlements, eked out their supplies of gritted samian mortaria by the use of ungritted bowls for grinding. This seems to have occurred at Sandy, though the scarcity of decorated ware, which often accompanied it, is not in evidence here.

Amphorae

The amphorae have been assessed below by season.

Amphora type	Sherd count
Dressel 20	742
Gallic	46
Class 59	2
unclassified	21
TOTAL	811

Table 4.11 Types of amphora reaching Sandy

1989

Dressel 20 - The vast majority of the amphora sherds from Sandy can be attributed to the southern Spanish globular form Dressel 20, which carried the local olive-oil from the region of the River Guadalquivar in the province of Baetica (Peacock and Williams 1986, Class 25). This amphora type was in production for some three centuries and is a common find on Romano-British sites. Seven rims were recovered from Sandy, and all of them can be roughly paralleled in Martin-Kilcher's scheme for the development of the Dressel 20 rim at Angst (Martin-Kilcher 1983): 4 are dated to the late 1stC AD-early 2ndC; 2 are dated to c.110-170AD; 1 is dated to the mid-2ndC. Three complete handles and four small parts were found, all unstamped, and three basal worts. Two bodysherds with slight handle stubs remaining had deliberately 'rounded' edges, suggesting that the neck of the vessel had been cut off for use as some form of container. A number of the sherds showed evidence of burning.

Gallic amphorae - The presence of a rim and handle belonging to the flat-bottomed amphora form Pelichet 47/Gauloise 4, suggests that most of the plain body sherds here also belonged to this type. It was made predominantly in southern France, especially around the Rhone in Languedoc (Laubenheimer 1985; Peacock and Williams 1986, Class 27). This amphora type carried wine, and importation to Britain seems to have started after the Boudiccan revolt and lasted until at least the 3rd century. However, also in this little group are two rim sherds which look to be Gallic in fabric and which may possibly be variations on the Gauloise 7 type, another of the flat-bottomed southern French amphora forms (Laubenheimer 1985). The two rims from Sandy, both from different vessels and in a light red to orange-buff sandy fabric, have a flattish rim which has been slightly scalloped on the inner edge. Gauloise 7 is known to have been made at kilns at Aspiran, Velaux-Moulin Du Pont and Frejas, and seems to have been in production during the 1st and 2nd centuries. Another possible Gauloise 7 vessel has been noted by Williams from Beddington, Carsholton, Surrey.

Peacock and Williams, Class 59 - A rim of a form only recently classified was recovered. In addition, a body sherd in what appears to be a similar fabric, was also found. The Sandy rim sherd is rounded with two grooves on the outer surface just below the rim, one deeper than the other, and is in a light buff, slightly micaceous fabric. Complete examples of this form show a long spindle-shaped body with a solid spike, a bead-like rim with one, sometimes two, grooves near the top and oval handles with a slight central groove. A southern Spanish origin was at one time proposed for this type (Sealey 1985, 167), but we now know that it was produced at Lyons in France during the 1st and early 2nd centuries, possibly imitating the Baetican amphorae Camulodunum 185A (Desbat 1987, fig. 2, nos 3 and 4). The nature of the contents are

somewhat uncertain, though an example from the Pan San wreck in the Thames estuary contained nearly 6000 olive stones, which suggests that either olives or *defrutum* may have been carried (Sealey 1985, 167).

1990

Dressel 20 - Only two amphora forms have been identified from the 1990 season, but they represent the overwhelming majority of the material, with the unclassified sherds amounting to less than 2.5% of the total. The picture is very similar to the amphora totals from the 1989 season, with the common globular-shaped southern Spanish olive-oil type Dressel 20 dominating the picture. Most of the Dressel 20 sherds occur in plain body sherds, but also included are five parts of separate rims, probably ranging in date from the end of the 1st century to the second half of the 2nd century. One of the handles present, almost complete, appears to be a 2nd-century form. Of interest among the Dressel 20 body sherds is a small, deliberately cut 'cube' which may have been used as a tessera or perhaps a gaming piece. Two of the larger sherds display a deliberately 'rounded' edge, suggesting that the neck of the vessel had been cut off to allow it to be used as a wide-mouthed container, possibly for a burial. On the outer surface of one sherd, which comes from the upper central part of the vessel, is a large inscribed 'R' which has been made in the plastic clay before firing. The letter is situated near to a broken edge, so it is difficult to say if it is solitary or part of the end of a word.

Gallic amphorae - Smaller amounts of southern Gaulish sherds were recovered, including a number of bases, which in all probability, belong to the flat-bottomed wine amphora form Pelichet 47/Gauloise 4. It is difficult to date this material at all closely, but it must lie somewhere between the second half of the 1st century and the late 3rd to early 4th centuries.

1991

Dressel 20 - Just over 250 sherds of amphorae were examined from the 1991 season. No different types from those already noted in the previous seasons were found to be present. With the exception of three sherds, all the remaining material belonged to the commonly found, globular-shaped, Dressel 20 Baetican olive-oil amphora form. The five different fragments of Dressel 20 rim that were recovered fall within the period of the late 1st century to just after the mid 2nd century. A stamped handle is likely to be dated to the second half of the 1st century.

Gallic amphorae - The three remaining sherds, comprising one rim and two body sherds, all belong to the southern French flat-bottomed wine amphora form Gauloise 4. In England, the importation of this form is probably dated to the later part of the 1st century to the late 3rd to early 4th centuries, with numbers reaching a peak during the 2nd century.

Building material

Twelve fabric types were recorded for the brick/tile assemblage:

- 1 sandy
- 2 sandy (+ inclusions)
- 3 sand/calcareous inclusions
- 4 grey cored
- 5 shelly
- 6 gault
- 7 grog/sand
- 8 sand/organic
- 9 limestone
- 10 grog/calcareous inclusions
- 11 grog
- 12 grog/shell

Over 95% of the total is made up of the following five fabric types:

- *Fabric 1 sandy* - comprises 1403 fragments, 42.6% of the total brick/tile assemblage. All forms are represented in this fabric.
- *Fabric 2 sandy+inclusions* - Variant of fabric 1, comprises 155 fragments, 4.7% of the total brick/tile assemblage. All forms, with the exception of ridge tiles, are represented, although bricks are the predominant form.
- *Fabric 3 sand/calcareous inclusions* - comprises 389 fragments, 11.8% of the total brick/tile assemblage. All forms, with the exception of ridge tiles are represented in this fabric.
- *Fabric 4 grey cored* - comprises 183 fragments, 5.55% of the total brick/tile assemblage. Box-flue, brick, *imbrex*, *tegula* and flat forms are present.
- *Fabric 5 shelly* - comprises 1016 fragments, representing 30.88% of the total brick/tile assemblage. All forms, with the exception of ridge tiles, are present. It seems likely that the bulk of the shelly tile found at Sandy originated from Harrold, some 15 miles to the north-west of the town. The Harrold kilns are known to have been producing both pottery and tile in this fabric from the late 2nd century to the mid-4th century (Brown 1994).

Fabric	1	2	3	4	5
<i>Tegula</i>	381	16	70	51	378
<i>Imbrex</i>	180	5	42	25	240
Ridge?	7	0	5	0	15
Box-flue	235	3	68	3	124
Brick	443	126	174	99	99
UNID	99	2	19	0	16
flat	55	3	11	5	143
Mod?	2	0	0	0	0

Table 4.12 Tile/brick forms in the principal fabric types

Box-Flue - 445 fragments of box-flue tile, 13.5% of the brick/tile assemblage, were recovered. All Roman phases subsequent to phase 2 contain box-flue fragments and the figure appears to rise with each successive provisional phase. No complete examples of box-flue tile were recovered from the excavations.

The presence of combing or roller-stamping was the main identifying factor for this class of material. Where sufficiently complete, the number of teeth on the comb was noted to determine whether the patterns of combing correspond to individual tilers or tile workshops (Brodrigg 1987). It may be possible to confirm this at Sandy due to the large quantity of material from one kiln site, Harrold.

Two examples of roller-stamped box-flue tiles were examined by Ian Betts who reports that the first conforms to die pattern 32 (Johnston and Williams 1979, 388, Fig. 21.3), and is the second known fragment from Sandy. The second appears to be from a previously unknown die form and will be added to the forthcoming roller-stamp corpus.

Tegula - 905 sherds of *tegula* form, representing 27.5% of the combined brick/tile assemblage were recovered. All phases subsequent to phase 2 contain *tegula* fragments and the figure rises with each successive phase prior to phases 5 and 6. No complete *tegulae* were recovered.

Marks recorded on the exterior of the tile are mainly the result of the manufacturing process and include knife trimming marks, finger imprints and impressions of the slatted drying racks. The upper surface of all *tegulae* is smoothed and in some instances a channel, probably made with the thumb, runs parallel with the flange; both these devices would assist in the run-off of rainwater. A single tile fragment bears the paw-print of a dog, presumably left by the animal while the tile was drying.

Imbrex - 512 sherds of *imbrex* form, 15.5% of the brick and tile assemblage, were recovered. Fragments appear in all phases, with the respective figure per phase rising successively. The largest quantity of this material, as with all the ceramic building material, derives from the latest phases. No complete examples of *imbrices* were recovered.

Most marks which appear on the surface of *imbrex* tiles derive from the manufacturing process. Fewer instances were noted of knife trimming and hand/finger marks than was the case with the *tegulae*. In common with the *tegulae*, however, the upper surface of the tile is smoothed and the lower surface, where it comes into contact with the mould is left rough. A single sherd of *imbrex* bore stab marks, possibly to quicken drying in advance of firing.

Brick/Flat tile - 1025 fragments of brick and a further 223 sherds with no diagnostic features but whose thickness suggest they might be bricks, and classified provisionally as flat tile, were recovered from Sandy. The combined total represents 37.9% of the entire brick/tile assemblage. Brick is found in all phases after and including phase 2, with this figure rising cumulatively until phase 6. Dimensions, other than thickness

were not recorded and any attempt to match the bricks to known Roman brick types may only be attempted at the analysis stage. A provisional survey of brick thickness does however suggest some clustering with groups measuring between 23-24mm, 54-57mm and 66-69mm.

Marks noted on the surface of bricks and flat tiles include knife or possibly wire trimming marks and finger impressions. A scratched cross recorded on one brick fragment is the only possible signature observed on any of the ceramic building material. In common with the treatment of tile, the upper surface was smoothed, with curving wipe-marks observable in some cases. Impressions of grass, straw or hay, and in one case, chaff, suggest the presence of organic packing material used at the drying out stage, or that some bricks were laid on the ground to dry out. Stabbing, from the underside of bricks, and penetrating completely or to within a few millimetres of the upper surface, is recorded on 29 fragments. This device is almost exclusively found on shelly bricks.

Ridge Tiles - 27 sherds of ridge tile, amounting to 0.8% of the total brick and tile assemblage were recovered. Small quantities of ridge tile appear in all phases, starting with phase 3. The largest quantity of this material derives from phase 7.

Ridge tiles are a rarity in the Roman period but they are known locally from the Harrold Lodge kiln site (Brown 1994). They appear at Sandy most commonly in shelly fabric 5 and an origin at Harrold seems likely. A single ridge tile sherd is perforated.

Evidence of use

The adhesion of mortar and *opus signinum* to surfaces of brick and box flue tile provides the most abundant evidence to demonstrate the use of this material. Traces of cement do not occur as frequently on roof tiles. However six instances are recorded where mortar patches survive on *tegulae* in the area of the flanges or cut-away, indicating that gravity was not solely relied upon to keep the roof in place. Mortar patches appear also on *imbrices*, most commonly on the underside, to secure overlapping tiles or possibly where used as ridge tiles, and secured in their precarious position at the apex of the roof.

Two nail or peg holes are recorded on *tegulae* sherds, one of which was drilled post firing. At Beauport Park (Brodrigg 1979, 215), 25% of the recovered *tegulae* displayed nail holes. In this instance they had been placed on the lowest part of the roof, for additional security; the tiles further back depended on their weight to stop them falling.

Sooting appears on all classes of ceramic building material, but is most common on flue tiles, where 24 instances are recorded. Here the residues were most frequently observed on the internal surfaces and almost certainly relate to their use. Sooting is next most common on brick and *tegulae*, of which 15 instances in both cases are recorded. The use and re-use of both classes of material in hearths, ovens and as supports in under-floor heating systems is well attested and this may account for much of the sooting (Brodrigg 1987). Eight instances are recorded of sooting on *imbrex* fragments and in two of these the residue was observable only on the inner curve. The

use of mortar bonded *imbrices* as hypocaust *pilae* is known from Rockbourne (Morley Hewitt, 1968, 22) and even as flue tiles at Verulamium (Wheeler and Wheeler 1936, 26). The latter case would explain the internal sooting.

Sooty residues over existing breaks on all materials hint also at accidental contact with fire, this could occur equally prior to or after the abandonment of the site.

Daub/fired clay

Daub/fired clay appears in four fabrics: sand, grog, sand and grog, sand and organic, the largest proportion of which is of sandy type.

The surface features recorded for this class of material reflects the variety of uses it could be put. Much of the material probably derives from structures; wattle impressions are recorded in 43 instances and finger impressions, resulting from hand-application on a further 15. Some corner pieces were found. Surfaces are generally smoothed and in one case it would seem that a wooden tool was used to flatten the face. Traces of plaster and white-wash found on a small number of fragments suggest some attempt at surface refinement or even decoration, and may be an indicator of function or status.

Contact with heat is evident on some fragments; this could be as the result of association with industrial activities such as metalworking or domestic practices such as the use of bread ovens or drying ovens. Accidental contact with fire may be the cause of slight surface sooting which is recorded on 7 sherds.

4.1.4 Condition

The condition of the pottery is generally good. It was possible to distinguish between post-depositional abrasion and wear caused through use. The fabrics were generally medium to hard fired, although some softer fired examples occurred, particularly among the Iron Age material. An assessment of the level of breakage, abrasion and disturbance was made of each context, and this is listed in table 4.13. About half of the contexts were recorded as fair or good.

Condition	Number of contexts	% contexts with pottery
Poor	553	51
Fair	432	40
Good	96	9
TOTAL	1081	100

Table 4.13 Assessment of the condition of contexts containing pottery

A number of complete vessels survived, some but by no means all, as part of burials. There was no excessive leaching out of the calcareous inclusions. No further treatment is necessary.

The condition of the ceramic building material is generally good. The fabrics were generally medium to hard fired, although some daub and fired clay is fragile.

4.1.5 Data collection method statement

Pottery

The pottery was spot dated during the excavations, on a season by season basis by C.Going. A date was allocated to each context; a catalogue of fabric types was made at the assessment stage. Quantification was not identified as a priority in the research design; an estimate of assemblage size, however, has been made. The presence of forms was noted, as were diagnostic decoration, stamps, evidence of function or secondary use, repairs, and level of breakage and abrasion. This was entered onto a computer database, using Access, to allow ease of data manipulation.

The samian and amphora sherds were sent out for cataloguing at the end of every season, and an assessment of this pottery is incorporated into the above assessment. A small number of samian and amphora sherds were recovered during the assessment of the non-specialist pottery. These will be added to the specialist catalogues at the analysis stage.

Building material

The building material was recorded by context. A fabric type series was defined and the material recorded by fabric and sherd count. Any abrasion or sooting present was noted; in addition, tile form (*tegula, imbrex* etc.), thickness, and presence of mortar were recorded for the tile; thickness was recorded for the brick/tile and presence of surfaces and impressions recorded for the daub/fired clay. This was entered onto a computer database, using Access, to allow ease of data manipulation

4.2 STATEMENT OF POTENTIAL

Introduction

The study of Romano-British ceramic types is generally well advanced and many, particularly the finewares, are well-known. This part of Bedfordshire is an area where late Iron Age and Romano-British occupation is known from work carried out since before the 19th century; little work, however, has been carried out in modern times. The ceramic pattern of this area, and how it fits into the national and regional trends, is poorly understood. The study of the ceramics from Sandy will help to fill these lacunae.

Research aim 1: To determine whether the settlement had an official function, such as a *mansio*.

Pottery

The structural evidence indicates that the settlement did not have a *mansio* within the area of excavation, although one may be situated slightly to the south. The ceramics found on the site of a *mansio* would not differ greatly from other domestic assemblages. Vessels for cooking, storage and food consumption would all have been necessary, and these are all present at Sandy. A higher level than normal of imported wares might be expected, as an indicator of status, but there is no indication of unusually high levels of imports reaching the site.

The pottery, therefore, has no potential to determine the presence of a *mansio*.

Building material

The ceramic building material has some potential to determine the presence of buildings. The distribution of roofing material, brick and box flue tiles, in particular, in conjunction with the structural data, has potential to establish the presence of substantial buildings, on the site and in the vicinity. The provisional phasing indicates the bulk of the building material occurs in the later phases. With a refinement of the phasing, the relationship of the distribution of the building material with the masonry structure found in trenches to the south of the site may be established. Its identification as a *mansio*, however, does not lie with the ceramics.

The building material, therefore, has low potential to determine the presence of a *mansio*.

Research aim 2: To determine any degree of continuity of settlement from the Iron Age to the Roman period and from the Roman to the Saxon periods

Pottery

There is no pottery present prior to the late Iron Age, most of which is likely to date to the 1st century BC-1st century AD. A small number of contexts, 43, have been allocated to the late Iron Age confirming some continuity of activity at Sandy from the late Iron Age into the Roman period only.

Despite the finds of Saxon cremation urns in Sandy in the 19th century (Kennet 1970), there is nothing in the ceramics found on this site to suggest Saxon or later activity in this area. There is an absence of medieval pottery, even abraded sherds that might have indicated manuring for cultivation, and only two contexts produced post-medieval ceramics. There is thus an hiatus in settlement activity in the post-Roman period when the focus of settlement may have shifted.

The pottery, therefore, has good potential to address this aim, particularly for the late Iron Age.

Building material

The period of use of ceramic building material was primarily in the Roman period, although daub/fired clay was in use in the Iron Age. However, the lack of any chronologically diagnostic characteristics in either the forms or the fabric types makes this category of minimal use in determining the continuity of settlement from the Iron Age, through the Roman and into the Saxon periods.

The building material, therefore, has no potential to address this aim.

Research aim 3: To determine any factors affecting expansion and contraction of the settlement.

Pottery

The sensitivity of pottery to chronological changes makes it eminently suitable for determining the expansion and contraction of the settlement. The spatial distribution of chronologically diagnostic fabric and form types will show at which times different parts of the site were in use. The assessment suggests already that the number of contexts allocated to each phase can be refined by the application of ceramic data. The determination of the factors that caused the expansion/contraction, however, can only be determined by full integration of artefactual and stratigraphic data along with evidence of activity in the hinterland of Sandy.

The pottery, therefore, has good potential to determine whether expansion or contraction took place on the site but limited potential to define the factors which caused it.

Building material

Although the ceramic building material lacks the chronological sensitivity of the pottery, the form of the *tegula* cut outs may be chronologically diagnostic. The distribution of this material will serve to confirm where activity was taking place at a given moment in the phasing.

The building material has only low potential to address this aim.

Research aim 4: To develop the Bedfordshire Roman pottery database.

Pottery

Fulford and Huddleston, in their survey for English Heritage, of Romano-British pottery studies (1991, 46), clearly laid out the importance of national and local type series. It is also stated (1991, 22) that local wares are inadequately researched and understood, and that local or regional type series are the instrument for accomplishing this. In Bedfordshire, a type series for medieval and post-medieval pottery was established in 1976, and has been built on since then, increasing our knowledge of the distribution of post-Roman pottery throughout the county. A Romano-British pottery section to this county type series is in the process of being built up.

In 1987, Sandy was one of the largest excavations of a Romano-British site to be undertaken in the county using modern methods. Prior to this date, type series for Romano-British pottery based on Odell and Newnham Marina, were established, (Dix and Aird in prep.). Since 1987, a number of other sites of this date have been excavated, and their analyses has led to the establishment of a type series compatible with the existing system for post-Roman pottery. The pottery from Sandy is still the largest stratified assemblage in the county and its date range runs throughout the Roman period. As such it will be incorporated into this system, to form the core of the county type series of Romano-British pottery.

Another priority pinpointed by Fulford and Huddleston is the keying in of the Milton Keynes type series into those of its near neighbours (1991, 34). Since the demise of the Milton Keynes Unit, a copy of the type series has been lodged with the Bedfordshire County Archaeology Service, making integration, and therefore easy accessibility, possible.

The pottery, therefore, has high potential to address this aim, due to the size and date range of the material.

Building material

Although primarily a vehicle for the ordering of pottery, the type series in Bedfordshire includes ceramic building material. The fabrics and forms form the basis of a database already established for the smaller Roman sites in the county. The larger quantity of ceramic building material from Sandy will complement and expand this database, in particular the tile from the Harrold kilns. This will help to determine the regional and national distribution of particular types, and to define the relationship with the pottery industry.

The building material from Sandy has no potential to add to the pottery type series; it does, however, have high potential to complement a ceramic-wide database for the county and the region.

Research aim 5: To determine the regional role of Roman Sandy through trade and patterns of rural activity.

Pottery

The assessment has suggested the essentially local and regional nature of the pottery found at Sandy, with only a minor proportion of continental imports. An examination of the sources of the pottery, including the samian and the amphorae, will go some way to determine the trade patterns that affected Sandy, particularly when considered with the other artefacts and in conjunction with the the road and river systems of transport. Comparison with other sites in the region, particularly those that have been excavated recently, such as Warren Villas, will place Sandy in its regional context and go some way to examining the relationship of Sandy with its hinterland (Fulford 1982).

The excavation of an early Roman pottery kiln at Warren Villas and the recovery of a large quantity of pottery from both the kiln and the settlement area provides the basis for assessing the relationship between Sandy and its nearby rural neighbour.

The pottery, therefore, has good potential to address this objective through the determination of possible sources.

Building material

The variation in brick and tile fabric type is not great, suggesting that a limited number of sources was used. As with the pottery, it can be possible to determine these sources. It has already been suggested that the shelly brick and tile come from Harrold. Comparisons with the kiln material will confirm this and help to expand on the distribution of the kiln products, not only the pottery, which was found at Sandy in large quantities, but also the building material.

The building material, therefore, has moderate potential to address this aim through the determination of sources, despite the limited number of different fabric types.

Research aim 6: To provide an explanation for the high artefact recovery level, in particular the coinage, and to explore whether this reflects the situation in East Anglia.

Pottery

The high artefact recovery level does not appear to be reflected in the ceramics. Although a large quantity of pottery was recovered, it is essentially of a local and regional nature. The variety of forms and the presence of some extra-regional types, if not in large quantities, does, however, suggest that Sandy was a settlement of at least some importance. The ceramics will help to provide the chronological background against which any fluctuations in the high artefact recovery level might be seen.

The pottery has no potential to provide an explanation for the high artefact recovery level.

Building material

The high artefact recovery level does not appear to be reflected in the building material assemblage. Although quantities are large, a limited number of forms and fabrics was recovered, and these came primarily from dumps. These do, however, indicate a substantial building in the vicinity, and, together with the structural and pottery data, will provide the background for the artefacts.

The building material, therefore, has no potential to provide an explanation for the high artefact recovery level.

Research aim 7: To explore further the unusual burial customs and confirmation of their date.

Pottery

A number of inhumations were found with complete pottery vessels. These vessels will directly help in dating the burials, and, together with the other features of these burials, will help to place them in the context of burial customs in Roman Britain.

The pottery has good potential to help in dating these burials.

Building material

No building material was found in association with the burials. Consequently, the building material has no potential to further our knowledge of customs or confirm their date.

Research aim 8: To provide a coherent explanation of the high coin loss on site, and determine the possibility of a market site.

Pottery

This research aim is linked to Research Aims 5 and 6. The pottery will provide a comparative chronological context for the high coin loss.

The identification of pottery sources, whether local, regional or continental, will determine the links that Sandy had with other areas of Roman Britain. Although the pottery will not directly determine the presence of a market on the site, when considered with the other archaeological evidence and compared with the ceramic pattern on other sites in the region, it might help to confirm or deny this possibility.

The pottery has low potential to address the question of the high coin loss, and moderate potential for the determination of a possible market site, if only by the provision of a chronological context.

Building material

The identification of the brick and tile sources, even if limited, will support the same data from the pottery and help to determine Sandy's outside contacts. It will not, however, have a bearing upon the high coin loss, nor will it help in determining the presence of a market.

The building material, therefore, has no potential to address this question.

Research Aim 9: To clarify the spatial and temporal relationships of craft activity against the background of a changing townscape, including the details of the crafts and the origin of raw materials.

Pottery

Spatial distributions of diagnostic pottery can indicate fluctuations in activity through time, thereby providing a chronological background against which craft activities can be determined. The pottery itself cannot define the nature of the crafts being undertaken on the site, but the chronological context for this activity as defined by the phasing on the site, can be confirmed by the pottery.

The pottery, therefore, has good potential to clarifying the temporal background of the changing townscape.

Building material

The spatial distribution of the brick and tile, as well as the distribution of the daub/fired clay, will determine the nature of buildings and structures on or near the site. This will form part of the background of the changing townscape, against which the craft activity may be examined. The building material was found in largest quantities in the dumps and cannot, of itself, determine the nature of the crafts being carried out.

The building material, therefore, has no potential to clarify the details of the crafts and the origin of raw materials, although it has some potential, even if only low, to define the presence and nature of any related structures.

Research Aim 10: To examine the floral and faunal remains, largely unstudied for this period in Bedfordshire. An environmental profile of the town can be compared with the rural situation being examined at Warren Villas quarry, only 1km south.

Neither the pottery nor the building material have any potential to address this research aim.

Research Aim 11: To address the wider issues of landscape development in the Ivel Valley and to compare the site of Warren Villas in relation to the roadside settlement of Sandy.

Pottery

This Research Aim is linked to Research Aims 2 and 5, in that a comparison with the rural settlement at Warren Villas might suggest a direct relationship between the two settlements. The pottery will help to place Sandy in its spatial and temporal framework through the spatial distribution of chronologically diagnostic pottery on sites in the Ivel Valley.

The pottery, has good potential to address this question, particularly in the provision of a chronological background to the development of the landscape.

Building material

A direct comparison of the nature of the structures, at or in the vicinity of, the site at Sandy with those at Warren Villas will help to determine the relationship of the two sites, particularly in terms of status and possible function. Most, but by no means all, of the brick and tile was derived from dumping layers, making the relationship with the structural evidence from the site only tentative.

The building material, therefore, has only moderate potential to address this aim.

Research Aim 12: To address wider issues of landscape development through the excavations at Sandy and those at Warren Villas, Broom and Biggleswade.

This research aim is directly linked to Research Aim 11.

Pottery

The pottery has good potential to provide a chronological framework in which to address this question.

Building material

The building material has only moderate potential to address this aim.

4.3 STORAGE AND CURATION

Potential for long term storage for both the pottery and the building material is good; no further treatment is necessary. All the ceramic artefacts are stored by context in plastic bags within acid-free cardboard boxes. With the exception of topsoil and other unstratified material, all the ceramics should be kept, in accordance with the guidelines of the Society of Museum Archaeologists (1993). Suitable arrangements for transfer and accessioning to Bedford Museum, on completion of publication, have been made.

5 REGISTERED AND NON-CERAMIC BULK ARTEFACTS

5.1 FACTUAL DATA

5.1.1 Quantity

The four seasons of excavation at Sandy Cemetery (including the 1987 evaluation) produced the following quantities of registered and non-ceramic bulk artefacts;

Type of material	Quantity
Registered Artefacts	3710
Nails	2469/c. 16 kg
Plaster	c 17kg
Metalworking Debris	c 105kg
Flint	27 pieces

Table 5.1: Quantities of material recovered

5.1.2 Provenance

The bulk of the assemblage spans the late first century BC to the early fifth century AD, with a small assemblage of flint (27 pieces) dating to the Mesolithic/early Neolithic (c. 4 pieces) and late Neolithic/Bronze Age (c. 23 pieces). Minor amounts of post-medieval to modern artefacts, a preliminary scan indicates in the region of c. 25 objects, were recovered from the upper-most layers of the overburden.

Quantities of registered and non-ceramic bulk artefacts from the 1989 - 1991 seasons by feature type are presented below. Contexts relating to the 1987 evaluation were not phased or defined for the purposes of this assessment.

Feature Type	Quantity of Registered Artefacts	Nails	Slag (g)	Plaster (g)	Flint
Robber Trench/Cut	1	1			
Ditch, Gully or Drain	417	395	19239g	5941g	2
External Cultivation	1078	316	6922g	592g	3
External Dump	66	18	9632g		2
External Surface	56	88	865g		2
Grave	41	32	91g		
Hearth	35	23	1365g		
Internal Surface	11	3	83g		
Layer	1404	1033	53623g	5949g	12
Masonry Wall	9	4	140g		
Natural Stratum	1				1
Pit (unspecified)	285	277	8270g	2951g	2
Rubbish Pit	5	0	247g		
Structural Cut (fill of)	116	157	3369g	155g	1
Undefined Feature (contexts not allocated to Type as vet)	12	6	551g		
Unstratified (metal detected from topsoil spoil)	88				
Unphased/undefined [1987]	85	116	1261g	1514g	2
TOTAL	3710	2469	105658g	17102g	27

Table 5.2: Artefacts recovered by Context type

Seven phases of activity have been provisionally identified for the seasons 1989-91. Quantities of registered and non-ceramic bulk artefacts by phase are presented in Table 5.3.

Phase	Registered Artefacts	Nails	Plaster	Slag	Flint
1	4	1			
2	35	4		90g	
3	260	76	101g	26944	7
4	640	484	1569g	38046g	10
5	248	390	1633g	9266g	3
6	144	114	233g	2858g	
7	2189	1277	11944g	27147g	3
unphased [1987]	85	116	1514g	1261g	2
unphased [1989-1991]	105	7	128g	46g	2
Total	3710	2469	17102g	105658g	27

Table 5.3: Quantities of registered and non-ceramic bulk artefacts by phase

The occurrence of simple name classes by functional category and phase are presented in Tables 5.13 to 5.29. Two classes of artefact, coins and brooches, were chosen to illustrate the degree of intrusion/residuality present. These classes were selected due to both the quantities present and their more closely datable nature.

The coinage evidence is presented in Table 5.4 by phase and issue period. Of the 1214 coins of Iron Age and Roman date, 1123 have been provisionally phased. Of these, 1039 (92.5%) are precisely enough dated to be assigned a single issue period; the remaining 84 coins, although datable, span more than one issue period. In addition to the Iron Age and Roman assemblage, two coins of seventeenth century date were recovered from Phase 7 deposits.

The brooch evidence is presented in Table 5.5 by phase and brooch form. Although brooch forms have accepted start dates, the dating is not as precise as that for coinage. A degree of caution, with regards to residuality, must be employed as some forms, for example Nauheim Derivatives, Colchester, Hod Hill, and Aucissa, have a long life making it problematical to assess relative degrees of residuality (Olivier 1988, 51). However the occurrence of for example established first century types in contexts dated to the fourth century can be taken to indicate residuality.

Phase/ Issue Period	1	2	3	4	5	6	7	Total
I to AD 43	2	18	9	4IA, IR			3	37
IIa 43-54							1	1
IIb 54-69			3			2	3	8
III 69-96			1	3		1	11	16
IV 96-117				1			6	7
V 117-38				2		1	7	10
VI 138-61				3	2		6	11
VIIa 161-80					1		6	7
VIIb 180-93								0
VIII 193-222							8	8
IXa 222-38						1	2	3
IXb 238-59				1	1	1	2	5
X 259-75			2	12	3	8	89	114
XI 275-94			2	13	2	6	160	183
XII 294-317							1	1
XIIIa 317-30					3		3	6
XIIIb 330-48				4	9	15	138	166
XIV 348-64				1	9	5	69	84
XVa 364-78			1	1	12	5	123	142
XVb 378-88							15	15
XVI 388-402				14	3	4	194	215
TOTAL	2	18	18	60	45	49	847	1039

Table 5.4: Coinage by Phase and Issue Period

Phase/ Brooch Type	1	2	3	4	5	6	7	Unph	Total
Langton Down				1				1	2
Colchester	1	1	5	5			4		16
Nauheim Derivative			1	5	1		3	1	11
Penannular D					1		1		2
Penannular C				1					1
Penannular ?					1				1
Thistle							1		1
Hod Hill			3	3	3		4		13
Aucissa			1						1
Colchester Derivative			5	2	2	1	2		12
Rosette			1						1
Enamelled Plate			1				3	1	5
Alcester						1	1		2
Unidentified Brooch **					1		1		2
Catchplate only			2	1			1		4
Hinged Pin			4	2		1		1	8
Spring Pin		1	6				3	1	10
Pin fragment			1				5		6
Total	1	1	30	20	9	3	29	6	99

** one brooch stolen prior to identification; one iron brooch requiring identification

Key:

Form in use prior to Conquest	Form in use from around the time of the Conquest	Form in use from the 7th Century	Form in use from the 8th Century
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Table 5.5: Brooch Types by Phase

Little sign of intrusion is evident amongst the coins and brooches in Phases 1 and 2. Intrusion is however evident in Phase 3 by the presence of a late-fourth century coin. Phase 4 appears to have a degree of intrusion, notably 14 late-fourth century coins and a late-medieval lace tag. Minor quantities, c. 25 objects, of modern date were recovered from the uppermost layers of the overburden, accounting for 1.1% of the Phase 7 registered artefact assemblage. However, overall the level of intrusion in Phase 7 deposits is low. Further refinement of the provisional phasing will attempt to resolve any discrepancies.

Residuality is clearly evident in both the coin and brooch assemblages in Phases 3 to 7. Likewise the flint assemblage in its entirety is residual, having been recovered from deposits of Phase 3 onwards (cf Table 5.28). Phase 7 in particular shows a high level of residuality across all classes of artefact.

5.1.3 Range and variety

The 1987 evaluation revealed that the site was covered with an overburden of c. 1.5 m depth of uniform colour/composition. There were no visible soil changes or features in this overburden, although it was productive in terms of artefacts. Due to time and financial constraints, it was decided in succeeding seasons to remove this overburden by machine. The resulting spoil was metal detected to ensure as much artefact retrieval as possible given the constraints. All features were fully excavated by hand. A metal detector was used both on site and on the spoil, however no dry or wet sieving was carried out. Sorting of soil samples accounted for 254 registered artefacts (6.8% of the total assemblage).

The use of a metal detector will have ensured, to a high degree, retrieval of the full range of metalwork, although it may have biased the overall composition of the artefact assemblage in favour of metalwork (see Table 5.6). However, it should be noted that of the relatively high percentage of copper alloy recovered (58.5%), 55% was coinage. J Davies (pers comm) noted the possibility of two dispersed coin hoards which suggests that this bias in favour of copper alloy was not the result of metal detecting.

Certain deposits had a high ash content which appeared to have accelerated the rate of decay/corrosion on the metalwork recovered. This may have biased the assemblage composition from these deposits, but the extent of bias is not measurable.

MATERIAL TYPE	QUANTITY	PERCENTAGE
AG	13 (10 coins)	0.35
AN (antler)	2	0.05
AU	1 (coin)	0.03
BO (bone)	133	3.58
CA	2169 (1202 coins)	58.50
CERA (ceramic)	49	1.30
FE	556	15.00
GL (glass)	549	14.80
IVORY	1	0.03
PBA	103	2.80
PLASTER/CHALK?	1	0.03
RCYST (rock crystal)	1	0.03
SL (shale)	9	0.20
STO (stone)	121	3.26
WO (wood)	2	0.05
TOTAL	3710	100.00

Table 5.6: Quantities of Registered Artefact by Material Type

All the registered and bulk non-ceramic artefacts have been assigned to 146 'simple name' or class groups (Table 5.12). These in turn have been allocated to functional categories and these categories, their respective artefacts and quantities, are set out in Table 5.13. The occurrence of artefacts within each functional category is presented by phase in Tables 5.14 to 5.29.

5.1.4 Condition and past conservation work (AT)

This report summarises the conservation work that has already been carried out on material from the site.

The quantities and range of materials of the registered artefacts recovered from the excavations in 1987 (evaluation) and 1989-1991 are presented in Table 5.6.

Of the finds recovered during the 1987 evaluation work, 12 copper alloy finds and the one ivory find were conserved by Karen Webster, then the English Heritage Contract Conservator for S.E. England based at the Kent County Museum Service (KCMS), West Malling Air Station, Kent. Two reports were written detailing the treatments used, and these form part of the site archive (Webster 1988a and b).

From the 1989-1991 excavations the following finds, selected by the BCCAS Artefacts Manager, were x-radiographed and/or conserved by the author, then the English Heritage Contract Conservator at KCMS:

Material	Quantity
Conserved	
Copper alloy	243
Lead/lead alloy	2
Pewter	1
Silver	2
Coins	54
Glass	1
Shale	7
X-radiographed only	
Copper alloy	21
Iron	541
TOTAL	872

Table 5.7: Quantities of material conserved

Three reports were written giving details of the work carried out and of information retrieved during the conservation process (KCMS Bedford Report Nos: 5, 9 and 12) and these form part of the site archive.

The finds which underwent investigative conservation were packaged following examination and/or treatment in a way designed to ensure, as far as is possible, their long-term survival.

Neither the remaining 2825 registered finds, nor the bulk finds, have so far been examined by the Conservator, although they are believed to be in a stable condition, having been packaged appropriately to the needs of each material type by the BCAS Artefacts Manager.

5.1.5 Means of collecting data

Sandy was excavated during the lifetime of MAP 1. In order to minimise foreseen delays in the programme of identification of registered artefact groups allocated to external specialists it was decided, with EH consent, to send each season's assemblage to the relevant specialist for interim reporting. The exception to this was the glass assemblage which, due to the commitments of the Romano-British Glass Project, could not be scheduled until the final season's conclusion. The remaining registered, and the bulk non-ceramic, artefacts were to be identified by in-house artefacts staff following the conclusion of the 1991 season, as funding and time constraints did not allow this work to be carried out season-by-season. The advent of MAP 2 in 1991 gave the opportunity for the whole assemblage to be recorded to a common minimum level appropriate for assessment; certain artefact groups catalogued prior to this date however were recorded to a higher level of detail. The specialists employed, and their areas of expertise, are listed below;

Specialist
G Appleton
J Bayley

Area of expertise
Stone relief
Crucibles, moulds and non-ferrous metalworking debris

H Cool
J Davies
C Haselgrove
M Henig
G Lloyd-Morgan
J Price (and S Cottam)
D Starley
A Tribe
K Webster
D Williams

Brooches
Roman coinage
Iron Age coinage
Ivory casket plaque
Mirrors
Romano-British Glass Project
Ferrous metalworking debris
Conservation (1989-91 seasons)
Conservation (1987 season)
Petrology

Each registered artefact has undergone basic cataloguing on record cards, consisting of 'simple name' identification (Table 5.12), context, material, scale record drawing and, where known, date. Full written descriptions for the brooches from the 1987 and 1989 seasons have been completed. Coin lists for all seasons, noting coin type, denomination, date, mint and reference has been completed. All the glass was visually examined, and the Roman and early Post-Roman glass catalogued and entered into the Romano-British Glass Project's database. The petrology and source, where known, of the stone artefacts have been identified. The stone relief [sf 3942] has received detailed cataloguing and is the subject of an article in *Britannia* (Appleton and Dawson 1995); this work was completed outside of this project's funding.

The information resulting from the above cataloguing of registered artefacts has been entered, in an abridged form, onto the Sandy Registered Artefacts database.

The bulk finds were listed and quantified (weight or count) and provisional identification carried out on;

- slag, ie ferrous/non-ferrous, smithing versus smelting;
- flint, date range determined by a combination of manufacturing methods (e.g. soft versus hard hammer, thickness of butt), flint quality and diagnostic tool types;
- plaster/mortar, fabric groups, surface treatment (e.g. painted, 'white-washed' or plain).

This information was entered onto a bulk non-ceramic artefacts database.

The artefact databases have been linked to the structural database enabling analysis of the artefacts by phase, context/feature, associational groups and class of object.

Approximately 50%, by weight, of the metalworking assemblage was visually examined by D Starley and grouped into ten categories. A selection of the crucibles, moulds and non-ferrous metalworking debris was examined by J Bayley. The assessment of the metalworking debris was carried out prior to phasing being available. The phasing information was however subsequently integrated with the assessment results.

Each specialist's assessment report is included in full in Appendix 1; the results of these reports have been drawn into the assessment of the whole registered and non-ceramic bulk artefact assemblage.

Each simple name or class of artefact has been allocated to one of sixteen functional categories (cf BAT; Tables 5.13 to 5.29) in order to facilitate an integrated assessment of the site's nature and development.

5.2 STATEMENT OF POTENTIAL

The progress report on the 1989 and 1990 seasons of excavation (BCAS 1991) summarised the original research objectives of the project (objectives 1 - 6) and identified a further six objectives (7 - 12). The objectives which can be addressed by the registered and non-ceramic bulk artefacts are individually dealt with below. The Conservation Statement of Potential is considered first as this work contributes to the majority of these objectives.

Conservation and the research value of the finds (A Tribe)

The academic objectives of the project as proposed in 1988/9 included several to which finds research work could potentially contribute:

- to determine whether the settlement had an official function, such as a *mansio*, and whether the high artefact recovery in the past might be related to this;
- to examine the degree of continuity of settlement from Iron Age to Roman to Saxon.

The main aim of the finds research work is therefore to confirm the identity, function and technology of the finds to help achieve these academic objectives.

Subsidiary objectives involving compositional analysis are also proposed. These are the analysis of three mirror fragments, to confirm their identity and to enable comparisons to be made with similar material elsewhere in the country, and the analysis of the copper alloy brooches, to be carried out as part of a research project being undertaken by Justine Bayley, English Heritage Ancient Monuments Laboratory, 23 Savile Row, London W1X 1AB.

As the Sandy Cemetery post-excavation project is only now being conducted under the management requirements of *MAP 2*, there is inevitably a small amount of assessment work that still needs to be carried out on the artefact element of the site archive that would normally have been completed by this stage. The following criteria were applied in determining the extent of this work:

- those finds that had not been previously examined by the Conservator must now be seen to enable their condition and stability to be checked;
- the iron items that were not x-radiographed before should now be x-radiographed.

In order to determine which finds should undergo *active* conservation, the following criteria were applied:

- stabilisation treatment should only be carried out when the long-term preservation of an item cannot be satisfactorily or safely achieved through appropriate packaging and storage;
- cleaning and investigative conservation should only be carried out when at least one of these criteria can be met:
 - An item is from a relevant context;
 - An acceptable catalogue entry cannot be made without such intervention;

- The item is to be illustrated in the final report;
- An item may yield information that would contribute towards meeting the finds research objectives.

With reference to the above criteria, 2825 registered finds have been selected for examination by the Conservator to enable their condition and stability to be checked and 15 registered iron finds have been selected to undergo x-radiography. It is possible that some finds will be found to require stabilisation treatment, estimated at 1% of the total, i.e. 28 finds.

A total of 2469 iron nails (bulk finds) were recovered from the site, none of which have been examined by the Conservator. It is proposed that 5% of these (c.124) will be x-radiographed as a representative sample, selected across all phases.

Of the finds that have already been seen by the Conservator, none have been selected to undergo stabilisation treatments as they can be satisfactorily preserved through appropriate packaging and storage.

Through liaison with the BCAS Artefacts Manager and with reference to the criteria outlined above, three copper alloy mirror fragments, fifty-two copper alloy brooches, two iron brooches, one iron strip/brooch and one pewter bowl have been selected to undergo further conservation work.

Objective 1 To determine if the settlement had an official function, such as *mansio*

Without the complementary structural evidence, the artefactual assemblage has low potential to address this aim. This is due to the fact that there are few artefacts which unequivocally indicate a *mansio* - only epigraphic evidence would determine this role.

Objective 2 To determine if there was continuity of settlement from the Iron Age to Roman and Roman to Saxon periods

Johnston (1974) summarised the evidence for Iron Age activity at or near the town of Sandy citing three 'hillforts', one of which has yielded early Iron Age pottery, a ditch and hearth containing 'Belgic' pottery at the Bungalow site (some 500m south of the 1987-91 excavations) and a small cremation cemetery, containing 'Belgic' pottery, near the modern cemetery. On this basis Burnham (1986) in his paper on the origins of Romano-British small towns, assigned Sandy to his category 1B - sites with probable Iron Age predecessors.

The excavation of a drip gully during the 1987 season, the fills of which contained an Iron Age coin (BC20-AD10) and pottery dating to the first half of the first century AD, provide definitive evidence of settlement at Sandy in the period immediately preceding the Roman conquest. The extent and role of this settlement was not fully revealed by the excavations, but the quantity of coinage, and the site's proximity to the 'Belgic' cemetery cited by Johnston, are suggestive of a substantial settlement.

Continuity between this late pre-Roman Iron Age settlement and the subsequent Roman one is suggested from an examination of categories of typologically datable artefacts which occur in both periods. Although the range of categories is limited - querns, coins and brooches - the quantities within these categories are sizeable (cf Table 5.12) and therefore the potential is good for determining continuity of settlement.

In the late pre-Roman Iron Age in Britain beehive rotary querns were in use. These were rapidly superseded by the flat rotary quern, frequently of imported Mayen lava, early in the Roman period. Following the conquest of northern England, in the late first century AD, the production of flat millstone grit querns began. An early form of this type of quern is characterised by flat-topped stones with a radiating groove for the handle on the top of the stone (Curwen 1937, figs 15-18; Buckley and Major 1990, 117-19). Sandy produced all of these quern forms and although many appear to be residual, having been reused or incorporated into later deposits as frequently is the case with querns, their presence suggests continuity.

Similarly, the coinage record indicates no break in activity. The Iron Age assemblage of 37 coins is concentrated in the first half of the first century AD - 49% falling in the years BC10-AD10 and 24% in the years AD10-40. Early Roman coins of Periods IIa and IIb were also in evidence (Table 5.4). As J Davies states "the coin list continues from the Iron Age assemblage into and through the early years of Roman Britain" (App 1.2) with no apparent break. The brooch assemblage is a rich one, of predominantly first century date, spanning the Iron Age/Roman boundary and seems to fit into the broad pattern of the types of brooches in use in this area of south-eastern England during the first century" (Cool, App 1.3).

Although the evidence is limited in scope, there is evidence of continuity between the Iron Age and early Roman assemblages. The quantity of coins and brooches are such that a comparison of these assemblages with those from sites with broader structural evidence for Iron Age to Roman continuity has good potential to address the first half of this aim.

In contrast there is little evidence of continuity of settlement from the late Roman to the Saxon period within the confines of the most recent excavations (TL179487). Despite the late Roman period being well represented in the artefact assemblage, the site produced one of the largest very late Roman vessel glass assemblages from an occupation site in Britain (Price and Cottam, App 1.4) and 20.3% of the Roman coin assemblage was of issue period XVI (388-402AD) (Davies, App 1.2), there was only a single sherd from a glass vessel of early Saxon date (Price, App 1.4). Antiquarian finds of the eighteenth and nineteenth centuries of thirteen Anglo-Saxon *Buckelurnen*, dated to the fifth- to early sixth-century, are thought to have been made near the Great Northern Railway bridge (TL177488) (Kennett 1970, 17-33). This suggests that the area of Sandy continued to be occupied, but that there was a shift in the focus of settlement. However, within the limits of the 1987-1991 excavations, the artefact assemblage has no potential to address this question of continuity.

Objective 5 Understanding the regional role of Roman Sandy through trade and patterns of rural activity

Sandy's position at a road junction and probable river crossing, its location 10-14 kilometres to the northwest of Baldock and the quantity, range and in many instances (eg brooches, glass vessels) high quality, of the artefact assemblage recovered from a relatively small area of excavation (2000m) suggests that the site served as a local centre or market as defined by Hingley (1989, 25-29; 111-120).

Two factors indicate that the artefact assemblage has a high potential to confirm if Sandy was a local centre and therefore address this aim;

- artefacts directly associated with commerce;
- artefacts which derive from non-local sources.

"The numismatic assemblage is very large and contains strong patterns, the analysis of which will make a major contribution towards an understanding of the nature and development of the settlement. In particular the size of the assemblage, numbering in excess of 1000 items, will permit statistical analysis" (Davies App 1.2) and comparison with other identified local centre sites in the region (eg Baldock, Herts, Water Newton, Cambs., Alchester, Oxon) will assist in establishing whether similar patterns and coin profiles exist.

Amongst the known imported goods three material assemblages, stone, glass and copper alloy, are of a size which both permit comparison with other local centre sites and suggest more than occasional personal purchases. Of the 118 querns and whetstones, 71% were imported from extra-regional sources (see Williams summary, App 1.5). Comparison of the Roman quern assemblage from Sandy and Baldock indicates a greater quantity of querns from a wider range of sources were recovered from Sandy (see Table 5.8). Similar comparisons with other local centre sites in the region will assist in establishing whether the quantities recovered from Sandy were exceptional and if they indicate marketing of querns to settlements in the surrounding area.

Stone Type	Sandy (2000m ² excavated)	Baldock (3500m ² excavated)
Mayen Lava	33	7
Millstone Grit	34	21
Pennant Sandstone	2	0
Old Red Sandstone	1	0

Table 5.8 Quantity and source of Roman quernstones from Sandy and Baldock

The large assemblage of vessel glass, in particular the fourth century assemblage which accounts for 34% of the total, will enable comparisons to be made with other local centre assemblages in the Bedfordshire/Hertfordshire region (Price and Cottam, App 1.4). These comparisons will not only assist in determining the pattern of glass supply to the site, but may assist in indicating the relative wealth of Sandy. As Hingley states

(1989, 115) a positive correlation may be expected between the size and wealth of a settlement and the scale and success of its market. Analysis of the assemblage will provide a profile of the range and quantities of vessels in use which can then be compared to other centres and settlement types in the region to see if a pattern of glass use and supply by site type emerges and how this alters during the course of the Roman period.

Although evidence for copper alloy working and casting was recovered, the quantities were limited and perhaps indicate that this activity served as an adjunct to the ferrous smithing industry rather than an industry in its own right (see Objective 12.1.3). Hence it may be assumed that the majority of the copper alloy items were imported goods. Quantities of certain classes of this material, such as brooches, are numerous enough to permit comparisons with assemblages from other sites of various type in the region. As Hilary Cool (Appendix 1.3) reports "Olivier (1988) has provided a basic model of the types of brooches in use in the first century in the broad area of south-eastern England. This work could be built upon and extended by isolating the assemblages from particular types of contemporary site... This should help reveal whether the number of brooches recovered at Sandy is exceptional, given the area excavated, typical of this part of Roman Britain during the first century, or typical of a particular type of site" and thus assist in determining Sandy's regional role.

Objectives 6 and 8 To provide an explanation of the high artefact recovery level, in particular coinage (objective 8), and to explore whether this is reflective of the situation in East Anglia

The artefact assemblage has good potential to address this aim because the quantity and range of artefacts (see Tables 5.12- 29) is such that it permits comparison with assemblages from other sites of various types in the region. This will assist in revealing whether the quantity of artefacts recovered at Sandy is exceptional, within the confines of the area excavated, typical of this part of Roman Britain, or typical of a particular type of site (local centre or market).

Objective 9 Clarification of the spatial and temporal relationships of craft activity against the background of a changing townscape, including details of crafts and origins of raw materials.

Evidence for crafts is summarised in Table 5.17. Three crafts are indicated, metalworking, textileworking and, to a much lesser extent, boneworking. Each activity will be considered in turn.

Metalworking

Sandy, like many Roman roadside settlements (Smith 1987, 74-77), produced evidence of metalworking. Both iron smithing and bronze casting are indicated (Table 5.17). The by-products of ferrous smithing, in the form of dense slags, hearth bottoms, iron-rich cinder and hammerscale, is the most sizeable category of evidence. The greatest quantities were recovered from Phases 3, 4 and 7 (see Table 5.17). Although some of this material was found in deposits within hearths, the majority was recovered from

ditch and pit fills, external dumps and layers (see Table 5.2). This secondary deposition of metalworking by-products resulted from periodic cleaning of the hearths and surrounding areas. What must be addressed, however, is whether these deposits can be related to the hearths as "particularly in urban situations there is a likelihood that metalworking debris was dumped at some distance from the site of the process which produced it" (Starley, App 1.6). In order to assess whether clear associations could be made, the stratigraphic relationships of each of the 27 phased hearths were examined and the following information noted;

- the layer/deposit a hearth cut into;
- the hearth fills;
- features cutting a hearth;
- layers immediately overlying a hearth.

These contexts were then examined for the presence of ferrous working by-products. A hearth was determined to have been used for smithing if the fills of the hearth contained ferrous slags and hammerscale. Of the 27 hearths examined, 8 had evidence of smithing activity. Table 5.9 presents the evidence by phase.

Table 5.9: Evidence for smithing hearths

Phase	Hearth No.	Cuts into	Filled by	Cut by	Overlain by	Ferrous by-products
3	950	925				1340g
				951		452g plus hammerscale
					811	698g
				836		4g
3	952	925				see 950
				953		10g
					954	see 954 below
					811	see 950
				836		see 950
3	954	925				see 950
						see 952
				955		137g
					811	see 950
					836	see 950
3	4050	4007				none
				4051		10g hammerscale
				4052		10g hammerscale; 1g
					3961	3923g
					3647	38g
					3648	16g
4	4035	4143				none
				4036		10g hammerscale
					4076	none
					4140	none
						none
4	4133	4143				none
				4042		none
				4054		13g plus 10g hammerscale
					4030	2661g
4	4029	4028				none
				4013		260g
					3996	519g plus 10g hammerscale
					3988	157g
7	203	313				1496g
				222		none
				204		32g
				437		19g plus 1g hammerscale
					202	general topsoil

In addition, the spatial and temporal relationships of layers containing quantities of ferrous working by-products to the hearths was examined. In phase 3, 17 layers, containing 4792g of ferrous by-products, lay to the west, and within a radius of 10m, from Hearths 950, 952 and 954. Similar deposits lay immediately to the south of the hearth but in the 1989 season these deposits were box-sectioned only due to time constraints. These layers are likely to represent dumping from successive clearances of the adjacent hearths. This suggestion is supported by the presence of quantities of hammerscale within these deposits. Hammerscale is regarded as an important indicator of the location of ironsmithing because quantities are more likely to remain in the vicinity of the smithy as opposed to the bulk slags which may be removed further a field for dumping or use as hardcore (Starley, App 1.6). The ferrous material from the hearths and dumps together equates to 81% (by weight) of the ferrous working by-products from phase 3.

Such associations are less clear for the smithing by products from phase 4 deposits. The hearths producing evidence for smithing are clustered to the north of the trackway in the north-west corner of the site, while areas of dumping are in the main to the south of the trackway. Discrete dumps were noted in the south-west corner (7250g or 22% of ferrous slag from phase 4) and in the south-east of the site (9337g, 29%). The latter is the same area used for dumping in phase 3.

Discrete areas of dumping were not as evident in phase 7. Of the total ferrous slag assemblage assigned to this phase, 8535g (42%) was recovered from general layers immediately below topsoil and therefore no clear association can be made with the phase 7 hearth. Small areas of dumping, accounting for 11% of the total (2215g) occurred within 6 to 8m of hearth 203 and may potentially be associated. However the majority of deposits in phase 7 contained less than 500g of ferrous slags with no clear association with hearth 203.

In contrast, although working of copper alloys was undoubtedly taking place (Bayley, App 1.6), the evidence is much more limited in quantity (cf Table 5.10). What activity there is would appear to be occurring in the same phases as that of ferrous metalworking.

Phase	Crucible	Mould	Offcut	Waste	Comment
2				73.9g	
3	4	2	1	137.3g	18g of waste was from layers overlying Hearth 4050
4	6	2	1	187.2g	4g of waste from layer cut by Hearths 4133/4035; 35g of waste from layer overlying Hearth 4133
5	3			7.3g	
6				0.3g	
7	1	1	4	96.3g	1g from Hearth 374; 1 offcut from Hearth 280

Table 5.10: Evidence for copper alloy working by phase

There is evidence in Phases 3 and 4 that copper alloy working may have been carried out at the same hearths as ferrous working (see Tables 5.9-5.10). The same dumps containing sizeable quantities of ferrous debris also contained evidence for copper alloy working. Due to the small quantities of evidence for copper alloy working, and its recovery from the same deposits as that of ferrous debris, it can be suggested that a blacksmith may have occasionally worked with non-ferrous metals, for example in brazing, inlaying or copper riveting of iron objects (Starley, App 1.6), and that at least in the area of excavation copper alloy working did not form a major component of the site's economy.

In summary, the assessment of metalworking by-products has indicated that;

- there is no evidence for metalworking prior to Phase 3;
- evidence for metalworking is mainly restricted to ferrous smithing;
- the limited quantity of evidence for non-ferrous working may be associated with the blacksmith's products and does not represent evidence of a separate craft being carried out;
- the main episodes of ferrous smithing appear to occur in Phases 3 and 4;
- Phase 3 hearths are restricted to the area south of the road/trackway while Phase 4 hearths are concentrated in the north-west corner of the site, north of the road/trackway;
- although there is evidence of iron smithing in Phase 7, little of this can be directly related to any of the hearths in use.

Once provisional phasing is refined and associational context groups are established, there is good potential that an examination of the metalworking by-products in Phases 3 and 4 will contribute to understanding the economy of the site as a whole and the spatial and temporal relationship between craftworking and domestic occupation.

Textileworking

Evidence for textileworking is present in Phases 3 to 7 (cf Table 5.17). The quantity and form of evidence is not suggestive of intensive activity but rather small scale cottage industry. This is unsurprising as throughout antiquity this was the norm. No shears or woolcombs were recovered suggesting that 'primary' processing, that is shearing and combing, took place elsewhere and that the combed wool was brought to Sandy.

The evidence for spinning is limited to an assemblage of 13 spindlewhorls of a variety of materials including reused pottery sherds, lead, bone and shale. A preliminary scan of the fabric types of the ceramic spindle whorls indicates that, where examples are more closely datable than the Roman period (6 of 9), all date to the first and into the second centuries (Table 5.11).

Phase	Registered find	Fabric description	Date range
Unphased [1987]	3887	miscellaneous greyware	Roman
Unphased [1987]	3931	coarse grog tempered	late Iron Age/early Roman
3.0	3762	grog and sand	early Roman
4.0	1395	miscellaneous greyware	Roman
4.0	2765	samian (southern Gaul)	late first to early second century
4.0	3719	Verulamium	early to mid second century
5.0	2215	miscellaneous brown sandy	Roman
6.0	1498	grog and sand	late pre-Roman Iron Age
7.0	1810	miscellaneous burnished	early Roman

Table 5.11: Fabric types of ceramic spindlewhorls

Spindle whorls of other materials first occur in Phase 6 (one lead whorl), while Phase 7 produced two in bone and one in shale, all lathe-turned.

Use of the warp-weighted loom is evidenced by the presence of two loom weights. However, no Roman forms of loom weight were recovered; a single fragment of a very leached and abraded annular weight was found in a Phase 4 deposit, while a triangular weight was present in a Phase 7 deposit. The latter was burned on one side with patches of polish/soot from its secondary use. The absence of pyramidal loom weights could suggest that the warp-weighted loom was not in use at Sandy in the mid and later Roman periods. The presence of a single weaving tablet in a Phase 7 ditch deposit could indicate continued use of this form of loom as these were used with a small band-loom to produce the starting borders of the warps of warp-weighted looms (Wild 1970, 55-56, 63). However, tablet weaving can be used as an alternative to rather than adjunct of, the warp-weighted loom (MacGregor 1985, 191).

It has been noted at Baldock and Verulamium that both spindle whorls and loom weights were not in use after the late first century, suggesting that there was a change from Iron Age practices, perhaps indicating either that spinning and weaving were no longer domestic activities or that different artefacts were used (Foster 1986, 170). At Sandy evidence for spinning does not disappear from the record at this period, although there does appear to be a preference for whorls of materials other than ceramic in the later phases. Given the lack of Roman forms of loomweight, and the fact that weaving tablets can be used to produce entire garments such as stoles, and braids and tapes (MacGregor 1985, 191), it is reasonable to suggest that the warp-weighted loom was not in use in the excavated area of the settlement in the mid and late Roman period. This could suggest either that spinning was carried out in a different location than that of weaving, and therefore no a longer house-hold based activity, or, as has been suggested by Boon (1974, 285) the two beam loom, which does not require weights, was in use.

Sewing is evidenced by 22 needles in bone, copper alloy and iron occurring throughout Phases 3 to 7. Although many of the needles are incomplete, spatulate and needles with grooves above and below the eye, Crummy's Types 2 and 3 (1983, 65-67), were

identifiable amongst the non-ferrous needles. Of the 22 needles recovered, 4 occur in the same deposits as spindle whorls indicating that both spinning and sewing were carried out in the same area.

Once phasing is refined and associational groups completed, distribution plots of artefacts associated with textileworking will enable concentrations to be located and relationships to structures noted. Comparison with artefact assemblages from these same structures/deposits has moderate potential to assist in determining if textileworking was carried out in a domestic setting or organised craft areas and if the intensity and location of this activity altered over time.

Bone/antler working

Limited evidence exists for bone and antler working, mainly in the form of offcuts exhibiting saw or cut marks and a single unfinished gaming piece. The evidence is restricted to Phases 5 (three pieces) and 7 (five pieces), the majority coming from ditch (five pieces) and pit (two pieces) fills. Due to the small quantities of material, there is low potential to determine the extent and location of bone and antler working on site, although spatial analysis of the bone working by-products and bone and antler objects (eg combs, gaming pieces, etc) may assist in suggesting the type of products manufactured.

Objectives 11 and 12 To address the wider issues of landscape development in the Ivel valley and to compare the site of Warren Villas in relation to the roadside settlement of Sandy

This is good potential to address this aim by a comparison of the material assemblage profile recovered from Sandy, a possible local centre, with that from the closely neighbouring site of Warren Villas, a probable farmstead. The potential exists to examine commonalities in object type occurrence at the two sites, for example both sites yielded the same rare form of spearbutt, and explore whether Sandy played a role in the distribution of these non-perishable goods. A comparison of the development of these two sites throughout the Roman period and any changes in the nature and intensity of occupation will assist in understanding the interplay between the site types.

New Research Objectives

Objective 13 Was Iron Age coinage minted at or near Sandy?

A number of coin types occur in unusually high proportions at the site, notably British LX21-22 types (7 examples) and coins of Rviis (10 examples), this suggests that these coins were minted at or near the site (see Haslegrave, App 1.1). Further critical assessment of this hypothesis is required in concert with a critical review of the earlier, eighteenth and nineteenth century, coinage finds from Sandy. This work will contribute towards determining the late pre-Roman Iron Age role of Sandy within the region, in addition to addressing the question of continuity of occupation from the Iron Age into the Roman period.

Objective 14 Surface EDXRF analysis of Iron Age coins

Surface EDXRF analysis of a sample of the coins has shown that they include copper and brass as well as bronze issues. Completing this programme of analysis would provide important new information of the denominational structure of base metal coinages during the reigns of Tasciovanus and Cunobelinus (Haselgrove App 1.1).

Potential to contribute to National Research Objectives

Analysis of the registered artefact assemblage has good potential to contribute to the development of an artefact profile of a local centre site. The large assemblages of Roman coinage, vessel glass and brooches will be of particular use in establishing such a profile. This can then be compared to other local centre sites in the region in order to determine if we can differentiate between minor and major markets and hence extend our understanding of Romano-British economy and settlement patterns in the region. Regional models can then be compared in order to construct a national picture.

The Iron Age coin assemblage has good potential to determine Sandy's regional role in the late pre-Roman Iron Age (new research objective 13) and to contribute to current research on the transition from Briton into Roman (EH 1991, 36), with particular reference to the origins of Roman small towns or local centres.

In addition to contributing to the wider research aims outlined above, some categories of artefact can contribute to class specific national research aims;

- "the glass assemblage contains one of the largest very late Roman groups from an occupation site in Britain. This has high potential to increase our understanding of the latest phases of Roman glass use and a clearer chronological framework for late Roman forms. The assemblage contains some unusual late Roman forms, and comparison with assemblages from the Alchester Road Suburb, Towcester, Bath and Stanwick villa will help to define the range of vessels in use during this period" (Price and Cottam App 1.4);
- "the brooch assemblage will help to refine our ideas on what is the typical brooch assemblage of a site in this area of Britain during the first century. There appears to be emerging a difference between the type of brooch assemblage that can be expected in the south-east during the later first century and that to be expected in the north and west at the same time. A large assemblage such as this will have its part to play in future synthetic work to explore this. As such it is important that it is published in sufficient detail to be used in this way in the future" (Cool App 1.3);
- the proposed completion of EDXRF analysis on the Iron Age coin assemblage (New Research Aim 14) "will provide important new information of the denominational structure of base metal coinages during the reigns of Tasciovanus and Cunobelinus" (Haselgrove App 1.1), thereby addressing the national research aim of determining the nature of the technical process involved in production of non ceramic artefacts (EH 1991, 42).

5.3 CURATION AND STORAGE

Once all conservation has been completed, the packaging of the material will be re-checked and if necessary upgraded, to ensure, as far as is possible, the long-term preservation of the finds.

The relative humidity (RH) within the air-tight polyethylene boxes in which this metalwork is stored must be regularly monitored. An RH indicator card will be placed in the boxes and as soon as the RH rises above 20% for the iron objects or 40% for the non-ferrous finds, the silica gel must be removed, regenerated and replaced.

The organic finds should be stored in an environment with a fairly constant RH between 50 and 55% and a temperature between 15 and 20°C. Light levels should also be kept as low as possible.

The inorganic non-metal finds should ideally be stored in an environment with a mid-range RH and a fairly constant temperature, although they will generally tolerate a wider range of conditions than the other materials.

Table 5.12 Sandy Cemetery: Occurrence of simple names and quantities of registered and bulk non-ceramic finds in alphabetical order

simple name	quantity	simple name	quantity	simple name	quantity
amulet	1	gaming piece	22	scissors	1
angle tie	1	goad	2	sculpture	1
armour fitting	1	hasp	2	scythe	1
arrowhead	2	hinge	12	seal box	2
axe	1	hipposandal	6	sheath	1
balance	2	handle	7	sheet	239
bar	49	hobnail	1 group (c.30)	shoe iron	1
bar iron	4	hook	7	sickle	1
bead	19	hoop (bucket)	1	socket	1
bezel	1	horse pendant	1	spade shoe	1
binding	6	horseshoe	1	spatula	3
block (shale)	1	hub lining	1	spike	3
bolt (door)	1	industrial waste [bulk finds]	34 c.105kg	spindle	1
bowl	1	intaglio	3	spindle whorl	13
bracelet	33	key	13	split pin	2
brooch	75	knife	28	spoon	2
brooch pin	24	lace tag	3	spear butt	2
buckle	10	ladle	4	spear head	1
buckle pin	3	lamp holder	1	spur	1
buckle plate	2	latch lifter	3	staple	15
bucket mount	1	ligula	28	strap end	6
button	5	linch pin	3	strap fitting	3
came	2	lock bolt	2	strainer	1
candle holder	3	lock ward	1	strike-a-light	1
chain	1	loom weight	2	strip	253
chain link	3	loop-headed spike	5	stud	19
cheekpiece	1	lump	47	stylus	8
chisel	6	mirror	3	swivel	1
chopper	1	mould	5	tack	33
clamp	2	mug	1	tang	1
clasp	3	nail	2469	terret ring	1
coin	1216	nail cleaner	9	toggle	1
comb	11	needle	22	tube	9
coulter	1	offcut	10	tweezers	10
crucible	15	pin	150	unidentified	28
disc	17	pipe	2	vessel fragment (other than glass)	20
drillbit	2	pivot	1	vessel glass	504
double-spiked loop	11	plane	1	vessel patch	9
earring	3	plaque	1	wall plaster	c.17kg
ferrule	4	plate	1	washer	10
figurine	2	probe	4	wedge	1
finger ring	17	punch	9	weight	15
fish hook	2	quern	98	whetstone	20
flesh hook	6	rake prong	1	wire	34
flint knife	2	reaping hook	9	worked bone	8
flint scraper	2	ring	34	window fitting	1
flint debitage	23	rivet	2	window glass	26
flute	2	rod	52	weaving tablet	1
fragment	165	rove	1	TOTAL	3710

Table 5.13 Registered and bulk non-ceramic artefacts by functional category

Category	Simple Name	Category	Simple Name	Category	Simple Name
01	angle tie 1	04	needle 22	12	earring 3
01	came 2	04	offcut 10	12	finger ring 17
01	wall plaster c.17kg	04	plane 1	12	hobnail 1 group (30)
01	window fitting 1	04	punch 9	12	intaglio 3
01	window glass 26	04	spindle whorl 13	12	lace tag 3
02	(door) bolt 1	04	worked bone 8	12	pin 150
02	clamp 2	04	weaving tablet 1	12	shoe iron 1
02	double-spiked loop 11	05	chopper 1	12	strap end 6
02	hasp 2	05	knife 28	12	strapfitting 3
02	hinge 12	05	scissors 1	13	comb 11
02	key 13	05	whetstone 20	13	ligula 28
02	lock bolt 2	06	balance 2	13	mirror 3
02	lock ward 1	06	coin 1216	13	nail cleaner 9
02	loop-headed spike 5	06	weight 15	13	probe 4
02	latch lifter 3	07	seal box 2	13	spatula 3
02	nails 2469	07	stylus 8	13	tweezers 10
02	pivot 1	08	flute 2	14	amulet 1
02	rivet 2	08	gaming piece 22	14	figurine 2
02	rove 1	09	cheekpiece 1	14	sculpture 1
02	split pin 2	09	goad 2	15	flint knife 2
02	staple 15	09	hipposandal 6	15	flint scraper 2
02	stud 19	09	horseshoe 1	15	flint debitage 23
02	tack 33	09	horse pendant 1	16	bar 49
02	washer 10	09	hub lining 1	16	binding 6
03	bowl 1	09	linch pin 3	16	block 1
03	bucket mount 1	09	spur 1	16	chain 1
03	candle holder 3	09	terret ring 1	16	chain link 3
03	flesh hook 6	10	coulter 1	16	disc 17
03	hoop (bucket) 1	10	rake prong 1	16	ferrule 4
03	ladle 4	10	reaping hook 9	16	fragment 165
03	lamp holder 1	10	scythe 1	16	handle 7
03	mug 1	10	sickle 1	16	hook 7
03	plaque	10	spade shoe 1	16	lump 47
03	quern 98	11	armour fitting 1	16	pipe 2
03	spindle for quern 1	11	arrowhead 2	16	plate 1
03	spoon 2	11	fish hook 2	16	ring 34
03	strike-a-light 1	11	sheath 1	16	rod 52
03	strainer 1	11	spear butt 2	16	sheet 239
03	vessel glass 504	11	spear head 1	16	socket 1
03	vessel other 20	12	bead 19	16	spike 3
03	vessel patch 9	12	bezel 1	16	strip 253
04	axe 1	12	buckle 10	16	swivel 1
04	bar iron 4	12	buckle plate 2	16	tang 1
04	chisel 6	12	buckle pin 3	16	toggle 1
04	crucible 15	12	bracelet 33	16	tube 9
04	drillbit 2	12	brooch 75	16	unidentified 28
04	industrial waste 34	12	brooch pin 24	16	wedge 1
04	loom weight 2	12	button 5	16	wire 34
04	mould 5	12	clasp 3	TOTAL	3710

Table 5.14 Functional Category: 01 Building Materials and Construction

Simple name	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Unphased
angle tie							1	
came							2	
plaster			101g	1569g	1633g	233g	11944g	1622g
window fitting							1	
window glass				4	2		20	

Table 5.15 Functional Category: 02 Fastenings and Fittings

Simple name	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Unphased
door bolt						1		
clamp				1			1	
double spiked loop				2		1	8	
hasp				2				
hinge			1	3	2		5	1
key				1	2		10	
lock bolt				1		1		
lock ward					1			
loop headed spike					3		2	
latchlifter				1			2	
pivot					1			
rivet				2				
rove							1	
split pin		1					1	
staple			3	2	1	2	7	
stud			2	3	1	1	11	1
tack			6	7	2		18	
nails	1	4	76	484	390	114	1277	123
washer				1		1	8	

Table 5.16 Functional Category: 03 Household Utensils and Furnishings

Simple name	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Unphased
bowl				1				
bucket							1	
hoop								
bucket mount				1				
candle holder				1			2	
flesh hook				1	1	1	3	
ladle			1	1			2	
lamp holder							1	
mug							1	1
plaque								1
quern			5	33	5	3	44	8
spindle (for quern)							1	
spoon			1	1				
strike-a-light							1	
strainer							1	
vessel glass			9	117	36	24	311	7
other vessel				6	3		11	
vessel patch			1	1		2	4	1

Table 5.17 Functional Category: 04 Craft and Industry

Simple name	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Unphased
crucible			4	6	3		1	1
mould			2	2			1	
offcut			2	1			7	
industrial waste		163.4g [inc 6Sf]	26983.3g [inc 7Sf]	38085g [inc 6Sf]	9266g [inc 1Sf]	2861g [inc 1 Sf]	27774g [inc 9Sf]	1307g [inc 4Sf]
bar iron					1		2	1
punch			1	4		1	3	
chisel			1	3			2	
drillbit					1		1	
plane							1	
axe							1	
loom weight				1			1	
spindle whorl			1	3	1	2	4	2
weaving tablet							1	
needle			5	6	3	2	5	1
worked bone/antler					3		5	

Table 5.18 Functional Category: 05 Multi-purpose Blades and Sharpeners

Simple name	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Unphased
chopper			1					
knife			2	6	2	1	17	
scissors							1	
whetstone			1	7	1	2	9	

Table 5.19 Functional Category: 06 Trade and Commerce

Simple name	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Unphased
Balance							1	1
Coin	2	18	20	66	47	53	919	91
Weight			1	3	1		10	

Table 5.20 Functional Category: 07 Written Communication

Simple name	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Unphased
seal box				1			1	
stylus				2	1		2	3

Table 5.21 Functional Category: 08 Pastimes

Simple name	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Unphased
flute							2	
gaming piece		1	3	5	2	1	10	

Table 5.22 Functional Category: 09 Animal Trappings and Transport

Simple name	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Unphased
cheekpiece								1
goad					1		1	
hipposandal				4		1		1
horseshoe							1	
horse pendant							1	
hub lining							1	
linch pin				2			1	
spur							1	
terret ring				1				

Table 5.23 Functional Category: 10 Agriculture and Horticulture

Simple name	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Unphased
coulter				1				
rake prong							1	
reaping hook				1	2	1	5	
scythe				1				
sickle								1
spade shoe					1			

Table 5.24 Functional Category: 11 Weaponry (Military and Hunting)

Simple name	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Unphased
armour fitting					1			
arrowhead					1		1	
fish hook				2				
sheath							1	
spear butt							2	
spear head							1	

Table 5.25 Functional Category: 12 Personal Adornment and Dress

Simple name	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Unphased
bead		1	1	5	1		10	1
bezel							1	
buckle			1			1	6	2
buckle pin			1	1			1	
buckle plate							2	
bracelet			1	2	3	3	17	7
brooch	1	1	19	18	9	2	21	4
brooch pin			11	2		1	8	2
button						1	4	
clasp				1	2			
earring				1	1		1	
finger ring			2	4	2		8	1
hobnail				1 (c.30)				
intaglio					1		2	
lace tag				1			2	
pin			9	38	11	7	75	10
shoe iron							1	
strap end			2		1		2	1
strap fitting			1				1	1

Table 5.26 Functional Category: 13 Toiletry

Simple name	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Unphased
comb				2	2		7	
ligula			3	8	1		15	1
mirror				1			1	1
nail cleaner			1	1		1	5	1
probe			1	1		1	1	
spatula			1				2	
tweezers			4	3		1	2	

Table 5.27 Functional Category: 14 Religion

Simple name	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Unphased
amulet							1	
figurine				2				
sculpture								1

Table 5.28 Functional Category: 15 Prehistoric

Simple name	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Unphased
blade				3	2			3
core				1				
flake			4	5	1		2	1
knife			1	1				
scraper			1				1	

Table 5.29 Functional Category: 16 Multi-functional and unknown objects

Simple name	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Unphased
bar		1	2	21	6	4	12	3
binding			1		1		3	1
block (shale)							1	
chain							1	
chain link				1			2	
disc			1	4	3		9	
ferrule				2			2	
fragment		1	23	48	8		84	1
handle			1		1	1	4	
hook				3			4	
lump		1	13	13	5		13	2
pipe							2	
plate							1	
ring			1	8	1	3	20	1
rod			12	11	6	2	20	1
sheet			29	42	16	7	134	11
socket						1		
spike				2	1			
strip		3	28	57	25	6	125	9
swivel							1	
tang					1			
toggle							1	
tube			1	1			6	1
wedge							1	
wire		1	5	7	5		16	
unknown	1		5	1	2		18	1

[*specialists reports are appended after page 73]

6 ANIMAL BONE (A F ROBERTS)

6.1 FACTUAL DATA

6.1.1 Quantities

During excavations at Sandy between 1988 and 1991 at the Roman small town of Sandy 203 boxes (44 x 22 x 18cm) of animal bone were recovered including hand retrieved and sieved material.

The bones were assessed by a random sample and rapid scan examination of 20 boxes (following Davies 1992), 5 each from the 1989 and 1990 seasons, and 10 boxes from the 1991 representing 10% of the bone recovered. The 1991 season produced the richest contexts (in terms of bone recovery), some requiring 8-11 boxes per context.

Species > Number	Year	E	B	S	O	C	G	Bird	Fish	SM
	1989	10	309	102	421	13	3	-	-	4
	1990	8	301	30	175	20	7	2		1
	1991	40	890	57	147	14	12	3	3	3
%	1989	1	36	12	49	1	.5	-	-	.5
	1990	1	55	5	32	4	1	.5	-	.5
	1991	3	76	5	13	1	1	.25	.25	.25
Meas	1989	-	42	6	60	6	2	-	-	-
	1990	3	32	-	14	12	1	1	-	-
	1991	6	73	3	14	3	-	-	-	-
Mand	1989	-	5	8	37	-	-	-	-	-
	1990	-	5	3	12	-	-	-	-	-
	1991	-	14	2	14	-	-	-	-	-
Teeth	1989	-	43	16	76	-	-	-	-	-
	1990	-	48	11	19	-	-	-	-	-
	1991	-	188	17	15	-	-	-	-	-

Key:

- Number = No. Bones identified to species
- % = % identified bones per sample
- Meas = No bones which produce useful measurements
- Mand = Mandibles with teeth indicating age at death
- Teeth = No of teeth indicating age at death

6.1.2 Condition

The bones have all been washed and bagged by context, but there is a certain amount of post excavation damage, particularly to the large number of cattle scapulae from the 1991 season. The damage was caused during machine removal of the ditch fills underlying the southern area of habitation. The bones are otherwise in good condition and will require no further conservation.

6.1.3 Range and variety

The bones were scanned for species, indications of butchery, pathology and trauma, age, burning, abrasion and potential for measurement.

Species present include horse, cattle, pig, sheep/goat, dog and deer, chicken and goose. The sieved material examined includes rodent, bird, fish and amphibian bones. Cattle are by far the predominant species, and the larger contexts from the 1991 season, which date to the 4th century AD consist almost entirely of cattle scapulae and mandibles. Many of the scapulae have been pierced through the blade and this has been the cause of fragmentation in the majority.

The bones examined present usable amounts of recordable data. No complete cattle long bones were observed, but measurement is possible on scapulae and mandibles. Sheep/goat long bones have survived entire and can furnish measurements. Mandibles are available for patterns of tooth wear and ageing to be recorded from cattle, pig and sheep/goat.

Most of the material, particularly the cattle would seem to indicate butchery waste spread in layers and filling gullies, the presence of this waste may indicate specific areas of the site for butchery in definable episodes.

6.2 ASSESSMENT OF POTENTIAL

The large quantities of animal bone from Sandy can supply information about the nature of the settlement at Sandy and its agricultural environment during c500 years of occupation. The sample examined showed that the material exhibits both quantity and range of elements and species, which can be used to build a detailed picture of the site and its economy. It is clear that the areas excavated in 1989, at the northern end of the site differed greatly from those excavated in 1990/1, with sheep predominant in 1989 but overwhelmed by cattle in contexts from 1990/1. Pig is half as frequent in 1990/1 as it is in 1989. It is clear therefore from the 10% sample of animal bone used in this assessment that the assemblage can be used to identify changes in the proportions of animal bones over time and to identify activity areas within the excavated site. Such analysis will contribute to determining the nature of the small town at Sandy and contribute to the debate regarding towns as centres of distribution or re-distribution.

7 PLANT MACROFOSSILS (M R ROBINSON)

7.1 FACTUAL DATA

7.1.1 Provenance

Sandy is situated on a ridge of Greensand above the floodplain of the River Ivel. It is well-drained so there is low potential for the survival of waterlogged remains, but there was every reason to expect that the excavation would yield plentiful charred material.

The excavation showed that there was only limited activity on the site up until the end of the 1st century AD and that the town was occupied from the 2nd to 4th centuries AD. Associated with this occupation were many pits, ditches, post holes and layers that were rich in occupation debris. A few ovens or furnaces and hearths were also found. At the very end of the 4th century, the character of occupation changed and ceased to be fully urban. However, activity of perhaps a more agricultural nature continued into the early years of the 5th century, resulting in the digging of various pits and ditches, with the continued deposition of layers containing occupation debris. Thereafter, settlement on the site ceased.

7.1.2 Quantities

Extensive sampling was undertaken for charred plant remains during the excavation. Samples of about 5 to 20 litres were floated onto a 0.5mm mesh and dried. No samples were taken specifically for mineralised plant remains, although a few were encountered in the flots. Some of the flots were sorted at Bedford for charred remains down to 1.0mm, but unfortunately samples with sparse assemblages tended to be chosen.

The 527 dried flots from Sandy and any seeds which had been sorted from them were spread out and scanned at x10 magnification under a binocular microscope. The number of samples containing different categories of macroscopic plant remains has been recorded in Table 7.1. The presence of charred remains of cultivated and collected wild economic plants has been recorded in Table 7.2 by site phase. The phases are as follows:

Phase 1:	late 1st century BC - 1st century AD
Phase 3:	2nd - 3rd century AD
Phase 4:	3rd century AD
Phase 5:	4th century AD
	unphased and post-occupation deposits

Table 7.3 gives a breakdown into numerical groups of the estimated abundance of charred remains in the samples, expressing the results as a percentage of the total number of samples in each phase. Notes on samples of special interest are given in Table 4.

The scanning of the flots inevitably results in an underestimate of the abundance or even presence of smaller seeds and chaff items. It does, however, serve to characterise the assemblages.

7.1.3 Range and variety

The concentration of charred remains (excluding charcoal) from the deposits at Sandy is relatively high, as would be expected for a town. While a high proportion of the Sandy samples contain material, much of it comprises somewhat abraded grains of *Triticum* sp. (wheat), suggesting reworking and re-deposition of material. Most of this grain is likely to be *T. spelta* (spelt wheat) although some of the samples contain short grains of uncertain status. A few samples contain much chaff (glumes) of *T. spelta* but the majority of assemblages show a high ratio of wheat grain to glumes. It is thought possible that there has been a substantial loss of chaff due to weathering rather than that the material burnt was necessarily of a different composition from that which gave rise to the chaff-rich assemblages. No rachis fragments of free-threshing wheat were found.

The other cultivated cereal from Sandy is *Hordeum* sp. (barley), with a few grains being further identifiable as hulled *H. vulgare* (six-row hulled barley). In no case does barley outnumber wheat in a sample, although a minority contain a major component of barley. Barley rachis fragments are very sparse. Grains of *Avena* sp. (oats) are present in many of the samples, but it is assumed that it was a weed rather than a crop.

Charred seeds of cultivated legumes were noted from Phases 3, 4 and 5, but only as single finds. The only legume to be identified with certainty is *Pisum sativum* (pea), with a single specimen from Phase 5, but *Lens culinaris* (lentil) is possibly present in a sample from Phase 4.

Remains of cultivated fruit are rarely preserved by charring but two flots from Phase 4 contain pips of *Vitis vinifera* (grape) and there is also a stone of *Prunus avium* (cherry) from this phase. There are several additional samples which have not yet been attributed to a phase that include grape or cherry.

Nut shell fragments are more susceptible to becoming charred and were recorded from Phases 3, 4 and 5. However, as would be expected, their occurrence is very slight indeed when compared with the quantity of cereal grain from the site.

Weed seeds are usually greatly outnumbered by cereal grains in the flots but they are mostly from species likely to have been growing amongst the crops including: *Vicia / Lathyrus* sp. (vetch/tare). Chenopodiaceae (fat hen etc), *Lithospermum arvense* (corn gromwell), *Rumex* sp. (dock), *Galium aparine* (goosegrass), *Tripleurospermum inodorum* (scentless mayweed), *Anthemis cotula* (stinking mayweed) and *Bromus* S. *Eubromus* sp. (brome grass). It is not, at this stage, possible to associate particular weed assemblages from the site with the varied soils around Sandy.

Seeds of wet ground plants were noted in many of the flots. Some of these seeds, for example, *Carex* spp. (sedges) and *Eleocharis* S. *Palustres* sp. (spike rush), are quite commonly found in charred arable weed seed assemblages, and are usually interpreted as

the result of arable extending up to the edge of marshy ground. Indeed, there was direct evidence from the site of Warren Villas, in the valley bottom, that very wet ground was being cultivated in the early Roman period. However, several of the Sandy examples from Phases 3 and 4 contain seeds of *Sparganium* sp. (bur-reed). This is a substantial emergent aquatic plant unlikely to have grown as a weed even under the wettest of arable conditions. It is therefore assumed that plants of *Sparganium* sp. were deliberately harvested and brought to the site, perhaps amongst the various species of Cyperaceae (sedges etc.) for use as thatch or animal bedding.

There appear to be some differences between the charred assemblages from the different phases. The few samples from Phase 1 contain very little material and some of that could have been intrusive. The samples from Phases 3 and 4 show many aspects of similarity but those from Phase 4 contain higher concentrations of remains. The samples from Phase 5 show a drop in the concentration of remains and cereal chaff seems very elusive. This could in part be the result of a higher proportion of the charred material being degraded remains reworked from earlier periods. However, it is also possible that there had been a change in the wheat varieties cultivated.

At this stage in the assessment there is insufficient distributional and contextual information available for a detailed evaluation of these aspects of the charred assemblages. However, Samples 213 and 214, which are very chaff-rich, were both from an oven or furnace and it is very likely that it was being used to de-husk spelt wheat.

There is much charcoal from the site although very little of it was from contexts in which burning had occurred. The majority of the charcoal is *Quercus* sp. (oak), which was probably the main fuel used in Roman Sandy.

Two of the samples, Samples 213 and 453, contain many silica chaff fragments of wheat which had resulted from the complete oxidisation of the organic component and the welding together of the silica phytoliths of the chaff during burning. Such material serves as a useful check on the bias introduced into charred assemblages by the differential combustion of chaff and grain.

Calcium-phosphate mineralisation of plant remains was also recorded in a few samples, but the only identifiable remains are two stones of *Prunus domestica* (plum) from Sample 474. This sample was from a pit and it is possible that it was a cess pit.

<i>Plant remains</i>	<i>No of samples</i>
Charred seeds etc	401
Larger quantities of charcoal	26
Silica chaff frags	2
Calcium phosphate	4
Total	527

Table 7.1 Presence of plant remains

			Phase				
			1	3	4	5	Unphased
Triticum sp	Wheat	Grain	+	+	+	+	+
Triticum spelta	Spelt wheat	Glume		+	+		+
Hordeum sp	barley	Grain	+	+	+	+	+
Vitis vinifera	Grape				+		+
Pisum sativum	Pea					+	
cf Lens culinaris	Lentil				+		
large legume	Pea or bean			+	+	+	+
Corylus avellana	Hazel nut			+	+	+	+
Prunus avium	Cherry				+		+
Spargium sp	Bur-reed						

Table 7.2 Presence of charred economic plants

No of items/sample	Percentage of samples per phase				
	1	3	4	5	Un-phased
0	67	22	22	33	19
1-9	33	49	31	44	43
10-49		22	36	21	31
50-99		4	6	1	4
100-199		3	1		3
200-999			3	1	
1000+		1	1		
Total	9	74	162	103	179

Table 7.3 Concentration of charred remains (excluding charcoal)

Sample	Context	Context type	Phase	Comments
62	425	Layer	4	c12 inc <i>Corylus</i> , <i>Vitis</i> and cereal indet.
63	425	Layer	4	c5 inc ? <i>Lens</i>
80	487	Structure	4	c50 inc <i>Triticum</i> , <i>Corylus</i> and interesting large legume, weeds <i>Eleocharis</i> , <i>Chenopodiaceae</i>
183	948	Structure	4	c60 inc <i>Vitis</i> , <i>Triticum</i> , <i>T. spelta</i> chaff
201	1009	Pit	4	c300 inc <i>Triticum</i> , <i>Triticum</i> short grains, <i>T. spelta</i>
213	1081	Oven	4	c300 <i>T. spelta</i> , <i>Hordeum</i> , <i>Avena</i> silica chaff
214	1082	Oven	4	c10,000 <i>T. spelta</i> glumes, <i>Corylus</i> <i>Rumex</i>
337	2396	Ditch	5	Large legume
339	2413	Ditch	5	c5 cereal and <i>Corylus</i>
373	2564	Layer	5	c250 badly preserved <i>Triticum</i> , good weeds - 1 <i>Pisum</i>
398	2613	Layer	3	c30 <i>Corylus</i> , <i>Triticum</i> , large legume
453	3015	Pit	3	c2000 mostly <i>Triticum</i> , <i>T. spelta</i> chaff, weeds - <i>Atriplex</i> , silica chaff
457	3039	Pit	4	c800 <i>Triticum</i> , <i>T. Spelta</i> chaff, <i>Corylus</i> , good weeds - <i>Rumex</i> , <i>Chenopodiaceae</i> , <i>Solanum</i> , <i>P. Aviculare</i> , <i>Lithospermum</i>
474	3213	Pit	3	mineralised - 2 <i>Prunus domestica</i>
510	3647	Layer	3	c100 <i>Triticum</i> , good weeds - <i>Sparganium</i> , <i>Carex</i>

Table 7.4 Notes on more interesting samples

7.2 ASSESSMENT OF POTENTIAL

The macroscopic plant remains from Phases 3, 4 and 5 at Sandy, if analysed in more detail, have the potential to give useful information on three important aspects of the agricultural economy of Sandy:

- 1 the nature of crop processing activities in the town,
- 2 the soils being exploited (from weed seeds) at different phases and whether the waterlogging of the valley bottom during the Roman period is reflected by the weed flora,
- 3 changes, including perhaps a decline in spelt wheat, in the early 5th century AD.

Table 7.4 gives summary details of the samples with the most interesting assemblages. It is recommended that these samples be analysed in detail for macroscopic plant remains excluding charcoal, with the aim (not possible for all the samples) of recovering several hundred items per sample. The larger assemblages should be sub-sampled as appropriate. In addition it is recommended that 5-10 "typical" assemblages from a variety of well-stratified context types from each of Phases 3, 4 and 5 be analysed in detail. These samples should be chosen once more detailed contextual and spatial information becomes available. It is possible that further samples will need to be analysed for weed seeds only. The results from the detailed analyses would be combined with the broader results from the assessment in the final report. Only limited work can be recommended on the charcoal.

8 HUMAN BONE (T A JACKMAN)

8.1 FACTUAL DATA

8.1.1 Quantification

Out of a recorded 34 inhumations, 29 were recovered during excavation at Sandy. Those not recovered were located on the edges of the excavation and extended beyond the area of threat, nevertheless their presence was recorded, and their position marked on plan.

Records for the burials include context sheets, inhumation sheets, drawings at scales 1:20 & 1:10 and a comprehensive photographic record. Finds associated with the burials are recorded on the inhumation sheets and these included pots, nails and iron objects.

Soil samples were taken from 17 of the burials and these were be sieved for small bones, calculi and other environmental evidence.

8.1.2 Condition

In general the condition of the bone is fair to good. Despite the sandy nature of the soil, the infants have survived very well and the bone appears to be in a stable condition. This may be due to the comparatively high collagen content in the bones of the young, compensating for the lack of calcification.

8.1.3 Range and variety

Several of the burials have disturbed others and so approximately 9 burials are mixed. However as far as was possible, individual burials were recovered on site, although some small bones (hands and feet) may have been confused.

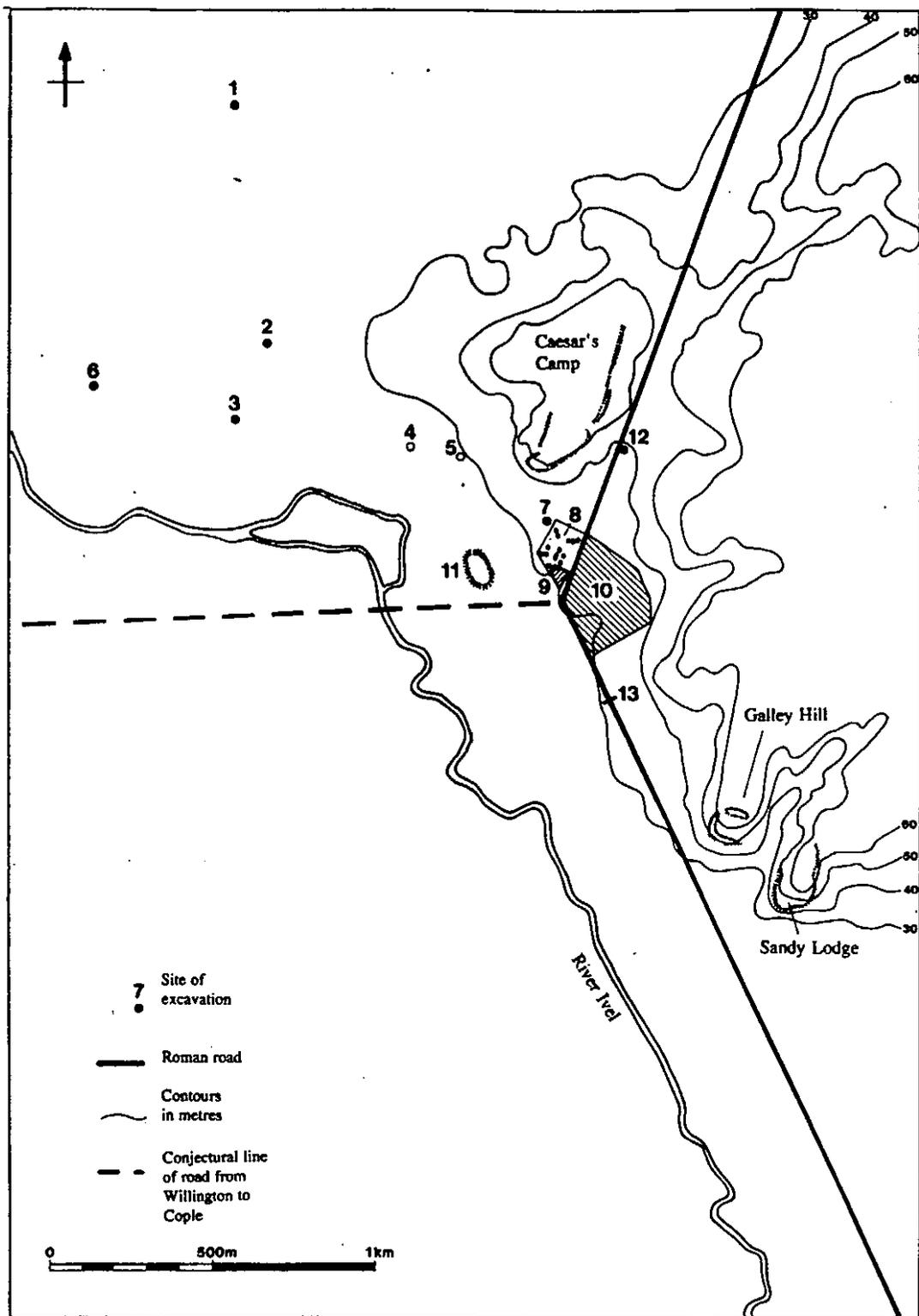
Approximately 44% of individuals recovered are infants buried within the settlement area and close to the structures. The remaining burials were adult inhumations often contorted, crouched or flexed.

8.2 ASSESSMENT OF POTENTIAL

Although statistically little can be analysed from populations of less than 50 individuals the burials can contribute to the growing body of evidence for later Roman burial from the region, including comparison with cemeteries at Ruxox Farm, on the River Flit, at Kempston Church End and Bletsoe (Dawson 1994) on the Ouse. Valuable comparison may be made with burials at Godmanchester and Baldock. In addition to comparanda dental anomalies and non-metric variants may contribute to identifying racial or genetically related types.

8.3 STORAGE AND CURATION

The skeletal material is boxed and is stable.



Key

- | | |
|---------------------------|-----------------------|
| 1 Engayne Avenue | 8 Cemetery |
| 2 Bedford Road | 9 90 - 91 excavations |
| 3 The Avenue | 10 Chesterfield |
| 4 Fire Station | 11 Tower Hill |
| 5 Stonecroft | 12 Swaden |
| 6 All Saints Church | 13 The Bungalow |
| 7 Cemetery keeper's house | |

Figure 1: The Archaeology of Roman Sandy.

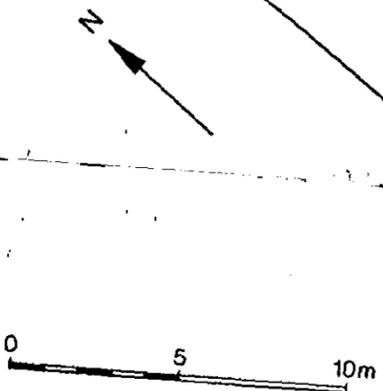
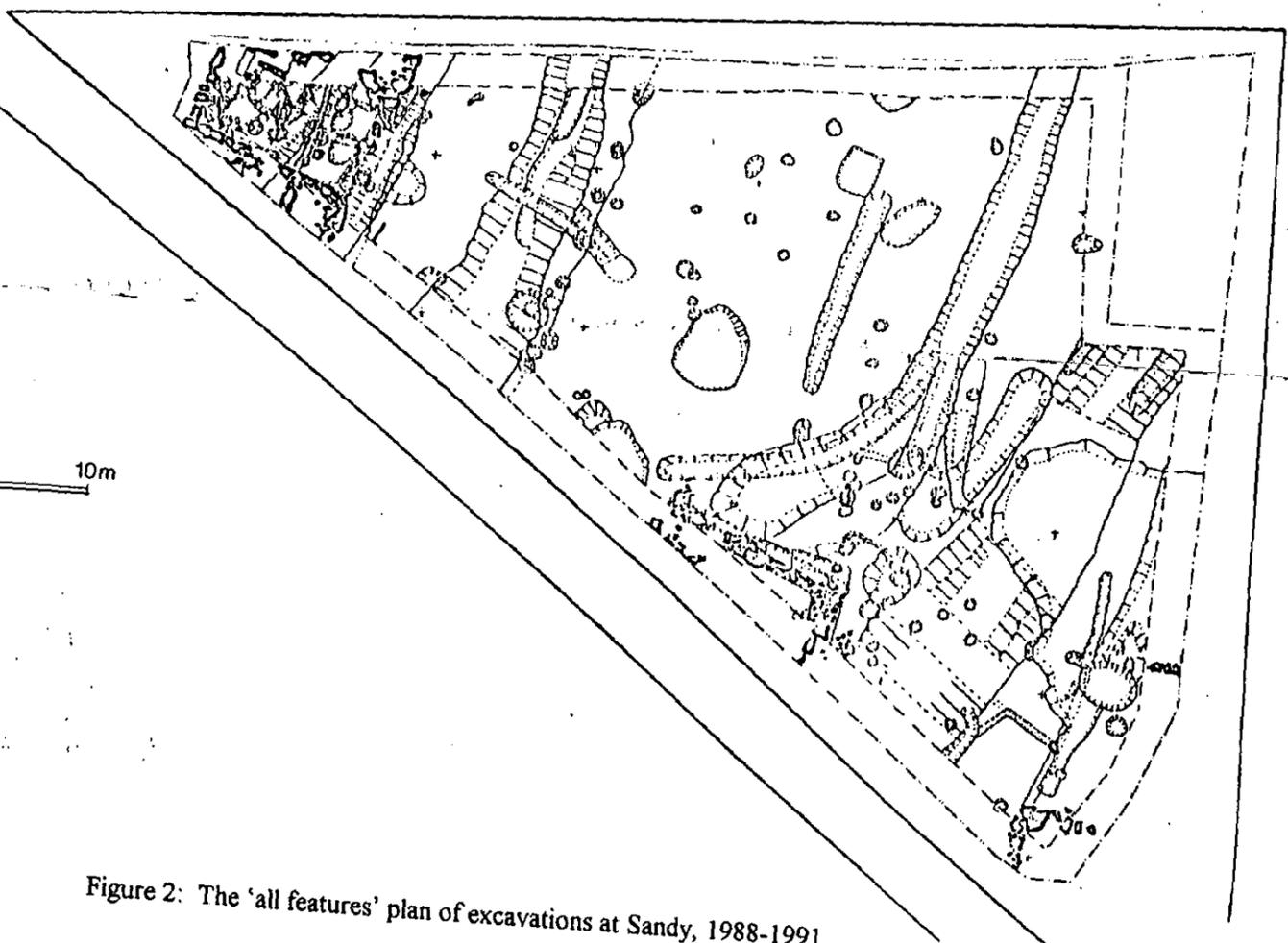
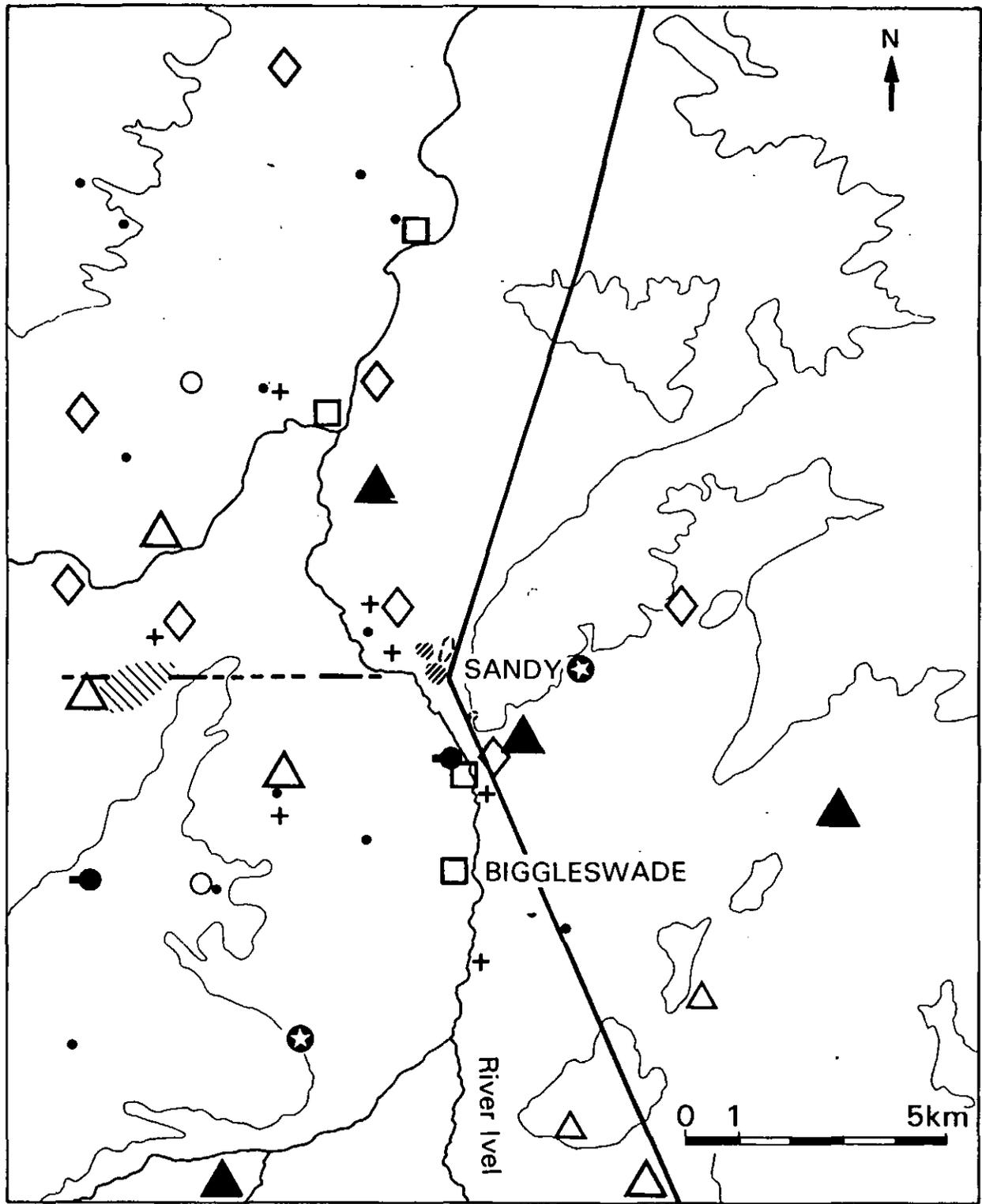


Figure 2: The 'all features' plan of excavations at Sandy, 1988-1991.

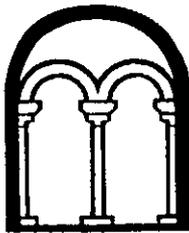


- | | | | |
|--|---|--|-----------------------------------|
| | 50m. contour | | area of extensive cropmarks |
| | Roman settlement within the town of Sandy | | evidence for occupation |
| | road/ possible road | | kiln site |
| | villa | | inhumation |
| | possible villa | | cremation |
| | finds of Roman building material | | cemetery |
| | rural settlement | | isolated finds of Roman artefacts |
| | | | pre-Roman fortifications |

Figure 3: The landscape of Roman Sandy.

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