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BEDFORD SOUTHERN BYPASS

POST EXCAVATION ASSESSMENT REPORT

VOLUME 1: The Sites:
Statement of Potential for Further Analysis

Report No. 95/14
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Volume I of five

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Bedfordshire County Archaeology Service
Contracts and Consultancy

Volume 1: The Sites: statement of potential for further analysis

Contents

List of Tables

Preface

The route of the Bedford Southern Bypass cuts an 8.5km swathe along the valley of the River Great Ouse to the south and east of Bedford town centre. It runs from the Kempston Southern Relief Road in the west, through the villages of Elstow and Harrowden, and across open country, bridging the Ouse beyond the Castle Mill airfield, and meeting the A428 St Neots Road to the east. The road passes through an area rich in archaeological remains, the valley bottom and sides having been a focus for settlement from the end of the last Ice Age to the present day.

The archaeological potential of the area, and the likely impact of the proposed development, was recognised at Public Inquiry in 1990. Subsequent to this a programme of investigative fieldwork was initiated across approximately 500 hectares, encompassing almost the entire route of the road. This has enabled the collection of a valuable archaeological database covering a wide range of periods and a variety of settlement, funerary and other contexts, but in particular focusing on long-term changes in the landscape.

The main phase of fieldwork was undertaken between October 1993 and July 1994, comprising excavation on eight separate sites:

- *Peartree Farm*
- *Village Farm*
- *Bunyan's Farm*
- *Manor Farm*
- *Bumpy Lane*
- *Harrowden*
- *Eastcotts*
- *Octagon Farm*

This was preceded by a period of intensive evaluation, and followed by a watching brief that continues as construction takes place. All the major pre-construction works have been commissioned by the Highways Agency and undertaken by the Bedfordshire County Archaeology Service (BCAS).

This report presents an assessment of the results based on a provisional examination of the data and in accordance with guidelines laid out by English Heritage in 'Management of Archaeological Projects' (MAP2). The importance and significance of the project, both in terms of the individual sites and the landscape is considered, with recommendations for further analysis. In general the MAP2 format has been followed, but with such a large project an overriding aim has been to facilitate effective communication and prevent repetition, and so the full report has been bound in five volumes:

Volume 1: The Sites: Statement of Potential for Further Analysis
Volume 2: The Evidence
Volume 3: Atlas of Plans
Volume 4: The Landscape: Statement of Potential for Further Analysis
Volume 5: Updated Project Design

The first three volumes are to be read together, presenting the evidence and the potential of each site in turn. Volume 4 draws the sites together, highlighting group value and the potential for addressing enquiries into landscape formation. The final volume, Volume 5, presents the method statement, resource programmes, and estimated costs for analysis and publication.

Acknowledgements

A large number of BCAS staff have contributed to these volumes under the overall project management of Mike Dawson (Senior Archaeological Field Officer). Nick Shepherd (Project Officer), Holly Duncan (Non Ceramic Finds Manager) and Anna Slowikowski (Ceramic Finds Manager) have been responsible for the overall compilation of the report including a number of the individual sections. In addition sections have been written by Jackie Wells (Finds Supervisor for Harrowden and Eastcotts) and Ed McSloy (Finds Supervisor for Village Farm, Bunyan's Farm, Manor Farm, Bumpy Lane and Octagon Farm with special responsibility for lithics). Other BCAS contributors include Anthony Maull (Site Supervisor Peartree Farm), David Fell (Site Supervisor Village Farm), Christine Atherton (Site Supervisor Bunyan's Farm, Manor Farm and Octagon Farm), Ron Humphries (Site Supervisor Bumpy Lane and Harrowden) and Andy Thomas (Site Supervisor Eastcotts). Much of the basic sorting and analysis of environmental remains was carried out by Eden Hutchins (Environmental Supervisor). Illustrations were produced by Cecily Marshall. Where external consultants have made contributions these are acknowledged in the text.

1. INTRODUCTION

1.1 Topography and land use

The topography of the route is characterised by the Pleistocene and more recent floodplain and terrace formations associated with the River Great Ouse. The precise terrace morphology is complex; the valley widens just to the west of Bedford, emerging from the relatively narrow confines above Biddenham and Kempston to form the Vale of Bedford. It is in this area that terraces begin to develop, although these are not fully recognisable until further downstream beyond Bedford in the St. Neots area (Rogerson 1987). Gravel beds were laid down at the end of the late Last Glacial and cross-bedding observed at Willington suggests that erosion has flattened out undulations left by fast flowing glacial outwash streams. During the early Holocene this area was dissected by a complex network of palaeochannels demonstrating the highly braided nature of the early river. These palaeochannels are still visible as a pattern of crop-marks and were located within the areas of excavation. More recent alluviation, dating from the late Iron Age and late Roman periods, is visible as dark staining on aerial photographs along either side of the modern channels and has contributed to a further levelling of the landscape.

To the south of the river a number of tributary streams have cut shallow valleys into the glacial and alluvial deposits. The most important of these is the Elstow Brook and for much of its route the new road follows a course parallel to this stream.

The topography is fairly flat at a maximum of 31m aOD in the west at Peartree Farm on the first gravel terrace, falling to 24m aOD in the east at Octagon Farm on the edge of the floodplain terrace.

The soils in the area are moderately stony, fine loamy argillic brown earths, with gravelly subsoils predominantly found in association with river terrace gravel of the Efford 1 soil association. In addition, calcareous clayey soils occur over areas of alluvium (Soil Survey 1983).

Land use at the time of the investigations was predominantly arable, from the A6 in the west to Bumpy Lane and from the A603 to the Ouse. The middle section, in the Harrowden area, lies within the valley of the Elstow Brook and is consequently more low lying and prone to flooding. Here sheep and cattle pasture had been established.

1.2 Archaeological background

The route of the Bypass passes along the valley bottom of the River Great Ouse through an area known to be rich in archaeological remains. The primary source of data in reconstructing the ancient landscape has been aerial photographs housed within the Historic Environment Record (HER), and these pick out a dense pattern of often superimposed crop marks scattered across the arable fields. Most striking are the ritual monuments dating from the middle Neolithic into the Bronze Age centred on the Cardington cursus complex, and including one of the few regional examples of a causwayed camp. The majority of the crop marks appear to signify enclosed Iron Age and Roman settlement sites with droveways and in-field enclosures, larger double and triple boundaries possibly marking territorial units.

Although rescue excavation has greatly increased the range and quality of data available for the Ouse Valley, little synthetic work has been carried out, and general surveys for the Iron Age (Simco 1973; Dyer 1976; Knight 1984) and Romano-British periods (Simco 1984) rely heavily on unstratified material and salvage excavation. More up to date work (Clark and Dawson forthcoming) serves as a useful interim on recent large scale investigations, but can only begin to highlight some of the themes developing out of these projects, and attempt to point the way forward in developing research and conservation frameworks. The current state of knowledge prior to the completion of the BSBP was outlined in the report on the evaluation (Dawson 1993a) and is reproduced in this report in Appendix 1.

Although the archaeological potential of the Ouse Valley had been recognised no substantive work had been carried out on any of the Bypass sites prior to the initiation of this project. The crop-marks were however well known, and surface collected material and geophysical survey had further characterised some of the sites. The most important opportunity for investigation in this area had been the construction of the Southern Orbital Sewer in the mid seventies, although only a watching brief was possible and results were limited (White 1977; 1980). In areas adjacent to the Bypass work has been carried out on a number of sites (e.g. Mill Farm) but it has been largely the crop-mark evidence, and inference with other valley floor environments that has informed our understanding of the nature and development of human occupation in this area.

The first phase of archaeological evaluation along the proposed route of the Bypass was commissioned by English Heritage in 1990. Work was concentrated in the area of the monument complex at Octagon Farm and was designed to characterise the survival of deposits and to assess the impact of development. These results, and recommendations on further evaluation and fieldwork were presented to Public Inquiry in April 1990 (Baker 1990)(see Appendix 2). Subsequent to this a programme of evaluation across the whole of the Bypass route was agreed. Extensive desk top survey was augmented with field visits, geophysical survey and trial trenching; the results were presented in June of 1993 (Dawson 1993a). This confirmed the potential of this part of the Ouse Valley and highlighted seven sites of national or regional importance, all threatened with destruction:

- **Peartree Farm;** a Romano-British farmstead with Iron Age antecedents
- **Village Farm;** prehistoric ring-ditches
- **Bunyan's Farm;** an Iron Age and Romano-British Farmstead
- **Manor Farm;** enclosure systems of Iron Age and Saxon date
- **Harrowden;** the well preserved earthworks of a medieval shrunken village
- **Eastcotts;** prehistoric burial and landscape boundaries and later Roman settlement
- **Octagon Farm;** a Scheduled Ancient Monument, comprising Neolithic and Bronze Age.

In addition, it was always undertsood that the project's underlying aim was to understand the evolution of the archaeological landscape, and the sum of the project was therefore seen to be far greater than the individual value of its component parts.

The design of the road was altered where possible to take account of these sites, embankments being constructed at Bunyan's Farm, Manor Farm, Harrowden and Octagon Farm to protect the deposits. In these sections limited archaeological excavation took place, but elsewhere, where topography or existing development militated against altering the design, large scale excavation was undertaken (e.g. Peartree Farm, Village Farm and Eastcotts). The quantity and complexity of evidence in some areas demanded the scope of investigation be expanded as at Village Farm and Eastcotts.

The final phase of fieldwork comprised a watching brief, carried out during the construction of the road. Observations have added significantly to our understanding of the sites at Eastcotts and Village Farm with important monitoring work undertaken in the area of the Octagon Farm scheduled ancient monument. This work continues, with substantial topsoil stripping still to take place between Bumpy Lane and the A603 Harrowden Road.

1.3 Project Aims

The Landscape project aims are stated and discussed in Volume 4. Within this volume the results of fieldwork are assessed against the site specific aims. Although the original project aims are comprehensive in terms of the results expected, they do not of course address additional themes that have arisen as a consequence of new and unforeseen discoveries. Many, particularly those addressing generalised aspects of development and social and economic frameworks, can still be applied to the new data, but new aims will also need to be framed. Of particular note are the Iron Age, Saxon, and medieval remains at Village Farm; all unknown prior to excavation, and the prehistoric and Roman evidence from

Bumpy Lane; which were entirely unexpected before access was arranged for evaluation. Eastcotts was considered of particular importance because of the prehistoric remains recovered from the trial trenches, once stripped it became clear that the majority of the evidence dated to the Roman period; likewise at Harrowden where a previously undetected Romano-British settlement underlay the medieval earthworks. Assessment has allowed the generation of new aims and objectives, incorporating many of the themes expressed in the original Project Design, and also taking account of the results of excavation, and in particular the new discoveries outlined above. These updated aims and objectives are presented in Volume 4, section 3, and provide the foundation for the methodologies of analysis, and format of publication, outlined in Volume 5.

1.4 Summary of results

Fieldwork has demonstrated activity settlement in the study area from the early prehistoric through to the present day, with evidence for almost continuous occupation. In addition, valuable data has been recovered on the development of the natural topography and the floral and faunal environment, and how these influenced, and in turn were affected by, human settlement.

Flint scatters were recorded throughout the entire route of the Bypass and testify to activity from the Mesolithic and early Neolithic. Direct evidence for settlement during the later Neolithic/early Bronze Age was recovered at Peartree Farm, Manor Farm, Bumpy Lane and Eastcotts. The excavations at Octagon Farm of parts of the Cardington Cursus complex formed the focus for investigations into the contemporary ritual and ceremonial landscape, with seventeen of the individual monuments sampled and further examples excavated at Village Farm and Eastcotts.

Limited evidence for Bronze Age settlement and enclosure was recorded at Bumpy Lane and Bunyan's Farm with further analysis holding out the prospect of identifying similar activity at Eastcotts and Octagon Farm. An intensification of settlement and activity is visible from the early Iron Age with early to middle Iron Age material recovered from all the Bypass sites. The evidence from structural observations, artefacts and ecofacts combines to suggest a densely occupied landscape. A simular picture emerges for the Romano-British period, although as yet the nature of the late Iron Age / Romano-British transition is poorly understood. Roman period evidence constituted the largest single body of data with two major occupation sites excavated at Peartree Farm and Eastcotts. Both represent types of non-villa rural settlement common within the study area but little investigated. Evidence for Romano-British settlement was also recovered from Bumpy Lane and Harrowden.

At Peartree Farm developments late in the Roman period hint at sub-Roman activity, and early Saxon material has been found here, and in more substantive form at Village Farm. Village Farm appears to demonstrate continuous activity from the early to late Saxon period, in contrast to the single period middle Saxon site at Manor Farm. Both sites demonstrate the shifting and episodic nature of Saxon settlement, and this pattern of complexity can be seen to continue into the later medieval period, again at Village farm, but also at Harrowden where the surviving earthworks mask a complex history of development.

The following table demonstrates the range and variety of material recovered from the Bypass sites.

Table 1 Quantification of datatypes across all the Bypass sites

Data type/Site	Contexts	Recorded finds	Pottery sherd count	Animal bones (boxes)	Environmental samples
Peartree Farm	1974	201	4668	24	118
Village Farm	2204	76	2404	10	63
Bunyan's Farm	198	-	65	-	11
Manor Farm	293	4	174	4	16
Bumpy Lane	485	7	602	1	10
Harrowden	477	48	1196	4	13
Eastcotts	3239	262	15812	31	153
Octagon Farm	1109	-	179	-	22
Total	**9979**	**598**	**25100**	**74**	**406**

Note: A more detailed breakdown for each site is presented in Volume 2 with integrated summaries for each datatype within Volume 5.

Thirteen major periods of activity were identified (not including natural deposits and unphased features) covering the prehistoric through to the modern era. It should be noted that table 2 indicates the periods represented after provisional phasing had taken place. A more interpretative and integrated summary is shown in table 1, Volume 4.

Table 2 Summary of Periods represented by site

SITE CODE	PT	VF	BF	MF	BL	HA	E	OF
PERIOD 1 Natural								
PERIOD 2 Early prehistoric								
PERIOD 3 Neolithic								
PERIOD 4 Late Neolithic/EBA								
PERIOD 5 Bronze Age								
PERIOD 6 LBA/EIA								
PERIOD 7 Iron Age (E/MID/L)*								
PERIOD 8 Late IA/ERB								
PERIOD 9 Romano-British								
PERIOD 10 Late RB/early Saxon								
PERIOD 11 Saxon								
PERIOD 12 Saxo-Norman								
PERIOD 13 Medieval								
PERIOD 14 Post-med. to modern								
PERIOD 15 Unphased								

KEY: PT=Peartree Farm VF=Village Farm..BF=Bunyan's Farm MF=Manor Farm BL=Bumpy Lane HA=Harrowden E=Eastcotts OF=Octagon Farm

*Period 7 covers the early, Middle and late Iron Ages.

Note: Period 15 contains contexts that are currently unphased on the grounds of poor dating, stratigraphic or spatial relationships (see Volume 5, section 2.1.2)

Peartree Farm: Neolithic tree-clearance and possible settlement
Early to late Iron Age boundaries and peripheral settlement
C2nd-C5th Romano-British Farmstead
Sub-Roman/early Saxon occupation
Medieval cultivation

Village Farm: Late Neolithic/early Bronze Age ring-ditches
Early to middle Iron Age settlement
Early and late Saxon settlement

C11th-C15th settlement

Bunyan's Farm: Late Bronze Age/early Iron Age settlement
Iron Age boundaries

Manor Farm: Late Neolithic/early Bronze Age settlement
Early to mid Iron Age boundaries
Middle Saxon settlement

Bumpy Lane: Neolithic settlement
Late Bronze Age/early Iron Age settlement
Early to middle Iron Age settlement and enclosures
Romano-British boundaries

Harrowden: Late Iron Age boundary
Romano-British settlement
C11th-C15th settlement
Post-medieval settlement

Eastcotts: Neolithic burial/ritual activity
Late Neolithic/early Bronze Age boundaries
Late Iron Age settlement
C1st-4th Romano-British settlement
Medieval cultivation

Octagon Farm: Middle/late Neolithic cursus and mortuary enclosures
Late Neolithic/early Bronze Age barrow cemetery
Early Iron Age boundaries and settlement
Medieval cultivation

1.5 Potential and significance

The location of the study area within the valley floodplain has lead to the discovery of a wide variety of evidence and this shows exceptional potential for investigations into landscape development , settlement and land use.

A number of themes of national importance can be addressed by the sites individually and as a group, and these have been highlighted by Darvill (1987) in *Ancient Monuments in the Countryside* and English Heritage (1991) in *Exploring Our Past: Strategies for the Archaeology of England* (EOP). Both these documents were widely referenced and quoted in the original Project Designs and their recommendations underpin many of the strategies employed during fieldwork and proposed for analysis and publication.

The significance of the project is further enhanced by its relevance to current research at a national level. This is increasingly targeted towards identifying regional patterns of diversification (Thomas 1991; Hingley 1989) for which the Ouse Valley is an important but so far little understood area. Significant in its own right, this study is also important in terms of the contrasts and comparisons to be drawn with other more widely investigated river valleys and lowland landscapes such as the Nene (Windel *et al* 1990), Welland (Pryor and French 1985; Pryor 1991), Upper Thames (Benson and Miles 1974), and Fenland areas (Hall and Coles 1994).

The scale of work undertaken within the Bypass, spanning the Mesolithic to the post medieval period, provides a framework for the future integration and interpretation of many other projects, and will contribute to the development of integrated and coherent conservation and management strategies. This is particularly important within the context of developing regional research frameworks, currently encouraged by English Heritage, and exemplified by papers at the recent Ouse Valley conference (Dawson *et al*, in prep.).

Throughout the five volumes of this report the landscape potential of the project is highlighted. From the design stage through to publication it has always been the primary aim to provide a picture of development, both spatially and chronologically, that applies to the whole landscape. This has been possible firstly because of the scale of works, the Bypass transect allowing the investigation of over 500 hectares of the valley bottom, and secondly because of the great range and variety of evidence uncovered. Excavations of known crop mark and earthwork sites have been undertaken, and extensive survey and evaluation has allowed the identification of new sites. Importantly, fieldwork has not only concentrated on the various foci of settlement activity, but on the hinterland of sites, with investigations carried out on extensive field systems and the areas between them. This volume spotlights the potential of the individual sites, and in all cases significant evidence has been recovered that will amply repay further appropriate analysis. As each site is considered separately, however, it should be born in mind how they articulate to provide the landscape dimension, and it is in this that the greatest potential lies.

2. THE SITES

Within this section each site has been assessed separately, independent of its significance to the landscape. The potential of the project to address themes of landscape development is considered in Volume 4. The sites have been assessed against the original project aims outlined within the Project Designs, and each data set; structural, non-ceramics, ceramics, human bone, animal bone, and macroscopic plant and invertebrate remains, is dealt with in turn (where the quality of the lithic assemblage warrants separate consideration this also appears individually, otherwise it is covered under non-ceramics). This mirrors the organisation of the original Project Designs and facilitates a close assessment of the results, the potential of each data set being ranked as of *high*, *good*, *moderate*, or *low* potential. A tabulated summary of the site's potential, and a quantification of the relevant data is presented at the end of each site section. The evidence supporting these statements of potential is contained within Volume 2.

2.1 PEARTREE FARM

2.1.1 Summary of results

Area excavations covering 1.8ha revealed a sequence of activity spanning the Neolithic through to the medieval period. During the Romano-British period, the site was occupied by a small farmstead, probably representing a single family group.

The earliest period of activity relates to tree clearance during the Neolithic, a single tree throw containing ceramics and lithics indicating domestic activity. The land had been cleared by the Iron Age, and parts of a ditch system, marking the site of fields or stock enclosures were excavated. Only very fragmentary remains of occupation were recovered, but the settlement site may not have been far away. The majority of features dated to the early to middle Iron Age, although enough late Iron Age pottery was recovered to suggest activity may have continued into this period.

The Roman farm appears to have been established in the second century AD, there being no evidence for continuity of settlement from the Iron Age. The domestic focus was difficult to identify, but concentrations of pits, post-holes and gullies suggest it occupied the NW part of the site, with a track or droveway to the west, and in-field enclosures to the east. Although the layout of the farm remained largely static for most of the Roman period, three phases of development were identified. The first two represented relatively minor amendments to the system, the third a major change with smaller enclosures cutting across the earlier system. This final phase may herald the decline of the settlement in the later Roman period. Two isolated inhumations also date to this phase and there is evidence for sub-Roman/early Saxon activity into the fifth century, including early Saxon sherds within the upper fills of pits cutting the Roman ditches. The resolution of these later phases remains a key task within analysis. There is no evidence for middle or later Saxon activity, nor for any settlement during the medieval period when the site lay within the open fields of Elstow.

Few comparable excavations have taken place within the Ouse Valley except at Odell, two decades ago in the 1970s (Dix 1980; 1981), and at Eastcotts, also part of the BSBP. The pre-eminence of features such as droveways and enclosures bears comparison with sites such as Little Paxton near St. Neots (Jones and Ferris 1993) and Warren Villas in the Ivel Valley (BCAS in prep.). Similar Romano-British sites within south-east England include Maxey (Pryor and French 1985) and Wyboston (Tebbut 1957).

2.1.2 Statement of potential for further analysis

The evidence at Peartree Farm has moderate to good potential to address the original project aims. In particular the structural and ceramics will enable the investigation of the formal development of the settlement over time. Important indications of Neolithic tree clearance and settlement were identified with possible Iron Age antecedents to the Roman settlement. Within the Roman period at least three phase of development can be seen. Sub-Roman or early Saxon activity was also represented. All these periods can be further clarified and characterised. The internal development of the Roman period settlement is particularly interesting and an integrated study of the structural, artefactual and ecofactual remains should be possible, assisting with the identification of areas of activity.

In addition to the site specific aims discussed below Peartree Farm has good potential to contribute to the overall updated landscape aims of the project (volume 4, section 3). In particular the evidence for early prehistoric activity is significant in characterising deforestation and the nature of settlement (***aim 3.3:*** *Settlement and Land use, and* ***3.3*** *Environment*). The nature of the relationship between the Iron Age and Romano-British remains has the potential, along with sites such as Eastcotts, to begin to describe the transition from Briton to Roman, and likewise, the later periods of occupation can illuminate the sub-Roman/early Saxon period (***aim 3.4****:Processess of change*). The substantial Roman period remains

provide a benchmark database for this type of site, and together with the settlement at Eastcotts allows the foundations of rural settlement models to be established for the Ouse Valley (***aim 3.1:*** *Non Villa Romano-British settlement*). Overall the Pcartree Farm evidence makes a fundamental contribution to the study of the development of the Ouse Valley region and further analysis will prove valuable at both a site and landscape level.

The following section details the potential of each dataset in relation to the original site-based project aims and includes, where appropriate, new aims identified during assessment. Where the site has no potential to address an aim this has been omitted. Likewise where an aim can only be addressed by a limited number of datasets, those datasets of no potential are also excluded.

Original project aims

In common with the global project aims, these have been re-cast from those listed in the original project design to facilitate assessment. Numbers in brackets cross-refer to the original statements.

Project aim 1: To determine the development, status, extent, and date of the site. (1.2)(1.5)(2.4)

Structural

The structural data has **good** potential to address this aim. It provides the primary evidence for the formal development of the site through time. The excavated sample will provide a diachronic and spatial framework for all subsequent artefactual and ecofactual analysis. Provisional phasing has identified five main periods of activity from prehistoric tree clearance to medieval agriculture. The majority of the evidence dates to the Romano-British period and it is within this body of data that the greatest potential rests. Although direct evidence for buildings and structures is absent, there is potential for identifying some details of spatial organisation and development within the settlement focus. The sample size and level of preservation of ditched boundaries is good enough to identify a sequence of at least three phases within period 9. Further analysis will concentrate on defining the detail of these phases and on establishing the exact nature of later activity, sub-Roman use of the site and tentative evidence for early Saxon occupation. In particular, the problems of residuality and contamination have to be explored, especially within the context of the upper fills of some of the larger more long-lived ditches; these factors currently exert an unquantified bias on the provisional phasing structure.

The form and layout of the farmstead reflect its status and function and this is of primary significance in fixing its relationship to other contemporary sites. The artefacts suggest that the site may have constituted a single family holding (see project aim 4), a simple farmstead towards the lower end of the settlement hierarchy. Other similar, but less well investigated or reported examples, can be seen at Bunyan's Farm (this volume) and Cardington (HER 9081) and further afield at Odell (Dix 1981). Useful comparisons can be made with more extensive sites at Eastcotts (this volume) and Warren Villas (BCAS in prep.).

Non ceramic artefacts

A study of these artefacts and the nature of their deposition, (in combination with ceramic, environmental and structural evidence), has **moderate** potential to address this project aim.

The assemblage can provide a general indicator of date, lithics of Mesolithic and late Neolithic/early Bronze Age date being of prime importance in fixing the presence of early prehistoric activity. The greatest quantity of evidence for occupation was attributable to the Roman period. The assemblage is concentrated in the second to the late fourth/early fifth centuries. The glass assemblage in particular will be of assistance in refining the dating of some of the features within the Roman period, as several of the vessel forms recovered are typologically well understood and in some cases relatively closely dated (see Table 7).

The only phase of occupation that has potential to address status is Period 9, Romano-British. Although the number of registered artefacts for this period is limited, the presence of non-essential goods, for

example glass vessels and items of personal adornment, suggests that patterns of socio-economic contact, and thus status relative to contemporary local and regional sites, may be sought.

Ceramics
The pottery has **good** potential to determine the development and date of the site through the spatial distribution of chronologically sensitive groups. The presence of the full date range of pottery, from the early prehistoric to Saxon periods, helps to provide the chronological framework within which the site developed. The pottery has moderate potential to determine the status of the site, the limited, domestic nature of the assemblage is an indicator of the status, and, when considered with the other artefactual evidence, will help to address this part of the Project aim.

Animal bone
The animal bone has **moderate** potential to inform on the development and status of the site in that it represents husbandry, one of the major activities present on site.

Microscopic plant and invertebrate remains
The data has particular importance in contributing to our understanding of the earliest period of site use, suggesting clearance of oak woodland, possibly during the Neolithic period. Together with ceramics the data has **moderate** potential to shed light on the progress of deforestation.

The data also has particular importance in characterising Period 10 settlement. The charred grain assemblage is 'characteristic of the fifth rather than the fourth century' (Mark Robinson pers. comm.), strengthening the argument for late and possibly sub-Roman occupation of the site.

Summary
Overall, the Peartree Farm data has good potential to address themes of development, date and extent with perhaps only moderate potential to address status. The structural evidence, in concert with dating evidence from finds will furnish the chronological and spatial framework forming the basis for interpretative discussion. Stratigraphic relationships and pottery dates are precise enough to identify broad periods and sub-phases, and it is expected that incorporation of numismatic evidence and a better appreciation of residuality and contamination will further refine our understanding of the site's development.

The status of the site in terms of settlement hierarchy and socio-economic relationships with contemporary groups is harder to define and depends to a greater extent on evidence recovered from a range of contemporary sites across the region. Comparative data is readily available from Bypass sites, especially Eastcotts but also Harrowden and Bumpy Lane, and further to the east within the Ouse catchment at Warren Villas and Little Paxton (Jones and Ferris 1993).

Project aim 2: To determine how many periods were represented; was there evidence for continuity, or had the site been occupied episodically? (1.2)

Structural
The structural data has **good** potential to identify continuous or episodic occupation. Multi-period occupancy can be demonstrated but gaps are evident in this sequence. Further analysis will clarify the relationship between the Iron Age and Roman periods, where discontinuity is apparent in the layout of the two systems, and between the Roman and later occupation, where a certain degree of continuity or re-use can be suggested.

Non ceramics
A survey of the registered and non-ceramic bulk artefacts has **moderate** potential to address this aim and indicates that occupation of the site was episodic in nature. Although the flint assemblage indicates Mesolithic activity, its character and extent remains unclear due to the residual nature of the assemblage. The late Neolithic/early Bronze Age assemblage from Period 4 does appear to be from undisturbed contexts; the evidence however is limited. This combined with the ceramic and structural evidence can indicate activity on the site, but has low potential to determine the extent and duration of this occupation.

Evidence for Saxon activity is limited to a single ceramic loomweight suggesting Saxon activity in the vicinity. No artefacts datable to between the Saxon and the late-to-post-medieval period were recovered. Artefacts of this later period were all recovered from either furrows or land-drains.

Analysis of the artefact types will assist in refining dating and in characterising periods of activity.

Ceramics

The pottery, generally, has **good** potential to address this question although the potential of each period varies. The early prehistoric, medieval and post-medieval pottery has little potential for further establishing details of activity during these periods. It has no potential for indicating continuity or a hiatus in occupation. The Iron Age has some potential for determining whether continuity occurred on the site through the relative proportions of different pottery types. Too few sherds were found to be able to define the nature of that activity, although Iron Age occupation has been observed close by (Woodward 1977). The Roman period produced the highest proportion of ceramics, dating from the 2nd to the 4th centuries, and has good potential to determine continuity throughout the sub-phases defined for Period 9.

Summary

Overall the excavated evidence has good potential to address themes of continuity and discontinuity in the settlement and land use at Peartree Farm. Structural, non-ceramics and ceramics all indicate episodic activity with Mesolithic and late Neolithic evidence, peripheral settlement during the Iron Age, and a relatively late Romano-British foundation in the early second century. Further analysis should more closely define the date and nature of activity in all those periods and in particular focus on the boundary between the Iron Age and Roman periods. The nature of late Roman activity is also interesting, and here an integrated study has the potential to draw out the detail of the relationship between the Period 9.3 enclosures and the apparently later Period 10 pitting to elucidate sub-Roman or early Saxon occupation. At present it is difficult to characterise this late activity, but on grounds of form alone it appears to respect the earlier Roman enclosures and may indicate continuous use or re-occupation.

Project aim 3: To understand more fully how the site relates to the wider archaeological landscape of the Ouse valley. (1.3)(1.4)(2.1)(2.4)

Structural

The structural data has **good** potential to contribute towards this project aim. Data on the form and development of the site can be compared with other excavated and surveyed examples within the Ouse Valley and the wider region.

Non ceramic artefacts

Comparison of this material assemblage with that of Eastcotts, which has a broader based economy and probably denser population, has **moderate** potential to contribute to understanding the Roman rural settlement in the Ouse valley.

Analysis of the vessel glass in particular will provide a profile of the range and quantities of vessels in use on a rural Roman site. This profile can then be compared with other rural sites in the Ouse valley and the region, to see if a pattern of glass use and supply by rural site type emerges. This in turn can be compared with glass vessel use profiles from small towns and urban centres in the region in order to extend our understanding of the local Romano-British economy.

Ceramics

The pottery has **good** potential to help in furthering understanding of the archaeological landscape of the Ouse valley, by providing a chronological framework for this and other comparative sites in the region. The distribution of different fabric types will help to determine the pattern of ceramic use in the region.

Macroscopic plant and invertebrate remains

The material has **moderate** potential to contribute to reconstructing the natural and cultivated landscape, of the site, its hinterland, and by inference the wider landscape. The assemblage is of particular

significance for the Roman period and together with Eastcotts will provide the foundation for the construction of models of environmental change.

Summary
As a multi period site within the framework of the Bypass project Peartree Farm has good overall potential to address wider landscape themes. Integration of the evidence with sites such as Village Farm and Eastcotts will provide a useful model for the development of settlement and land-use patterns (in the Elstow area in particular), and for the social and economic interaction of contemporary settlement. Issues of landscape development and the potential of the Bypass project as a whole to address them are dealt with more fully in Volume 3 of this report.

Project aim 4: Had the site been occupied by a single family group, or were larger units represented? (1.2)

Structural
The structural data has **moderate** potential to address this aim. Beyond identifying the focus of occupation it has not yet been possible to reveal any detail of the number and form of buildings, evidence that might normally be expected to provide some indicator of population size. A more general indication of the size, organisation and status of the settlement is suggested by its overall form and this may indicate a single family unit rather than multiple occupancy. Comparisons with sites such as Odell (Dix 1981) and Fengate (Pryor 1991) provide a useful interpretative framework within which some estimates of the Peartree Farm population can be made.

Non ceramic artefacts
The artefacts cannot be used as a reliable indicator of population size although comparison with other sites may be instructive in identifying patterns of artefact use and deposition in relation to different site types.

Ceramics
When considered in conjunction with the other artefactual evidence, the pottery has **moderate** potential to address this project aim. Pottery is restricted in the same way as the non ceramics and cannot on its own provide a detailed estimate of population size or organisation. Analysis of the distribution and, in particular, the forms of the pottery, especially those assigned to period 9, will seek to identify more exactly the level of pottery use in any one phase, and the range of activities represented. In comparison with other sites it may then be possible to give some estimate of population size and social organisation.

Summary
Overall the evidence has moderate potential to address this aim. Insufficient evidence was recovered for buildings or the detail of settlement organisation to provide a framework for the assessment of the other material classes. In general terms the size and form of the settlement suggest a 'low status' site consistent with single family occupancy, similar sites to sites such as Odell, where house sites were preserved and appear to be organised at such a level.

Project aim 5: To investigate what functions and activities had taken place. Was the site economy based purely on agriculture, or had industrial/craft activity been undertaken, such as pottery manufacture, as suggested during the research design? (2.3)(2.5)(2.6)(2.7)

Structural
Although only broad zones of use can be identified the structural data has **good** potential to address this aim. Areas of domestic activity; in-fields and out fields, and details of settlement layout provide a useful framework for the analysis of spatial patterning of the artefacts and ecofacts, which in turn should feedback into interpretation of process and activity. Although evidence for specific activities appears to be

poorly represented, a good opportunity exists to investigate aspects of crop processing in the well-preserved 'steeping tank' and associated features on the southern edge of the site.

Non ceramic artefacts
Due to the limited quantities of artefacts, there is only **moderate** potential to address this aim.
The range of artefacts attributable to the Roman period, in the main household utensils, personal items of dress and toiletry and structural fittings indicates domestic, rather than craft/industrial, activity. Small quantities of smithing slag suggest occasional repairs to iron implements rather than the presence of a working forge which have existed away from the main domestic settlement.

Ceramics
The pottery has **moderate** potential to determine the activities that took place on the site, in particular the occurrence of food storage, preparation and consumption, by the distribution of different forms. The ceramics have particularly good potential for illuminating aspects of ritual activity in an analysis of the ditch deposit (1276) (see *New Project Aims* below). There was no further evidence recovered for pottery manufacture beyond the kiln bar found during assessment. Like iron-working, pottery production seems to have been carried out away from or on the periphery of settlement.

Animal bone
The animal bone has **good** potential to address this aim. The size and condition of the assemblage will allow analysis of species, age of death and sex to clarify the nature and organisation of husbandry at Peartree Farm. In particular comparisons can be made with assemblages at Eastcotts and Harrowden to compare strategies between the sites.

Macroscopic plant and invertebrate remains
The data has **moderate** potential to address this aim. In particular it provides evidence for a range of crop types and some indication of crop processing.

Summary
The structural evidence provides a useful spatial framework within which patterns of domestic, agricultural and craft activity can be determined. With the majority of material of domestic origin the [patterning is significant for the social organisation of space. Certain groups might indicate other processes. These are indicated in an assessment of the individual datasets, (crop processing and iron working for instance) but the potential to identify others through an integrated study is good.

Project aim 6: To recover material that will contribute to a fuller understanding of the social and economic framework within which the site developed. (2.2)(2.5)(2.6)

Structural
The structural data has **good** potential to address this aim by providing the framework within which this aim can be addressed. The implications for population size have already been addressed under project aim 4, and the social organisation of space in project aim 5 above.

Non ceramic artefacts
The structural and environmental evidence indicates settlement based on agriculture, and the artefact assemblage has shown **good** potential to suggest domestic and craft activity. Some indication of status however, is demonstrated by the acquisition of goods from external sources such as vessel glass, querns of Rhenish lava and millstone grit (Derbyshire/Yorkshire or less likely Devon, the Mendips or south Wales), a whetstone of Kentish ragstone, and personal items such as copper alloy bracelets and toiletry implements. Involvement in trade is attested by the presence of both coinage and a steelyard.

Study of the glass vessels in use at Peartree will contribute to the creation of a pattern of use of glass vessels on rural sites, an area that hitherto has received little study. Potential exists to use the vessels as an indicator of Romanisation thereby contributing to a fuller understanding of the social and economic framework in which the site of Peartree Farm developed.

Ceramics

The pottery has **good** potential for determining when agricultural activities took place, particularly during the early prehistoric period, although it has no potential to define the nature of that activity. The pottery has good potential to address trade and commercial contacts. The pottery assigned to period 9 shows, on preliminary assessment, an emphasis on regional trade and commercial contacts, with some continental imports. Analysis will seek to confirm this regional marketing pattern and define the regional context for the distribution of the pottery types found on the site.

Macroscopic plant and invertebrate remains

The data has particular importance in relation to establishing the 'economic mix' of the site and for agricultural policies specifically. It has **good** potential, along with animal bone, to highlight the general arable-pastoral balance, although probably too little material survives for a detailed diachronic study to be undertaken. There is potential to investigate the significance of the crop types as marketable commodities, contributing to the determination of trade networks within which the farm existed.

Summary

The position of non-villa communities within the socio-economic framework of the Romano-British countryside is still little understood, despite evidence that they formed the most numerous settlement type (Hingley 1991a). This has largely been due to the bias in excavation and survey towards villa sites and the Peartree Farm evidence has good potential to explore aspects of site specific and more general significance for this class of non-villa site. The spatial organisation of the site, particularly during the Romano-British period, suggests a small arable farming community, with a pastoral element. Ecofactual data can contribute towards understanding the arable/pastoral balance as well as detailing specific activities and crop types. Trade and social contacts, the degree of integration into a market economy and issues of 'Romanisation' can all be dealt with through an integrated approach to the evidence (Millet 1991).

Project aim 7: To recover environmental evidence towards making a significant contribution to regional studies. (2.5)

Animal bone

The animal bone has **moderate** potential to contribute to this aim, largely for the Romano-British period. Although the majority of remains relate to domesticates, red deer and hare within the bulk assemblage and rodents, amphibians and small birds within the sieved material are indicative of the wild fauna.

Macroscopic plant and invertebrate remains

The data has **good** potential to contribute towards this aim. The types of crop present during the Roman period are typical for small lowland rural sites, but in the absence of good comparative evidence from the locale or region, this data will make an important contribution towards constructing regional models within which the Ouse Valley can be assessed and future research frameworks assembled.

Summary

Although a relatively small sample in terms of size, the environmental potential is good as little previous work has been undertaken in the area. The potential of the Peartree material is significantly enhanced when considered with that from other Bypass sites (see volume 4).

New Project aims

'Unusual' depositional practices

Context (1274), a ditch terminal, contained a large assemblage of pottery, (1401 sherds including 91% of the total samian assemblage), and glass (87% of the total site assemblage), dating to the mid-late 2nd century. The glass is unusual in three respects. In the context of these excavations it is remarkable that so much glass was found in one feature when vessel glass was otherwise a rare find. It is also unusual in that

some of the fragments are large and join together. Roman vessel glass was generally collected for remelting and recycling. This tends to result in small fragments and there are rarely two or more fragments from the same vessel. The pottery vessels are unabraded and in substantially complete, if fragmentary, condition. Of these, seven are stamped samian vessels. Fabric types R03A and R03B are a major part of this context group, consisting of 436 sherds. One of the jars in fabric type R03B is a copy of a metal vessel, down to the rivets attaching the handle to the body.

The Antonine date of this deposit links it with similar unusual deposits of glass and pottery vessels at Towcester (Price 1980), Harlow (Price 1987) and Alcester (Price and Cottam 1994, 225). These were found in pits and often included reconstructable vessels. They clearly represent unusual, and deliberate, depositional practices and, although it is possible to suggest a utilitarian explanation such as an unfortunate accident to the best china cupboard, ritual explanations could also be invoked. Hingley (1990) has demonstrated the occurrence of special deposits used as boundary markers on Iron Age and Romano-British sites and further analysis has the potential to reveal spiritual or ceremonial aspects of the life of the inhabitants of mid-second century Peartree Farm.

Burial practice

The quantity of human remains from Peartree Farm is much too small for demographic study, but nevertheless adds to the corpus of material from the Ouse valley. The presence of inhumations obviously has significance to the development of the site in so far as it provides a point of comparison with other rural settlement within the Ouse Valley. In particular the evidence for isolated burial can be contrasted with those rural sites where burial in larger more organised cemeteries was practised (e.g. Ibbots field, Kempston), and the implications for social organisation and status discussed.

2.1.3 Peartree Farm: Summary statement of potential

Table 3 Summary of potential

Aim	Structural	Non ceramic	Ceramics	Human bone	Animal bone	Macro. floral and faunal remains
1 Development ,status and extent	★★★	★★	★★★	-	★★	★★
2 Continuity/discontinuity	★★★	★★	★★★	-	-	-
3 The wider landscape	★★★	★★	★★★	-	-	★★
4 Social structure	★★	★★	★★	★★	-	-
5 Functions and activities	★★★	★★	★★	-	★★★	★★
6 Social and economic framework	★★★	★★★	★★★	-	-	★★★
7 Environment	-	-	-	-	★★	★★★
Ritual deposition (NEW)	-	★★★	★★★	-	-	-
Burial (NEW)	-	-	-	★★★	-	-

★★★★	High potential
★★★	Good Potential
★★	Moderate Potential
★	Low potential
-	No Potential

Table 4 Quantification of relevant data for analysis

	Structural	Non ceramics	Ceramics	Human Bone	Animal Bone	Environmental	Other
Topography	Observations on fluvio-glacial deposits	19 Mesolithic flints (residual)	-	-	-	-	-
Neolithic/early Bronze Age	248 contexts; tree clearance and possible settlement	29 flints, 2 saddle querns	51 sherds of pot	-	-	-	-
Iron Age	70 contexts; enclosures and peripheral settlement features	-	102 sherds of pot (early to middle IA and Belgic IA)	-	5 contexts containing bone	1 sample containing carbonised spelt and oats	Good A.P. coverage and details of settlement on HER
Romano-British	1125 contexts; three phases of farmstead	134 recorded finds, 100 sherds of vessel glass	4427 sherds of pot, 106 frags of building material	Two inhumations	197 contexts containing bone	5 samples containing carbonised, spelt, oat and others	Good A.P. coverage and details of settlement on HER
Late Roman/early Saxon	22 contexts; pits	1 recorded find	71 sherds of early Saxon pot, 28 frags of building material	-	10 contexts containing bone	3 samples containing carbonised seeds	-
Medieval	196 contexts, cultivation	17 recorded finds	-	-	-	-	-

2.2 VILLAGE FARM

2.2.1 Summary of results

Area excavations (1.4ha) at Village Farm were initially targeted towards recording the ring ditches visible on aerial photographs, although evaluation and subsequent excavation revealed a long sequence of activity spanning the late Neolithic through to the post medieval period. The majority of the settlement evidence for all periods at Village Farm was unenclosed and dispersed. It was undetected prior to evaluation and difficult to characterise before full excavation. Crop marks, although they had developed over the ring ditches, did not indicate the site of Iron Age pits or the Saxon and medieval buildings. Given the longevity of occupation on the site metal objects and even pottery were surprisingly scarce, and so surface detection of the site was also difficult. Similar difficulties were encountered at Maxey where only six sherds were collected from topsoil sealing an Iron Age farmstead (Pryor and French 1985). The evidence at Village Farm is extremely important in indicating the dispersed character of settlement in this area and has great significance for the interpretation of sites where less extensive excavation has been carried out.

A large part of the two ring ditches was investigated providing evidence of possible re-use during the Iron Age. This was associated with unenclosed settlement, evidence for post-built structures and pit groups having been uncovered. The site was re-occupied during the early Saxon period and two sunken featured buildings were excavated along with a number of pits. After an apparent hiatus settlement resumed in the Saxo-Norman period and continued into the fifteenth century. An estate map of 1767 shows the area as enclosures on the edge of the Elstow open fields. Recent excavations at Medbury Lane show the Saxon and medieval settlement to extend up to 250m further to the south (see volume 2 appendix 1).

The site is of particular importance because of the light it throws on the changing pattern of settlement in the Elstow area. Recent work has provided substantial evidence for settlement and land use from the early prehistoric, and Village Farm fills an important gap in the sequence, notably for the early Saxon period. In particular the evidence at Village Farm emphasises the episodic nature of occupation in the area and illustrates the phenomenon of settlement shift. The picture of complexity and continuous development during the medieval period is in line with recent observations elsewhere emphasising a more dispersed or polyfocal pattern with relatively late nucleation (Taylor 1992).

The Village Farm evidence has been greatly enhanced by recent excavations immediately to the south at Medbury Lane. Work here has confirmed and extended our understanding of the Saxon and medieval periods, allowing a better appreciation of the extent and layout of domestic occupation during these periods, and also suggesting an element of continuity through the middle Saxon period.

2.2.2 Statement of potential for further analysis

The original project aims (1-3) were framed with special reference to the ring ditches, as prior to the first round of trial trenching there was no evidence for the Iron Age, Saxon or medieval activity. Project aim 1 however is broad enough to incorporate the full range of the final results and so all periods are considered. Project aim 2 is specific to areas immediately surrounding the rings. Fieldwalking was not carried out and so Project aim 3 cannot be addressed. Project aims 4 to 9 are new aims.

Overall the Village Farm evidence has good potential to address both the original and the new project aims. The range and variety of the evidence for domestic, ritual, agricultural and craft activities is impressive as is the chronological range of the site. In addition to the site specific aims discussed below, Village Farm has good potential to contribute to the overall updated landscape aims of the project (volume 4, section 3). In particular the longevity of site use means the site is pivotal in understanding settlement and land use development, for the Iron Age generally, and during the Saxon and medieval periods in the Elstow area (***aim 3.1**: Settlement and Land use, and **aim 3.4**: Transitional Periods;*

development of medieval settlement). Aspects of the prehistoric ritual landscape can be investigated, including the transition to settlement and agricultural forms (***aim 3.4**: Transitional periods; monument to settlement*).

The following section details the potential of each dataset in relation to the original project site specific project aims and includes, where appropriate, new aims identified during assessment. Where the site has no potential to address an aim this has been omitted. Likewise where an aim can only be addressed by a limited number of datasets, those datasets of no potential are also excluded.

Original project aims

Once machine stripping commenced, it became apparent that the site contained the remains of a wide variety of activity, ranging from the late Neolithic/Bronze Age to medieval periods. The changed nature of the site demands a revised set of project aims for both assessment and analysis. Numbers in brackets cross-refer to the original statements within the Project Design.

Project aim 1: To characterise the crop marks, and if possible compile a dating and chronological sequence. (2.2)

Structural

The Village Farm evidence has **good** potential for addressing this aim. Settlement at Village Farm appears largely to have been unenclosed and dispersed during the Iron Age and early Saxon periods, with only a loose framework of enclosures identified for the medieval periods. There were therefore few linear features with which to assemble a relative sequence; scattered pits and post holes, even discrete groups, could not provide an integrated network of stratigraphic links. At Village Farm, each major period appears to occupy a different area of the site and where relationships have not been identified, pottery spot dates have provided the basis of provisional phasing. Further stratigraphic analysis will be limited to instances where good internal sequences can be demonstrated.

The evidence has good potential to indicate the general form of settlement and land use and excavations at Medbury Lane make it clear that, for the medieval period at least, activity was far more extensive, with perhaps a number of separate settlement foci.

Non ceramics

Four periods of activity were identified from within this material, fewer than that suggested by combination of ceramic, environmental and structural evidence. The potential of this artefact group for addressing Project aim 1 is assessed as **low**.

The registered non ceramic and bulk assemblages include no certain evidence for Iron Age activity. Saddle quern Rf. 24 almost certainly belongs to this period although an earlier date cannot be ruled out.

Evidence for Saxon activity consists of a bone needle and a seax blade. No finds could be dated on typological grounds to the Saxo-Norman period.

The non-ceramic evidence is strongest for the medieval and post-medieval periods, with sixteen registered artefacts typologically datable to the 13th-17th centuries.

Flint

The flint has **moderate** potential to contribute to this aim by attesting to activity from the Mesolithic to the early Iron Age. The large quantity of 'in situ' flint (crudely formed flakes of characteristic Iron Age type) from upper fills of the larger ring-ditch complements the ceramic evidence and confirms the date of the secondary silting of this feature.

Ceramics

The pottery has **good** potential for the compilation of a dated sequence for the site, including the ring ditches, through the distribution of chronologically sensitive pottery groups. The presence of the full range of pottery from the early Iron Age to the post-medieval periods, although in varying quantities, helps to provide the chronological framework within which the site developed.

Ceramic registered finds

The ceramic registered finds have **moderate** potential to contribute to this aim for the compilation of a dating and chronological sequence for the site. However, because the typologically datable ceramic registered material relates to only two periods, a comprehensive chronological sequence cannot be compiled from this material alone.

Summary

The Village Farm material has moderate to good potential to address issues of overall characterisation, dating and chronology. Although stratigraphic relationships are few they serve to confirm the spatial evidence, and combined with pottery derived spot-dates, enable five main periods of activity to be demonstrated. The flint , non ceramic finds and registered ceramic finds are more important for specific episodes, the flint in determining Mesolithic activity and in confirming the date of the later use of the rings for instance, and the loomweights in re-inforcing the date and nature of Saxon occupation.

Project aim 2: **Using the Mill Farm and Goldington examples for comparison, to examine any features adjacent to the ring ditches. To investigate these for evidence of burial, ceremonial deposits or other evidence of function or contemporary environmental conditions. (2.3)**

Structural

Although areas adjacent to the rings were investigated it proved impossible to identify features that might have been contemporary with their construction and primary use; certainly no features indicative of ritual or ceremony were recovered. Activity of Iron Age date was identified, and this is clearly contemporary with the final phase of ring-ditch fills, providing a source for the refuse collected within them. Two cremations, one accompanied by Iron Age pottery, were recovered in the vicinity of the rings, and this might indicate satellite burial and the continued use of the site for funerary purposes. The exact nature of Iron Age activity is as yet uncertain and further analysis may demonstrate ritual rather than settlement. In particular the pit alignment remains enigmatic; some of the pits appear to have contained timber uprights while others display the characteristics of storage pits. The potential of the Iron Age material to address these aims is **good**.

Human bone

Insufficient human bone was recovered from either cremation to attempt any determination of age or sex although a study of bone type may indicate retention policies and therefore aspects of ritual deposition. It has therefore **moderate** overall potential.

Ceramics, flint and animal bone

An integrated study of the depositional relationship of these classes of material may indicate general domestic refuse or possibly recurring patterns indicative of more specialised activity such as feasting or other ritual. Work is currently underway on identifying these recurring patterns on Iron Age sites within the East Midlands (Adam Gwilt, Durham University) and the Village Farm material has **good** potential to contribute to this study. The animal bone in particular may repay study, special deposits consisting of whole or part animals are increasingly recognised as forming a pattern on Iron Age sites (Grant 1984; Harding 1972) and at Village Farm evidence for the possible burial of dogs, goats and badgers is recorded.

Summary

Evidence for activity contemporary with the construction and first use of the rings is difficult to identify: the lower fills of the ditches are almost sterile, and no associated features have been identified. Evidence for the later use of the ditches is abundant however, as is evidence for adjacent contemporary activity. This may be of a ritual nature and there is good potential to further investigate this.

New Project Aims

Project aim 4: With reference to the overall development of the site, to identify aspects of continuity and discontinuity in settlement site and land use.

Structural

Even allowing for the problems of stratigraphic interpretation outlined above, the potential to demonstrate episodic occupation (discontinuity of settlement site) is **high**. As already noted, settlement during each period appears to occupy discrete parts of the site and is clearly shifting across the landscape through time. Identifiable gaps in the sequence, notably during the Roman period and Middle Saxon indicate that settlement lay elsewhere (for instance at Peartree Farm and Manor Farm), while there may be continuity of agricultural use.

Non ceramics and flint

Both these categories, in so far as they indicate some of the periods, but not all, have **moderate** potential to contribute to this project aim.

Ceramics

The pottery has **good** potential to support an episodic model through the recognition of discrete period groups.

Summary

The value of the Village Farm material is highlighted in the potential for its integration with that from other sites within the Elstow area. This is especially true with regard to determining the pattern and development of settlement site. As has already been stated, a large body of data now exists with which to construct models, and Village Farm represents a vital building block.

Project aim 5: To understand how the site relates to the wider archaeological landscape of the Ouse valley.

Summary

The site has **good** potential to address this aim and the significance of Village Farm to the overall landscape objectives of the BSBP is discussed in detail within Volume 4. The wide range and variety of evidence recovered from the site allows connections to be made with other sites excavated as part of the BSBP and more generally within the Ouse Valley. For the prehistoric periods the ring ditches form part of a wide pattern of distribution of these monument types (Green 1974, Woodward 1978), and Iron Age settlement within the Ouse Valley has been studied recently by Knight (1984). Both areas of study provide useful data with which to draw comparative and contrasting examples, and both offer opportunities to place the Village Farm material within the wider landscape. The evidence is particularly important for the Saxon and medieval periods when set within the context of the parish of Elstow. With sites such as Peartree Farm, Bunyan's Farm, Manor Farm and Village Farm itself providing insights into earlier patterns of settlement, the later evidence can be integrated into work carried out to the north around Elstow Abbey (Baker 1971; Woodward 1977). Good potential also exists to explore the documentary record of the parish (Volume 5, section 2.2). The investigation of the development of medieval settlement and land use patterns within Elstow is one of the most important strands of analysis proposed (Volume 4, section 2.2.8).

Project aim 6: To understand the socio-economic organisation and structure of the settlement and how these changed through time. To attempt to identify the diagnostic factors instrumental in these changes.

Structural

The structural data might be expected to contribute to these aims through an analysis of the form and function of the settlement expressed in the organisation of space, disposition of dwellings and zoning of activity areas. The ability to address these themes varies from period to period. The entire settlement was not available for study and estimates of the full extent of the settlement cannot be made. During the Saxo-Norman and medieval periods building foci and activity areas can be identified and this evidence is significantly enhanced by the material from Medbury Lane. Together they possess **good** potential to address this project aim.

Ceramics

There is **moderate** potential to determine the nature and status of the site; to investigate what functions and activities had taken place and understand the social and economic framework within which the site developed. Identification of the different sources of pottery as well as regional distributions will determine the level of outside contact and trade during the different phases of activity.

Animal bone

The preservation of the bone is generally good and its potential for species identification, and recording of butchery/working marks is **good**. Its representation in all periods from the Iron age in reasonable quantities also suggests that the sample should be sufficient to highlight diachronic developments in husbandry that will contribute towards determining the socio-economic status of the site.

Macroscopic plant and invertebrate remains

Charred cereal remains for the prehistoric and early Saxon periods are very sparse and cannot provide a detailed picture of crop production. Those for the Saxo-Norman and medieval periods are better but still can only provide a general indication of some of the crop types that would have been in use. Some evidence for crop processing was recovered and so overall the material has **moderate** potential to address this aim.

Summary

The potential of the data to contribute to an understanding of the socio-economic structure of the site varies from period to period. All classes of information are present for the Iron Age and some attempts can be made to examine the overall functioning of the site and any ritual component. The evidence for the early Saxon period is limited in scope. In both the Saxo-Norman and medieval periods the database is broader and presents a good opportunity to construct frameworks for comparative study. During the later periods the better quality structural remains have good potential to provide an insight into social organisation and economic function

Project aim 7: To identify activities and processes, especially those linked to agriculture, craft, and industry, through an integrated study of structural data, artefacts and ecofacts.

Structural

Further analysis of the structural data has **moderate** potential to identify specific activities. It may be possible to identify broad zoning of activities in 6 above but direct evidence for agricultural or craft activity is better represented in the artefactual and ecofactual record. The main contribution of the structural data is in providing a framework within which residues can be interpreted. For instance two hearths have received archaeomagnetic dates of AD1140-1230 and AD1060-1120, the former possibly used for iron working, the latter for domestic or agricultural purposes.

Non ceramics

There is **good** potential from industrial/craft residues (slag and charcoal) to assess the nature and extent of these activities on site. Spatial distribution of this material, particularly the *in situ* furnace structures, may help to identify industrial 'zones'.

Ceramics

The ceramics have **low** potential to address this aim. Evidence for use of the pottery and the range of forms are indicative of a predominantly domestic assemblage. Industrial or craft activity on a large scale cannot be inferred from the ceramics, and likewise, no evidence of pottery production contemporary with the settlement was found. Evidence for non-ferrous metalworking is limited to single fragments from a mould and crucible from periods 11 and 12 respectively.

Ceramic registered finds

The ceramic registered finds are exclusively associated with the production and manufacture of textiles. There is **good** potential to infer such activity on site in periods 7 and 11. The further investigation of this material is relevant to understanding the social and economic framework within which the site developed.

Animal bone

This dataset has **good** potential to address this aim. The most important aspect of investigation relates to the nature of animal husbandry, for instance species profiles, slaughtering regimes and butchering techniques, these will throw light on general processes with distributions of material across site pinpointing activity areas. The bone assemblage covers the Iron Age, Saxon and medieval periods, and so comparisons can be made through time, and changes in the nature and location of activities recognised. In addition to animal husbandry the relatively good collection of wild species, especially for the Iron Age has the potential to demonstrate the scope and importance of hunting, and more generally the utilisation of the local environment.

Macroscopic plant and animal remains

Charred plant remains were recovered from all periods except the early Saxon, and an examination of the data has **good** potential to identify activities associated with the cycle of production, processing and consumption of plant crops. As with the animal bone it may be possible to identify activity specific areas, particularly for processing, and to examine diachronic changes between periods.

Summary

Overall there is only moderate potential to demonstrate specific activities across the site. This is confined to iron and textile working during the Saxon and medieval periods. Further potential does however exist within the charred seed to identify crop processing and within the animal bone to highlight butchery techniques and possible secondary use of bone. Neither of these areas can yet be quantified.

Project aim 8: To attempt to reconstruct the on-site and off-site environment and to attempt to identify the anthropogenic influence on that environment.

Animal bone

The animal bone has **moderate** potential to contribute to this aim. Although the majority of remains relate to domesticates, hare, rabbit goose and badger within the bulk assemblage, and rodents, amphibians and small birds within the sieved material are indicative of the wild fauna and of the local environment.

Macroscopic plant and invertebrate remains

The charred crop remains and their specific contribution to the study of agriculture are dealt with above. They have **moderate** potential to indicate cleared arable in the immediate environs of the settlement from the late Neolithic. Weed species confirm this. Charcoal, presumably resulting from fuel, has again **moderate** potential to indicate local species and felling regimes, although for the Neolithic period evidence points to on-site felling, possibly part of a more general landscape phenomenon seen on other Bypass sites (e.g. Peartree Farm). As with other Bypass sites, the major contribution of this class of evidence is not in site specific terms, but in its potential to contribute to models of landscape development.

2.2.3 Village Farm: Summary statement of potential

Table 5 Summary of potential

Aim	Structural	Non ceramic	Flint	Ceramics	Ceramic registered artefacts	Human bone	Animal bone	Macro. plant and animal remains
1 Dating and chronological sequence	★★★	★	★★	★★★	★★	-	-	-
2 Burial and ceremony	★★★	-	★★★	★★★	-	★★	★★★	-
4 Continuity and discontinuity	★★★★	★★	★★	★★★	-	-	-	-
5 Wider archaeological landscape	★★★	★★	★★	★★★	-	-	★★★	★★★
6 Socio-economic organisation	★★★	-	-	★★	-	-	★★★	-
7 Activities and processes	★★	★★★	-	★	★★★	-	★★★	★★★
8 Environment	-	-	-	-	-	-	★★	★★

★★★★	High potential
★★★	Good Potential
★★	Moderate Potential
★	Low potential
-	No Potential

Table 6 Quantification of relevant data for analysis

	Structural	Non ceramics	Ceramics	Human Bone	Animal Bone	Environmental	Other
Topography	143 contexts; Observations on fluvio-glacial deposits	-	-	-	-	-	-
Neolithic/early Bronze Age	120 contexts; 2 ring-ditches	66 flints residual in later contexts	-	-	4 contexts containing bone including goat skull in ring-ditch	1 sample containing naked barley	A.P./HER evidence for ring ditches in vicinity
Iron Age (early to mid)	446 contexts; settlement and funerary features	163 flints	1190 sherds of pot 57 frags. of fired clay	3 cremations	46 contexts containing bone including cattle sheep, pig	I sample containing free-threshing wheat	A.P./HER evidence for adjacent sites
Early to mid Saxon	72 contexts; settlement including 2 SFB's	2 recorded finds	131 sherds of pottery, frags. of 14 loomweights	-	26 contexts containing bone	-	Excavations at Medbury Lane and Elstow area
Saxo-Norman	287 contexts; boundary and settlement features including timber buildings	12 recorded finds, 6.8kg of slag and furnace lining	307 sherds, 75 frags. of fired clay	-	25 contexts containing bone	3 samples containing barley and oats	Excavations at Medbury Lane and Elstow area
Medieval	356 contexts; settlement including ovens/well	-	637 sherds of pot, 156 frags. of roof tile, 31 frags. of fired clay	-	54 contexts containing bone	3 samples containing wheat, barley, oats, rye and legumes	Documentary evidence for late medieval Elstow (Wood 1985)

2.3 BUNYAN'S FARM

2.3.1 Summary of results

Archaeological excavations at Bunyan's Farm were restricted to the area of the drainage runs to either side of the main road corridor, amounting to an area of 0.27ha. Evidence was recovered indicating a possible Iron Age date for a double ditched boundary or droveway, visible on aerial photographs for some distance to the north and south. Parts of an undated field system, and scattered settlement of Bronze Age date were also recorded. The majority of features were of either natural or indeterminate origin.

The most significant result was the identification of Bronze Age domestic activity, the limited view afforded by trench excavation suggesting that further features might be expected close by. Settlement of this date is extremely rare, not just within the Ouse Valley but more generally within south-east England.

2.3.2 Statement of potential for further analysis

Overall the evidence has limited potential to address the majority of project aims, with low to moderate potential to address aims 3, 5, 6, and 7. This reflects the limited scope of the project. Little further analysis is proposed although some aspects of the structural data will be investigated in order to better characterise activity and to better fix the context of datable finds. The Bronze Age ceramics will require further analysis to confirm dating and to investigate the significance of deposition.

Although the site is of relatively minor significance on its own, the Bunyan's Farm material has, however, considerable significance for the Bypass project as a whole. The date and development of the crop marks can be characterised, and previously unknown Bronze Age settlement is indicated, adding significantly to our understanding of the distribution of these sites.

The following section details the potential of each dataset in relation to the original project aims. Where the site has no potential to address an aim this has been omitted. Where an aim can only be addressed by a limited number of datasets, those datasets of no potential are also excluded.

Original project aims

In common with the global project aims, these have been re-cast from those listed in the original project design to facilitate assessment. Numbers in brackets cross-refer to the original statements.

Project aim 3: **To identify intra site differences in agricultural practice and local land use and to relate these to the contemporary natural environment. (2.1.6)**

Structural

The structural data has **moderate** potential to address this aim, in that an analysis of the form of the enclosures can provide some indication of function. Useful comparisons can be made with sites within the Upper Thames Valley at Roughground Farm, Lechlade (Allen *et al* 1993, fig. 115) and Farmoor (Lambrick and Robinson, 1979, 138-139) where enclosure form has been used to postulate arable or pastoral regimes.

Macroscopic plant and invertebrate remains

A small assemblage, including barley and hazelnut shells, was recovered from the late Bronze Age/early Iron Age pit. Although this has **low** potential for further analysis as far as intra site themes are

concerned, the material can make an important contribution to the construction of models for agricultural and environmental development within the landscape.

Summary
The limited scope of the investigations restricts further analysis but the collected data can still indicate the nature of some aspects of agricultural land use and environment.

Project aim 5: **To compare the material cultural evidence from within the ditches with that from the main settlement focus in order to obtain a clearer understanding of the probable nature and date of the settlement. (2.2.4)**

Structural
The structural data has only **low** potential to address this aim. The excavated material appears to encompass only peripheral aspects of the settlement and outlying element of the enclosure. Neither of these can conclusively date or characterise the main settlement focus.

Ceramics
The ceramics have **low** potential to address this aim for the same reasons. Only a small assemblage was recovered and this has peripheral significance for the dating of the main settlement focus.

Summary
The evidence has little direct significance for the settlement focus to the north of the site although some characterisation of the early enclosures and the large double ditched boundary or trackway is possible.

Project aim 6: **To examine the relationship between the Iron Age and prehistoric activity with relation to the gravel ridge. (2.2.5)**
and
Project aim 7: **To investigate whether it might be possible to determine functional or cultural differences between Peartree Farm as a principally arable working farmstead with its enclosures and fields, and Bunyan's Farm as principally a cattle farming enterprise with droveways but no apparent field system. Both might be usefully compared with Odell and Stagsden. (2.2.6)**

Structural
The structural data has **moderate** potential to address these aims. The settlement and land use can be characterised through structural analysis, its relationship to its topographical setting and to other contemporary sites addressed in the overall Bypass project aims (see volume 4).

Non ceramics
The presence of worked flint, albeit residual, has **moderate** potential to confirm early prehistoric activity.

Ceramics
The pottery and building material have **moderate** potential to address this aim by suggesting domestic activity in the vicinity during the late Bronze Age/early Iron Age.

Summary
The Bunyan's Farm material has particular importance in locating an additional unenclosed late Bronze Age/early Iron Age settlement within the floodplain/first terrace area. Although only a small amount of material was recovered it is still possible to characterise the nature of activity, especially in comparison with sites at Village Farm, Manor Farm and Bumpy Lane.

2.3.3 Bunyan's Farm: Summary statement of potential

Table 7 Summary of potential

Aim	Structural	Non ceramic	Ceramics	Macro. plant and animal remains
1. Boundaries within prehistoric landscape	-	-	-	-
2. Areas peripheral to the ring-ditch	-	-	-	-
3. Agricultural practice, land-use and environment	★★	-	-	★
4. Romano-British land-use	-	-	-	-
5. Comparison between material culture between core & periphery	★	-	★	-
6. Prehistoric settlement	★★	★★	★★	-
7. Comparisons with local sites	★★	★★	★★	-

★★★★	High potential
★★★	Good Potential
★★	Moderate Potential
★	Low potential
-	No Potential

Table 8 Quantification of relevant data for analysis

	Structural	Non ceramics	Ceramics	Environmental	Other
Topography	90 contexts; Observations on fluvio-glacial deposits and palaeochannel	Mesolithic/early Neolithic flint in tree throws. Residual late Neolithic/early bronze Age flint	-	1 sample from tree throw containing carbonised seeds cereal and arable weeds	Good A.P. evidence for palaeochannels and alluviation in the area
Late Bronze Age/early Iron Age	6 contexts; A single pit denoting settlement	-	45 sherds of pot, some decorated	3 samples containing carbonised seeds of barley and arable weeds (also hazelnuts)	-
Iron Age (early to middle)	32 contexts; Possible droveway and field system	-	10 sherds of pot, 4 residual	-	Good A.P./HER coverage of crop marks/settlement pattern
Romano-British	Unexcavated crop mark enclosure	-	-	-	Good A.P./HER coverage of crop marks/settlement pattern

2.4 MANOR FARM

2.4 1 Summary of Results

Excavations at Manor Farm were limited to the line of roadside ditches, the total area excavated amounting to 0.45 ha. Results show three main periods of activity. A single isolated pit of Neolithic/early Bronze Age date contained fragments of a single vessel probably indicating domestic activity. Parts of a field system, similar to that at Bunyan's Farm, and also dating to the Iron Age, were investigated although no direct evidence for settlement was recovered. A limited amount of Roman period remains were identified but evidence for middle Saxon settlement was relatively substantial, comprising large pits, possibly associated with post-hole structures.

2.4.2 Statement of potential for further analysis

Overall the site has limited potential to address the original site specific project aims, although for the Neolithic/late Bronze Age and Saxon periods important new evidence now exists to pinpoint and characterise settlement and land use. Aspects of Iron Age land use can be investigated with regard to the date and function of the enclosures and this is of particular significance in light of the Iron Age discoveries at Village Farm, Bunyan's Farm and Bumpy Lane. Most significant was the discovery of the Middle Saxon settlement.

In addition to the site specific potential of the data, it also has significant potential for addressing themes of landscape development. Although trench excavation limits our understanding of the form and layout of the individual settlements at Manor Farm, important evidence now exists for activity during a number of periods, and this adds greatly to our understanding of settlement patterns. This is dealt with in detail within Volume 4.

The following section details the potential of each dataset in relation to the original site specific project aims and includes, where appropriate, new aims identified during assessment. Where the site has no potential to address an aim this has been omitted. Where an aim can only be addressed by a limited number of datasets, those datasets of no potential are also excluded.

Original project aims

In common with the global project aims, these have been re-cast from those listed in the original project design to facilitate assessment. Numbers in brackets cross-refer to the original statements.

Project aim 1: **Elements of the relict field system will be characterised, its components dated, and their relationships to each other clarified. These can then be compared with other excavated field systems along the Ouse Valley and Bypass, contributing to further analysis of landscape use from the prehistoric period to the early medieval. (2.2)**

Structural

The structural data has **moderate** potential to address this aim. The ditches of the field system were found to comprise possibly two phases. Pottery spot dates ranged from the early to the later part of the Iron Age. The limited scope of the excavation restricts the potential to characterise the system or provide a more detailed internal chronology.

Ceramics

The pottery has **moderate** potential to date elements of the field system. It would appear that most, if not all of its components relate to the Iron Age. As such the field system can be placed within the context of intensive Iron Age activity demonstrated through structural and artefactual evidence at Village Farm and Bumpy Lane and of a more sporadic nature at Bunyan's Farm and Octagon Farm, Peartree Farm and Eastcotts.

Project aim 4: Evidence for agricultural practice and for the surrounding environment will be sought. (2.9)

Animal bone

The major part of the assemblage came from the Saxon pits and its significance in the reconstruction of settlement economy is dealt with below (aim 6). Some parts of the assemblage relate to wild species such as rodents, birds and amphibians and these possess **moderate** potential to address themes of environmental reconstruction.

Macroscopic plant and invertebrate remains

Snails, charcoal and charred seeds were recovered in small quantities from features of Saxon date and so **moderate** potential exists to characterise agricultural practice and the local environment.

Project aim 5: Information regarding the deposition of alluvium in the Ouse will be sought and added to the model already developing (Robinson 1992) of periods of intense flooding. (2.12)

Structural

Alluvial cover was only noted to the eastern end of the Manor Farm trenches where it appeared to interrupt a sequence of ditches. These were undated and so the potential for addressing this aim is **low**.

Project aim 6: The potential to recover rare evidence of early Saxon occupation will be investigated. (2.16)

Structural

The potential of the structural data to address this aim is **good**. Although only a few well dated features of middle Saxon date were recovered, it can be suggested on form and association that the relatively large number of undated and unphased features may also be of this date. The form of the dated features indicates settlement and this is significant in the light of the very small amount of middle Saxon material recovered from within this part of the Ouse Valley and the region as a whole.

Ceramics

The ceramics have **good** potential to confirm the presence of Saxon activity although initial studies suggest that this may relate in the main to the middle Saxon period. Further study of the Saxon pottery will link into the work being carried out by the East Midlands Anglo-Saxon Pottery Project. It will help to place Manor Farm in its regional context.

Animal bone

The majority of the recovered bone came from the Saxon pits. Domesticates and wild species were represented and overall the assemblage has **moderate** potential to characterise economic aspects of the Saxon settlement.

Macroscopic plant and invertebrate remains

Wheat, barley and charcoal were recovered from the Saxon pits and this assemblage has **moderate** potential to contribute to characterising economic aspects of the Saxon settlement.

Summary

The identification of the Middle Saxon settlement is the most significant result of work at Manor Farm. The data sample, although originating from a small group of pits, is relatively rich in artefacts and ecofacts and holds out good potential for a limited characterisation of the site.

Project aim 7: Further evidence for Neolithic tree clearance should be sought. (2.17)

Flint

There is **low** potential for addressing the possible incidence of Neolithic tree clearance in the locality. Two instances have been noted where features, interpreted as tree bowls, contained flint likely to be Neolithic or earlier: residuality is, however, possible in both cases.

2.4.3 Manor Farm: Summary statement of potential

Table 9 Summary of potential

Aim	Structural	Non ceramic	Flint	Ceramics	Animal bone	Macro. plant and animal remains
1 Character and date of field system	★★	-	-	★★	-	-
2 Burials or terminal deposits	-	-	-	-	-	-
3 Function of the ditches	★	-	-	-	-	-
4 Environmental	-	-	-	-	★★	★★
5 Alluviation	★	-	-	-	-	-
6 Saxon occupation	★★★	-	-	★★★	★★	★★
7 Neolithic clearance	-	-	★	-	-	-

★★★★	High potential
★★★	Good Potential
★★	Moderate Potential
★	Low potential
-	No Potential

Table 10 Quantification of relevant data for analysis

	Structural	Non ceramics	Ceramics	Animal Bone	Environmental	Other
Topographic	52 contexts	-	-	-	-	-
Neolithic	3 contexts; a single pit	48 flints in-situ. 32 residual	29 sherds of pot	-	-	-
Iron Age (early-middle and 'Belgic'	65 contexts; field system and peripheral settlement	-	55 sherds of early to mid, 6 Belgic.	2 contexts containing bone	-	Good A.P./HER evidence for extent of fields and local settlement pattern
Roman	3 contexts; a single pit	-	1 sherd of pot	-	-	-
Saxon (middle)	17 contexts; pits and scattered settlement features	11 registered finds inc. quern stone frags, 417g of slag	3 early Saxon sherds, 59 middle Saxon	12 contexts containing bone inc. horse, cattle, pig, sheep, goat, pig & chicken	3 samples containing carbonised seeds, wheat, barley and arable weeds	-

2.5 BUMPY LANE

2.5.1 Summary of Results

Open-area excavation was carried out in two areas, totalling 0.84ha. Results indicate a sequence dating from the Neolithic through to the medieval period. Two isolated pits dated by ceramics and lithics indicate exploitation of the floodplain/first terrace during the Neolithic with limited evidence for similar activity in the late Bronze Age. A sequence of Iron Age enclosures and boundaries was accompanied by scattered settlement features. No structures or buildings were identified, although a number of hearths indicate building locations. Parts of the Iron Age enclosure system may have been re-used during the Roman period with large amounts of Roman pottery suggesting nearby settlement. Continuity in boundary use can be traced into the medieval period when furrows were driven down the line of the Iron Age/Roman ditches.

Of particular importance has been the location of domestic activity of Neolithic date. The fragile and ephemeral nature of this class of settlement has been highlighted by recent work within the upper Thames Valley at Yarnton/Cassington (Hey 1992;1993). The Bumpy Lane material is important in providing the first indication of similar activity in this part of the Ouse Valley. It is particularly useful in contrast to sites like Octagon Farm where the evidence for the Neolithic is overwhelmingly ceremonial in nature. The evidence for Iron Age occupation is significant, and previously unsuspected.

2.5.2 Statement of potential for further analysis

The evidence from Bumpy Lane, in particular the structural, ceramic and animal bone evidence, has moderate to good potential to address a number of the original project aims with important evidence for settlement during the Neolithic, Bronze Age, Iron Age and Romano-British periods recovered.

In addition to the site specific aims discussed below Bumpy Lane has good potential to address issues of landscape development (Volume 4, section 3) and forms an important part of the overall Bypass project. The longevity of site use is significant and in particular the evidence for Neolithic settlement can be placed with that at Peartree Farm and Manor Farm to begin the characterisation of domestic activity for that period (***aim 3.1*** *Settlement and land use; Neolithic and early Bronze Age*). Similarly it has good potential to illuminate aspects of the Iron Age landscape, particularly in terms of economy (***aim3.1***: *Settlement and Land use; The Iron Age, and* ***aim 3.2*** *Economy, Development of agriculture*). The site also has the potential to demonstrate continuity of boundaries from the Iron Age through the Romano-British and medieval periods and to illustrate aspects of continuous and discontinuous activity through time (***aim 3.4***).

The following section details the potential of each dataset in relation to the original site specific project aims. Where the site has no potential to address an aim this has been omitted. Where an aim can only be addressed by a limited number of datasets, those datasets of no potential are also excluded.

Original project aims

Numbers in brackets refer to the original statements within the Project Design

Project aim 1: To investigate the form and extent of the curving ditch. Specifically to establish the relationship of the ditch to any internal structures and to determine the date of construction and development. (2.2.1)

Structural

The structural data has **moderate** potential to achieve this aim. Although no internal features were recovered, the stratigraphy within the ditch requires close contextual analysis leading towards identification of periods of construction, use and disuse. Within this framework finds can be located to provide an insight into the date and function of the ditch. Geophysical survey has provided some indication of the overall form and extent of the monument and a search for parallels will need to be undertaken.

Ceramics

No ceramic material was recovered from primary fills of the curving ditch, and there is no potential to date its construction. The pottery has **moderate** potential to date the demise of the ditch.

Project aim 2: To understand the setting of the curving ditch within the prehistoric landscape stretching between Village Farm and Octagon Farm. (2.2.2)

Structural

The structural data has **good** potential to provide the framework within which this aim can be addressed. Although the original project aim refers only to the enclosure ditch, the prehistoric remains in general will be extremely important in assembling settlement patterns. In particular the Neolithic and Bronze Age settlement features have great potential to characterise the nature of land use. A more general assessment of its potential to contribute towards our understanding of the overall landscape is discussed in Volume 4.

Ceramics

Intensive early Iron Age activity can be demonstrated through structural and artefactual evidence at Village Farm and of a more sporadic nature at Bunyan's Farm, Manor Farm and Octagon Farm. The pottery from Bumpy Lane has **moderate** potential to place the curving ditch within the context of the early Iron Age landscape.

Project aim 3: To investigate the form and extent of any prehistoric settlement, to more closely define its date and the functions and activities represented. (2.2.3)

Structural

The potential of the structural data to realise this aim is **moderate**. The limits of the excavated areas and the scattered nature of the evidence restrict analysis of the settlement form.

Neolithic and Bronze Age activity can only be determined through a study of the lithics and ceramics but for the Iron Age there is sufficient evidence to characterise the site, and to provide some indication of its development. Analysis of features, especially contexts such as hearths and post-holes, will provide a framework for the study of ceramics and non-ceramics in determining processes and activity areas.

Flint

The flint assemblage has **moderate** potential to determine the extent and date of prehistoric settlement through the spatial distribution of chronologically sensitive groups. The potential to comment on

functions and activities represented is low because of the small quantity of tools and the high proportion of those residual in later contexts.

Ceramics
The pottery has **good** potential to determine the extent and date of prehistoric settlement through the spatial distribution of chronologically sensitive groups of pottery. There is no potential to comment on the functions and activities represented, due to the small quantity and fragmentary nature of the ceramics.

Human bone
The small human bone assemblage from a single inhumation has **moderate** potential to contribute to understanding burial activity during the Iron Age. An investigation of the types of bone retained for burial may provide an insight into specific rites and add to the accumulated burial evidence for the Ouse Valley.

Animal bone
The animal bone has **moderate** potential to define activities during the Iron Age. In particular the predominance of cattle may support an interpretation of a stock oriented economy. This can be contrasted with the absence of food-plant remains from the site, and the more varied animal bone assemblage from the Roman period.

Project aim 4: **To investigate the spatial and temporal relationship between the settlement and the curving ditch. Is the latter a ritual monument, and are the two contemporary and complementary? (2.2.4)**

Structural
The potential of the structural evidence to address this aim is **good** and is covered within 1, 2, and 3 above.

Ceramics
There is **low** potential to demonstrate contemporaneity of the curving ditch and the features spatially related to it and associated with prehistoric settlement. The pottery has no potential to confer a ritual function to the curving ditch.

Project aim 5: **To define the form and extent of Romano-British settlement. How does this relate to earlier prehistoric settlement and activity and to contemporary settlement in the Harrowden and Eastcotts areas? (2.2.5)**

Structural
The structural evidence for the Romano-British period at Bumpy Lane is limited, but its potential to address this aim is **good**. In particular it may mark the NW extent of settlement represented at Harrowden, and therefore characterise the outer margins of that settlement.

Non ceramics
The Roman non-ceramic material has **low** potential in helping to define the form and extent of the Romano-British settlement due to its largely uncertain provenance. The architectural fragments have no potential to indicate types of structures present on site because their occurrence cannot be linked to any structural evidence. No direct link can be demonstrated through this material with contemporary activity examined at Eastcotts and Harrowden.

Ceramics
Roman ceramics were recovered from a narrow range of features, probably peripheral to the nucleus of settlement, which was not identified. The Roman pottery therefore has **low** potential in helping to define the form and extent of the Romano-British settlement. The pottery, when considered on its own, has low

potential to suggest a relationship with activity examined at Eastcotts and Harrowden, other than to confirm a contemporary date.

Animal bone

The animal bone has only **low** potential to reflect the form of Romano-British settlement, although it may be possible to highlight any major bias in the assemblage in contrast to that recovered from Peartree Farm, Eastcotts and Harrowden. Some potential exists to compare the material with that from the earlier Iron Age activity on site (see 3 above).

Project aim 6: To recover material that will contribute to a fuller understanding of the social and economic framework within which the site developed. (2.2.6)

Structural

The Structural data has **moderate** potential to address this aim. Structural analysis will lead to an overall characterisation of the settlement form (see 1, 2, and 3 above), and this will provide the framework to determine the social and economic status of the site. In particular, the prehistoric settlement needs to be understood in terms of possible seasonal or temporary use, and further study, especially comparative analysis of recent work in other regions (notably the Upper Thames), will provide a useful framework for interpretation.

Ceramics

Due to the limited quantity and range of prehistoric and post-Roman ceramics, Project aim 6 can only be applied to the Roman assemblage. The Roman pottery has only **moderate** potential to address the part of this question dealing with the economic framework of the site. The pottery assigned to period 9 shows, on preliminary assessment, an emphasis on regional and locally made products, with a few continental exceptions. Analysis will seek to confirm this regional marketing pattern and define the regional context for the distribution of the pottery recovered. The social framework or status of the site is more problematical, dependent on the proportion of vessels regarded as indicators of status, such as imports, of which there are few. The potential of the pottery to address this part of the question is therefore low.

Animal bone

As discussed in 3 and 5 above the animal bone has **moderate** potential to support interpretations of a cattle oriented economy during the Iron Age, with perhaps a more mixed base indicated during the Roman period.

2.5.3 Bumpy Lane: Summary statement of potential

Table 11 Summary of potential

Aim	Structural	Non ceramic	Flint	Ceramics	Human bone	Animal bone	Macro. plant and animal remains
1. Investigate curving ditch	★★	-	-	★★	-	-	-
2. Setting of the curving ditch	★★★	-	-	★★	-	-	-
3. Prehistoric settlement	★★	-	★★	★★★	★★	★★	-
4. Relationship of ditch to settlement	★★★	-	-	★	-	-	-
5. Romano-British settlement	★★★	★	-	★	-	★	-
6. Overall socio-economic framework	★★	-	-	★★	-	★★	-
7. Environment	-	-	-	-	-	-	-

★★★★	High potential
★★★	Good Potential
★★	Moderate Potential
★	Low potential
-	No Potential

Table 12 Quantification of relevant data for analysis

	Structural	Non ceramics	Ceramics	Human Bone	Animal Bone	Environmental	Other
Topographic	58 contexts including evidence for tree clearance	39 microliths and flints of Mesolithic/early Neolithic date	-	-	-	-	-
Neolithic	13 contexts; 2 pits	11 tools and 276 cores and debitage	31 sherds of pot	-	-	-	-
Late Bronze Age /early Iron Age	3 contexts; single ditch/gully	-	38 sherds of pot inc. 7 residual in IA	-	-	-	-
Iron Age (early to middle and Belgic)	267 contexts; sequence of boundaries and settlement features	-	73 early to middle IA sherds with 3 Belgic types.	-	9 contexts containing bone	1 sample containing hazelnut fragments	Geophysical survey over sub-circular enclosure
Romano-British	48 contexts; re-use of IA boundaries, nearby settlement	7 registered artefacts including unstrat. coins of early C4th	456 sherds of pot' 38 frags of building material	1 cremation in wooden casket/box	8 contexts containing bone	-	RB settlement and enclosures at Eastcotts and Harrowden
Medieval	30 contexts; cultivation	-	-	-	-	-	Extant earthworks, inc. ridge and furrow at Harrowden

Original project aims

Numbers in brackets refer to statements within the original Project Design.

Project aim 1: To examine an area of medieval settlement which the evaluation indicated may be only slightly damaged by ploughing. It may contribute to our knowledge of the structure and morphology of the Bedfordshire village.

Structural

The structural data has **moderate** potential to address this aim. Medieval material was encountered within trenches 4 and 6 and this represents a sample of around 2.5% of the visible earthworks. A sequence spanning the eleventh to fifteenth centuries was recovered from trench 4, although only limited amounts of material were recovered from trench 6. Both trenches, however, confirm the high level of survival of deposits; earthworks and horizontal stratigraphy surviving in both areas. Trench 4 indicates shifting patterns of use within the main part of the village, an area of settlement features becoming sealed by agricultural soil and then subsequently by a trackway. Within trench 6 a major boundary between the enclosures and the open fields remained in place until the desertion of this part of the settlement.

Ceramics

The pottery has **good** potential to determine the chronological parameters of the site, but only **low** potential to contribute to knowledge of village structure and morphology. The presence of a range of pottery from the late Iron Age to the post-medieval period, with the notable exception of Saxon ceramics, which in itself is of interest, will define each chronological period and help to provide the chronological framework within which the site developed. The ceramic building material has **moderate** potential to indicate the types of building present on the site. Lack of association with structural evidence suggests the presence of structures beyond the limit of excavation.

Summary

The structural and ceramic data provide the best evidence for the overall development of the settlement and land use at Harrowden. The observations demonstrate the themes of fluidity and continuity in settlement form visible in large scale excavation at Westbury and Tattenhoe in Milton Keynes and at Stratton. In this way Harrowden can make a limited but valuable contribution to medieval settlement studies at a regional level.

Project aim 2: To augment survey and documentary evidence through detailed sample excavation. This should provide evidence for form and spatial functioning within at least part of the settlement.

Structural

The data has **moderate** potential to address this aim. The sequence within trench 4 gives an indication of how changes in spatial function might occur, and trench 6 may indicate areas of low intensity use within the main village such as paddocks or garden enclosures. Although aspects of the excavated material can be tied in to the survey data this serves only to provide information on very small areas of the site. Therefore, while some generalisations might be drawn, no firm conclusions regarding spatial function across the site as a whole can be made.

Ceramics

The pottery has **moderate** potential to provide an indication of function in specific areas. Different forms of pottery associated with specialist activities, such as the storage, preparation and consumption of food can determine whether these activities were being undertaken.

Project aim 3: **To investigate in detail the site's formation processes in contrast to the extensive sampling approach which has had to be adopted for the deserted medieval village of Stratton, itself a valuable comparison.**

Structural
The structural data has **low** potential to address this aim, restricted by the limited sample available for investigation.

Project aim 4: **To investigate the presence of early settlement, and explore the phenomenon of settlement shift.**

Structural
The data has **good** potential to address this aim. The Iron Age and Romano-British remains indicate the origins of settlement. Settlement shift within the medieval settlement has already been noted above and the lack of Saxon evidence is dealt with below.

Non ceramics
The registered artefacts and non-ceramic bulk finds have **low** potential to address this aim. The former are randomly distributed, with over 40% deriving from topsoil or disturbed agricultural layers. Although those artefacts dating to the Roman period indicate activity within this period, there is insufficient material to suggest any distinct chronological patterns of site development.

Ceramics
The pottery has **moderate** potential to address this. The late Iron Age pottery indicates the presence of early settlement at Harrowden although the small quantity and largely residual nature of the material recovered means there is little potential to address the issue of settlement shift. For the Roman and medieval pottery, distribution across the site of the fabric types that act as chronological indicators may determine the extent of activity during different phases of occupation.

Project aim 5: **Basic comparisons will be made using the evidence of imported pottery. A ceramic framework for Bedford was constructed in the 1970's, this still basically holds good, but has been developed and refined, and will be used to assess the ceramics from the excavation at Harrowden, these in turn will be a useful addition to the study of ceramics in the region.**

Ceramics
Neither the prehistoric nor the Roman assemblages have any potential to address this aim. Potential to add to current understanding of medieval ceramics within the region is, however, **good**. The site provides a rural pottery assemblage, the analysis of which will help to place the site within a regional framework in line with priorities outlined in the review of medieval ceramic studies in England (Mellor 1994).

Analysis of imported wares and comparison with assemblages from urban and rural sites will make a limited contribution to understanding site status and function.

Project aim 6: **The possibility of Saxon antecedents raises the possibility of establishing a good dating sequence. Other finds may also be compared with those at Stratton and Bedford.**

Ceramics
The pottery at Harrowden ranges in date from the Iron Age to late medieval period. Distribution across the site of those fabric types that act as chronological indicators will help to refine the dating sequence.

Project aim 7: **Investigation of the possible Saxon origins of the settlement and any *apparent* continuity between the Roman and medieval periods will be particularly important. In particular Harrowden might be expected to make a major contribution to understanding landscape development in the area from the prehistoric period to the present day.**

Structural

The data has **good** potential to contribute towards issues of settlement and land use. The presence of Iron Age activity may argue for some continuity into the Roman period and a Saxon origin for the medieval settlement is still indicated by place name evidence, although there is no excavated evidence for continuity. Overall the picture appears to be similar to other Bypass sites where episodic occupation is indicated. A superficial concordance in alignments between Roman and medieval enclosures may reflect a logical choice in orienting settlement to the Elstow Brook.

Non ceramics

The registered artefacts and non-ceramic bulk finds have **low** potential to address this aim. Typologically, few of the artefacts are closely datable, due to their fragmentary condition or undiagnostic nature. Many artefacts may have had an extended period of use and consequently cannot assist in the establishment of a dating sequence.

Ceramics

The recovery of pottery of prehistoric date from Harrowden was not anticipated and the potential to address this aim is **low** due to the residual character of the prehistoric assemblage.

The Roman pottery has **moderate** potential to address the question of continuity of site occupation, as pottery spanning the whole Roman period was recovered.

Summary

Evidence from a range of periods was recovered with particularly good data of Roman and medieval date. When set in the context of other Bypass sites, and more generally in the Ouse Valley region, Harrowden has good potential to throw light on aspects of settlement location, and development. In particular the evidence for shrinkage in the late and post-medieval periods can be set against a background of rising water tables and investigation into settlement desertion elsewhere.

Project aim 9: **To recover evidence for the immediate environment of the settlement. In particular the collection of environmental data from a comparatively low lying site might be expected to contribute substantially to the evidence of environmental change in the Ouse Valley during the early medieval period.**

Animal bone

The sieved soil samples at Harrowden revealed evidence for rodents and amphibian bones and these have **low** potential to contribute to studies into the local environment.

Macroscopic plant and invertebrate remains

This assemblage has **moderate** potential to address themes of local environment. The major medieval boundary ditch A31 contained flowing water gastropods possibly indicating seasonal flooding. This may have implications for the abandonment of the lower parts of the site; all modern occupation is located on higher ground.

Summary

Only a limited amount of environmental data was recovered from excavations at Harrowden but it has potential when integrated with data from other Bypass sites to illuminate more general issues of landscape development.

Project aim s 10 and 11: **To recover artefacts and ecofacts towards constructing models for the daily life in an English village through time *and* to recover data to allow comparisons of the status, economic base and trade relationships in relation to contemporary urban (Bedford) and rural (Stratton) settlements.**

Non ceramics

Low Potential. The paucity of finds means it is difficult to determine discrete areas of activity, although it is possible to suggest some types of activity that may have been undertaken during the medieval period.

For the Roman period, a ceramic spindlewhorl suggests textile production, while the presence of iron smithing slag (1519g in total) indicates craft/industrial activity. None of the identifiable registered finds appear to be associated with a structure or particular area of the site.

Ceramics

The ceramic assemblage has **moderate** potential to contribute to the construction of models. Analysis of pottery form and function indicates the nature of the assemblage is overwhelmingly domestic.

The pottery, has **moderate** potential to contribute to an understanding of the status of the Roman and medieval elements of the site. Economic and trade mechanisms can be examined through an identification of imported types present on the site in comparison with their wider distribution.

The medieval pottery has little potential in the examination of inter-site relationships. Ceramic evidence was recovered in insufficient quantity to allow meaningful comparisons to be drawn between Harrowden and contemporary urban (Bedford) and rural (Stratton) settlements, except in the distribution of fabric types. The pottery will help place the site within its regional context and will add to the patterns of pottery distribution within the county.

Animal bone

The Harrowden animal bone has **moderate** potential to demonstrate changing economic regimes. Cattle were predominant during the Roman period, sheep goat during the medieval, and cattle and sheep goat of equal importance during the post-medieval period. Further analysis will establish the exact context and therefore significance of theses preliminary results.

Summary

The small sample size restricts analysis and interpretation at an intra site level. Recent large scale excavations on medieval sites have demonstrated the importance of large datasets in these types of studies. However, the potential of the Harrowden data to reflect local social and economic frameworks is enhanced when viewed as part of the general body of Bypass data, particularly the evidence for medieval settlement at Village Farm.

2.6.3 Harrowden: Summary statement of potential

Table 13 Summary of potential

Aim	Structural	Non ceramic	Ceramics	Animal bone	Macro. plant and animal remains
1 Medieval settlement	★★	-	★★★	-	-
2 Spatial functioning	★★	-	★★	-	-
3 Site formation	★	-	-	-	-
4 Early settlement & settlement shift	★★★	★	★★	-	-
5 Ceramics	-	-	★★★	-	-
6 Dating sequence	-	-	★★	-	-
7 Origins, continuity and development	★★★	★	★★	-	-
8 Waterlogged material	-	-	-	-	-
9 Environment	-	-	-	★	★★
10 Daily life	-	★	★★	-	-
11 Socio-economic base and relationships	-	★	★★	★★	-

★★★★	High Potential
★★★	Good Potential
★★	Moderate Potential
★	Low potential
-	No Potential

Table 14 Quantification of relevant data for analysis

	Structural	Non ceramics	Ceramics	Animal Bone	Environmental	Other
Topography	20 contexts; observations on fluvio glacial deposits and late Roman/medieval alluviation	-	-	-	-	Elstow Brook project
Late Iron Age	7 contexts; single boundary	-	41 pottery sherds, 26 residual in RB	1 context containing bone	-	-
Romano-British	231 contexts; boundaries and settlement	16 registered finds including late C3rd/C4th coins	652 pottery sherds, 255 residual in med.	40 contexts containing bone, cattle predominant	1 sample of charred planet remains inc. hazelnut shells	Bumpy Lane / Eastcotts material
Medieval	83 contexts; boundaries and settlement	22 registered finds	3 Saxo-Norman sherds 191 medieval sherds 177 late medieval sherds	15 contexts containing bone, sheep predominant	-	Earthwork survey Documentary
Post-medieval	97 contexts; settlement	12 registered finds	88 sherds	15 contexts containing bone, cattle/sheep equal	Charcoal	Earthwork survey Documentary Mod. settlement pattern

2.7 EASTCOTTS

2.7.1 Summary of Results

The crop mark site at Eastcotts (HER 1623) comprises a collection of ring-ditches and other enclosures in association with an extensive triple-ditched boundary. Also visible to the east of the boundary were the fainter signs of small rectilinear enclosures, largely obscured by alluvium. These were thought to represent Iron Age or Romano-British settlement.

Excavation of a large open area, amounting to 2.8ha, identified a sequence spanning the Neolithic through to the medieval period. The earliest evidence for activity comprised a crouched inhumation and nearby pit, both dated by lithics to the Neolithic period. Evidence for late Neolithic/early Bronze Age enclosure was also recognised with two foci of late Iron Age domestic settlement. The nature of late Iron Age activity is particularly significant in that over 90% of the ceramics came from features dated by Romano-British material to the later first century Period 9.1.

The main period of activity began in the late first century AD with the establishment of a Romano British farmstead, comprising linear enclosures at the eastern end of the site. These were modified and sub-divided throughout the first and into the second century when evidence for pottery production metalworking and crop processing was recovered. Through the second, third and fourth centuries the enclosures, and the settlement focus appear to move to the east onto higher ground, possibly responding to rising water levels. At this time the original linear character of the enclosures changes to more a curvilinear form. The areas of early settlement to the east contain little evidence for later activity other than isolated burials; the settlement was abandoned some time in the fourth century.

2.7.2 Statement of potential for further analysis

The overall potential of the Eastcotts data to address the original project aims is good. A large open area was excavated and assessment has identified a number of clearly defined periods and phases. In particular the evidence for the Roman period provides a good opportunity to investigate the nature and development of a non villa rural settlement, evidence was recovered for structures and buildings, enclosures, pit groups, activity areas (domestic, agricultural and craft) and for significant developments in the internal form of the settlement. Hingley (1991b) has highlighted the lack of good excavated evidence for this type of site, the most common element within the Romano-British countryside, and Eastcotts, together with Peartree Farm will make a significant contribution to current research.

In addition to the site specific aims discussed below, good potential exists to integrate the data into a more general discussion of the development of the Ouse Valley landscape, with reference to the updated landscape aims (Volume 4, section3). Earlier periods of occupation can make an important contribution to landscape studies, particularly in terms of the extent and character of the Neolithic ceremonial landscape and for the transition to agricultural forms of landscape organisation (***aim 3.4:*** *Transitional Periods; Monument to settlement*) and for late Iron Age settlement (***aim 3.4:*** *Transitional Periods; Briton to Roman*).

The quantity and condition of the registered finds and non-ceramic bulk material from Eastcotts, and the nature of their provenance, indicate that the material has moderate to good potential to address the stated project aims of the project. Over 74% of the non-ceramic material derives from the fills of pits, ditches, and structural cuts, or is associated with masonry remains, and there is a relatively limited amount of contamination evident from residual or intrusive material.

The condition of the ceramics from Eastcotts, and the nature of their provenance, indicate that the pottery has relatively good potential to address the stated project aims of the project. Over 89% of the pottery

derives from the fills of pits and ditches and there is a relatively limited amount of contamination evident from residual or intrusive pottery. The building material has less potential; only approximately 12% can be directly associated with structural evidence, the remainder having been redeposited within cut features.

The human bone has moderate potential to address the original project aims. The quantity of human remains is too small to sustain demographic analysis but does have value in characterising the Neolithic use of the site and in demonstrating the development of burial rites within a Romano-British rural context. In particular for this later period the distribution of burials, with cremations (an early Roman rite) to the west and inhumations (late Roman) to the east, may reflect the spatial development of the site.

The following section details the potential of each dataset in relation to the original project aims and includes, where appropriate, new aims identified during assessment. Where the site has no potential to address an aim this has been omitted. Where an aim can only be addressed by a limited number of datasets, those datasets of no potential are also excluded.

Original project aims

In common with the global project aims, these have been re-cast from those listed in the original project design to facilitate assessment. Numbers in brackets cross-refer to the original statements. A number of new project aims are included to accommodate the changed nature of the site.

Project aim 1: To identify and date the nature of prehistoric land use and place it in a broader context, specifically the ceremonial landscape of the Octagon Farm area. (1.1)(1.2)

Structural

The structural data has **moderate** potential to address this aim. Evidence survives for activity during the Mesolithic, Neolithic, early Bronze Age and the Iron Age. Although the remains in each period are limited numerically they are significant in characterising the nature of activity and particularly in demonstrating the overall development of the landscape; deforestation is evinced by tree throws, the ceremonial landscape by an inhumation and associated ritual deposit and linear boundaries mark the gradual change towards a landscape dominated by settlement and enclosure.

Flint

Although largely a residual assemblage, the flintwork suggests activity on the site from the Mesolithic to the Bronze Age. The quantity and range of material recovered is such that further analysis, especially of the tools, has **good** potential to define the nature of this activity, especially for the Mesolithic.

Ceramics

Excavation at Eastcotts failed to produce pottery of an early prehistoric date. Comparisons can, however, be made between the Iron Age pottery recovered from other Bypass excavations and that recovered from Eastcotts, and this will help to broadly place the site within its regional context. The Iron Age pottery has **good** potential to address the issue of dating the site. A range of early to late Iron Age pottery was recovered, and this provides a chronological framework within which the site can be placed. Activity was concentrated within the late Iron Age, although 91% of the Iron Age pot was recovered from Romano-British Period 9.1. The assemblage may appear, on the face of it, to be largely residual, but more likely it represents a conservative tradition in local styles into the early Roman period, and this is very significant for the characterisation of late Iron Age assemblages in general.

Human bone

The human bone has **moderate** potential to address this aim in so far as the single inhumation indicates funerary activity during the Neolithic and has implications for the extent and focus of the ceremonial landscape. The condition of the bone could not sustain C14 analysis but has been analysed for age/sex/pathology.

Soil micromorphology

Provisional results suggest that the data has **moderate** potential to investigate the nature of prehistoric soil formation and consequently land-use. The pre-Roman/Roman soils appear to have been disturbed, and this is consistent with data emerging from other sites such as Octagon Farm, Village Farm and Peartree Farm where tree clearance can be demonstrated from the Neolithic.

Macroscopic plant remains

Charcoal was recovered from prehistoric contexts and the species represented are oak, ash and alder/hazel. The material has **low** potential for further analysis, but nevertheless contributes to the characterisation of the prehistoric landscape.

Summary

The data has variable potential to address themes associated with prehistoric land use. Mesolithic settlement can be demonstrated in the range and quality of the lithic assemblage and further analysis will contribute towards the characterisation of activity. As on other Bypass sites a large number of tree throw holes were identified and this provides an opportunity to recover evidence of the progress of deforestation during the Neolithic and later periods. Further indications of the pre-Roman environment can be obtained from charcoal and soil micromorphological evidence. Further analysis will characterise the Neolithic deposits, contributing to the study of ritual and burial. Although many of the Octagon Farm monuments were investigated, the Eastcotts evidence is unique in that human remains, and identifiable ritual deposits were recovered.

The prehistoric boundary ditches provide an opportunity to investigate a key transitional period in land use development with comparative data available from similar features excavated at Octagon Farm. Iron Age settlement features were sparse but significantly concentrated into spatial groups, with the majority of late Iron Age material in Period 9.1. An important opportunity exists to characterise the nature of late Iron Age/early Romano-British assemblages and to throw light on the strength of native traditions during this period.

Project aim 2: To establish the date range of the triple ditch line and determine its function as a major landscape boundary. (1.1)(1.2)(1.3)(1.5)

Structural

The structural data has **moderate** potential to address this aim. Although originally interpreted as a major boundary of earlier prehistoric date, the excavated data suggests it may be of Iron Age or Roman origin. The significance of the ditches in the landscape will depend as much on further analysis, and may indicate the position of a major tenurial boundary between settlements.

Ceramics

The pottery has **good** potential to address this aim. The examination of pottery recovered from within the triple ditch line will indicate a date range for when these features went out of use and place them within their chronological framework. Determination of function is, however, more problematic. The issue cannot be satisfactorily addressed unless ceramic evidence was recovered from the primary fills of these features. Analysis will seek to confirm this

Summary

The origins of the triple ditch in either the Romano-British period, or the Iron Age, is crucial to understanding the development of the landscape, and in particular the articulation of Romano-British settlement within any previously existing Iron Age patterns. Further contextual and artefactual analysis will be needed to fully appreciate the significance of the dating evidence for this feature

Project Aim 3: To determine the extent, date range and structure of Romano-British settlement activity and examine its development and status. (NEW)

Structural

The structural data has **good** potential to address this. The excavated transect represents around 30% of the settlement site, and the sample, together with survey data, is sufficient to establish the approximate extent of the site and its form. Provisional phasing has identified eight major phases of activity and the data clearly has potential for refinement and modification. In particular, analysis will provide opportunities to identify process and activity specific areas, domestic, agricultural, and craft/industrial, and to investigate how the function of areas might have changed over time. The shift of settlement and the gradual abandonment of parts of the site is of particular interest and the detail of this transformation requires further analysis.

Non ceramics

The non-ceramic finds have **good** potential to assist in defining the development and date of the site. Forty-six per cent of the registered artefacts from Eastcotts are typologically datable, the majority coming from the fills of pits and ditches. This datable assemblage spans the whole Roman period, with a distinct increase in artefact frequency (43.6% of the total assemblage) within period 9.2. The pattern of distribution across the site of dateable artefacts will help to refine the dating sequence

In particular, the 29 **coins** that can be dated very closely, provide a good sample for further investigation, both numismatically and chronologically.

The **vessel glass** recovered from Eastcotts will assist in refining the dating of the site. The forms are common ones that are typologically well understood, and can, in some cases be relatively closely dated.

The assemblage of **leather** recovered from Eastcotts appears to represent small scale domestic rubbish disposal. The leather occurs mainly in primary pit fills and was deposited during the period of active use of the features concerned allowing some insight into contemporary local activity. The three nailed shoes recovered confirm the Roman dating of the pits in which they were found.

Ceramics

The Roman pottery has **good** potential to determine the extent, date and development of the site through the spatial distribution of chronologically sensitive groups. The presence of a full range of pottery spanning the early to late Roman periods will contribute to spatial analysis into the extent of the site throughout the Roman period, and will help to provide the chronological framework within which the site developed. The pottery also has good potential to determine the status of the site, indicated by the domestic nature of the assemblage. The building material has more limited potential to address this aim, providing an outline indication of the types of structures present.

Human bone

Both inhumations and cremations of Romano-British date were recovered and further analysis has **moderate** potential to address this aim. The distribution of the two groups indicates some spatial patterning and this has implications not only for the development of burial rites but also for the definition of areas set aside for burial.

Soil micromorphology

The data has **moderate** potential to address this aim in so far as an understanding of the micro-stratigraphy of the building from which the samples were taken will demonstrate aspects of the development of the most complete structure recovered. Micro fabrics of possible occupation levels, and both mineralogenics and organic remains are still extant, despite weathering and biological working of the occupation horizon (Macphail 1994). These have good potential for further investigation. In particular further work can be integrated into national research agendas. Comparison may be feasible with Iron-stained features of possible anthropogenic origin being studied from beneath a possible timber framed Roman building at Mount Roman Villa, Maidstone (Macphail and Cruise, in prep.; Heathcote, in prep.).

Summary

The structural and ceramic data will together provide the framework within which all other studies will take place. Provisional phasing has highlighted the potential for a relatively secure and stratified structure to emerge during analysis. On the basis of this structure, aspects of development and status can be investigated. In particular, the form, level of material culture and range of activities present at Eastcotts suggest it will provide an important model for the development of rural settlement in this part of the Ouse Valley, and also extremely useful comparative data for assessing the relationship of contemporary sites within a network of social and trade patterns. The form and extent of the settlement, although certainly reflecting settlement shift, may also indicate a measure of nucleation and this contrasts with the single farmstead at Peartree Farm.

Project aim 4: To determine the relationship of the site to the broader regional context of the Romano-British landscape of the Ouse Valley. (NEW)

Structural

The structural data has **good** potential to address this aim. Eastcotts represents one of the most completely excavated Roman period sites in the region and the well stratified and dated sequence will allow a detailed characterisation of the form and development of the settlement. This in turn will provide solid data for the construction of models for the development of rural sites applicable to the region as a whole, and in particular to sites excavated within this stretch of the Ouse Valley. Recent research has concentrated on urban and villa sites to the exclusion of non-villa settlements, and both Eastcotts and Peartree Farm will make a major contribution to redressing this imbalance.

Non ceramics

A comparison of the range, function and quantities of the artefactual assemblage from Eastcotts with other Romano-British sites within the region has **good** potential to address the issue of inter-site relationships and may help to place the site within its temporal and spatial framework. In particular, investigation of the numismatic evidence from Eastcotts and similar sites from the region will support useful comparative study (Reece 1991; forthcoming).

Ceramics

The pottery has **good** potential to assist in furthering understanding of the Romano-British landscape of the Ouse Valley, by providing a chronological framework. The distribution of different fabric types will help to determine the pattern of ceramic production and use within the region.

Soil micromorphology

The data has **moderate** potential to address this aim. Further study should contribute towards providing a model for the development of soils and land-use during the Roman period. While insufficient comparative data currently exists to determine relationships with previously excavated sites, the significance of this work lies in the development of interpretative and methodological benchmarks to which current and future projects can be related.

Summary

Current hypotheses concerning the development of the Ouse Valley landscape during the Roman period rely heavily on isolated finds and a body of unpublished data (Simco 1984). There is an additional bias towards urban and villa contexts, and this reflects a national weakness in research strategies (Hingley 1991a). The quantity and quality of the Eastcotts material are such that it can be used to construct models for the development of a Roman rural site useful at the local, regional and national level. In particular useful comparative evidence can be found at Peartree Farm, Harrowden and Bumpy Lane within the Bypass, and further afield at Warren Villas, Stagsden and Mill Farm.

Project aim 5: To investigate the extent and nature of activities relating to the settlement. (NEW)

Structural

The potential of the structural data to address this aim is **good** given the wide range of domestic, agricultural, craft/industrial, and ritual/ceremonial activities that are present.

The structural remains have good potential to further characterise agricultural processing through closer analysis of the corn dryer and the context of food-crop remains. Structural data also indicates the location of craft activity; metalworking residues were concentrated within ditch and pit fills of period 9.2 and further analysis will elucidate the form and spatial distribution of these features. Pottery production was undertaken and a well-preserved kiln and its products excavated. Further analysis provides a good opportunity to investigate implications for the social and economic status of the site and its position relative to its neighbours.

Non ceramics

Functional studies have **good** potential to enable investigation of the extent and nature of ancillary activities, for example domestic versus craft/industrial, and for the identification of diachronic changes in types of activity. Over 29% of the registered finds fall within the household category, and appear to represent a rural and domestic assemblage.

Concentrations of over 1000g of smithing **slag** within features from period 9 were examined. Although these concentrations were recovered from a variety of secondary context types (predominantly ditch and pit fills), their locations may be used to indicate the vicinity of industrial activities. The slags from the groups examined were found to be concentrated in Enclosure Group A (period 9.2). Concentrations of slag from period 9.3 were from pits that had been dug into the ditch fills of this same enclosure group, suggesting the slags originated from period 9.2 smithing activity. This pattern of slag deposition suggests that the Eastcotts smithing industry was in the main concentrated within Enclosure Group A in period 9.2. Refinement in phasing and distributional analysis of all the ferrous slags has good potential to confirm this suggestion of spatial patterning of smithing activity.

Ceramics

The pottery has **good** potential to determine the extent and nature of activities that took place on the site. In particular, the pottery can investigate the occurrence of food storage, preparation and consumption, through the distribution of different forms. The nature of the pottery manufacturing industry may also be investigated.

Animal bone

Analysis of the animal bone can provide information on a range of agricultural production and processing activities and the size/condition of the Eastcotts assemblage suggests that it has **good** potential to do this. Additionally, the deposition of animal bone can also indicate ritual activity, either in the form of whole or part animals. Both types are represented on site (e.g. complete pig C2160 and cattle and horse skulls from ditch C2558) and it can be expected that further examples will come to light during analysis.

Macroscopic plant and invertebrate remains

The charred plant remains have **good** potential to indicate a range of agricultural activities, principally crop production, but also processing and consumption. In particular the contents of the corn dryer may point to more than a single function for the structure and elsewhere threshing is indicated. Charcoal will yield data on woodland management, supported by the evidence of waterlogged wood.

Summary

Good evidence exists for a range of domestic, craft/industrial, ritual and agricultural activities. Further analysis of all classes of material will contribute to a better understanding of the types of activity and their significance for the social and economic organisation and status of the site. The pottery production in particular is of importance in the further definition of a possible local greyware industry (Dring 1971).

Ritual activity is suggested through human burial and animal burial. The deposition of complete pots, within or close to boundaries, might also indicate ritual (this occurs within period 9.1 along boundary L6 marking the eastern edge of Enclosure Group B). This situation can usefully be compared with the rich deposit of samian and glass within a ditch at Peartree Farm (Hingley 1990). In addition other forms of recurrent association within the structural, artefactual and ecofactual record should be sought.

Project aim 6: To recover artefactual and ecofactual material that will contribute to a greater understanding of the social and economic framework within which the site developed. (1.10)(1.11)

Structural

Although artefactual and ecofactual studies provide good social and economic indicators, the value of the material can only be assessed, and any analysis undertaken, within a structural framework. As much as the presence or absence of material on site is significant, it is the spatial and diachronic location and associations of that material that provide meaning. The structural data is crucial in providing this framework, but is also a means of investigating social and economic themes in its own right. In common with other Bypass sites, such as Peartree Farm and to a lesser extent Village Farm, some appreciation of the overall form of the settlement can gained and this can be interpreted in terms of function. The development of the Eastcotts site clearly reflects the uses to which it was put, as a habitative site, a focus for agricultural production, a location of craft activities, and possibly offering some limited central place services (pottery production for instance). All these factors determine the way space is used and defined on site. Equally important in determining the form a settlement takes are social factors such as the stratification and organisation of communities. Although few structures were identified, the preservation of boundaries and enclosures and the evidence for activities (see 5 above) suggests that the Eastcotts structural data has **good** potential to address aspects of social and economic frameworks. The good quality intra site data will support the integration of the site into local and regional frameworks.

Non ceramics

An examination of the frequency and range of artefacts present at Eastcotts with comparable sites within the locality provides **moderate** potential to address this aim. Comparison of coinage profiles built up from sites of different types will assist in addressing this issue. Of particular interest will be the scarcity or absence of artefacts, which may act as an indicator of wealth or status. This will help to place Eastcotts within a broader socio-economic framework.

Ceramics

The pottery has **good** potential to address this issue, through the inter-site analysis of imported wares. The presence of a kiln producing Roman pottery provides added potential for defining the economic framework of the site. On preliminary assessment, the pottery shows an emphasis on regional trade and commercial contacts, with some continental exceptions.

Animal bone

The animal bone has **good** potential to provide important information on the production and consumption of stock and also on the role of wild species (such as deer and fish) in the economic mix. The assemblage is large, well dated and well stratified, and any diachronic variations in the economy can be expected to show up. Evidence will be sought for bias in species, age at death and any post mortem processing. Of particular interest will be the investigation of the pastoral/arable balance in relation to other Bypass sites such as Peartree Farm.

Macroscopic plant and invertebrate remains

Eastcotts possessed the largest assemblage of charred plant remains of all the Bypass sites and an important assemblage of waterlogged material. Both have **good** potential to provide a basic profile of the crop types in use during the Roman period although the assemblage is too small to be chronologically sensitive within that period. A range of crop types were present such as barley, oats and spelt wheat but also more exotic types such as celery and walnuts; the latter were imported and indicate external contact.

Evidence for fern gathering (a plant growing on distant acid soils) points to the exploitation of the settlement hinterland.

Summary

The Eastcotts data has good potential to investigate the social and economic functioning of the Eastcotts settlement and to determine external contacts. The sample size provides evidence for spatial organisation of activities, while imported material will help to determine the extent to which the settlement operated at a subsistence level or was integrated into a market oriented economy. These latter issues will involve the extent to which the native population was exposed to 'Romanising' influences with important implications for the region as a whole (Millet 1991).

Project aim 7: To understand the general environment within which the site existed, and changes within the settlement due to site formation processes and changes within the agricultural regimes. (1.10)(1.11)

Structural

The structural analysis provides the context and framework for environmental re-construction and has **good** potential to address this aim. More directly, structural observations allow a map of alluvial and colluvial cover to be constructed and the relationship of this cover to site development and in particular abandonment assessed. Provisional phasing indicated a migration of settlement uphill away from the Elstow Brook in the middle to late Roman period and this appears to be reflected by the distribution of alluvium.

Animal bone

The animal bone has **moderate** potential to address this aim in so far as domesticated species indicate open ground. Wild species such as bird, deer, rodent amphibians and fish indicate a range of environments.

Soil micromorphology

The potential for contributing to our understanding of the general environment during the prehistoric and Roman periods has been dealt with in Project aims 1 and 4. In addition, the potential to address site formation processes through soil micro morphological analysis is **good**,.

Macroscopic plant and invertebrate remains

The assemblage has **good** potential for studying aspects of the settlement and more local environment during the Roman period. Both the charred and waterlogged assemblages, including weed species indicate open and disturbed ground. There is evidence for a range of trees both native and introduced, and a number of more distant environments, such as acid heath indicated by ferns.

The limited assemblage of floral and faunal remains is insufficient to analyse chronological developments in agricultural practice within the Roman period, and any changes cannot be directly linked to settlement development. However, a provisional analysis of the snail remains indicates amphibious species, at the eastern end of the site during Periods 9.2 and 9.3, may be highly significant in indicating rising water levels which lead to the abandonment of this part of the site for settlement.

Summary

The Eastcotts material has good potential to provide an indicator of the general environment through a combination of faunal and plant remains. The major part of the data relates to immediate on-site conditions, but local arable and pasture is indicated as well as exploitation of more distant woodland and heath environments.

2.7.3 Eastcotts: Summary statement of potential

Table 15 Summary of potential

Aim	Structural	Non ceramic	Flint	Ceramics	Human bone	Animal bone	Soil Micro	Macro. plant and animal remains
1 Prehistoric landscape	★★	-	★★★	★★	★★	-	★★	★
2 Investigation of triple ditch	★★	-	-	★★★	-	-	-	-
3 R.B. settlement	★★★	★★★	-	★★★	★★	-	★★	-
4 R.B. regional context	★★★	★★★	-	★★★	-	-	★★	-
5 Ancillary activities	★★★	★★★	-	★★★	-	★★★	-	★★★
6 Social and economic framework	★★★	★★	-	★★★	-	★★★	-	★★★
7 Environment	★★★	-	-	-	-	★★	★★★	★★★

★★★★	High potential
★★★	Good Potential
★★	Moderate Potential
★	Low potential
-	No Poteotial

Table 16 Quantification of relevant data for analysis

	Structural	Non ceramics	Ceramics	Human Bone	Animal Bone	Environmental	Other
Topography	90 contexts; fluvio-glacial deposits, late Roman alluviation and ?recent colluviation	-	-	-	Micro fauna	Waterlogged deposits	Elstow Brook and Cardington data, Soil micromophological study
Mesolithic	-	433 pieces of residual flint	-	-	-	-	-
Neolithic	7 contexts; inhumation and pit	571 pieces of Neo-LBA flint, 25% *in situ*	-	1 inhumation	-	1 sample of charcoal	Crop marks
Late Neolithic/early Bronze Age	24 contexts, boundaries	ditto	-	-	-	-	-
Iron Age	34 contexts; two activity foci	-	23 early-mid IA pottery sherds. 1451 late IA sherds. 91% are residual in RB period 9.1	-	3 contexts containing bone	1 sample of charcoal	-
Romano-British	2396 contexts; boundaries and settlement, inc. three major phases of development from C1 - C4	121 registered artefacts; 25.7Kg of slag; leather, wood ,glass	14313 pottery sherds; 249 frags. of building material; 160 frags. of Kiln furniture	2 cremations 4 inhumations 2 fragmentary deposits	357 contexts containing bone	20 samples of charred plant remains; 12 of charcoal; 5 of waterlogged material; 2 of insect remains	Soil micromorphology Geophysical survey Settlement pattern
Medieval	35 contexts; cultivation	Single jeton	-	-	2 contexts containing bone	-	-

2.8 OCTAGON FARM

2.8.1 Summary of Results

Fourteen of the major monuments were investigated by trenching, with extensive fieldwalking and geophysical survey undertaken across the core of the site. This has allowed the site to be characterised as part of a group known as 'Barford type Complexes'. A number of examples are known from within the Ouse Valley (e.g. Haddenham) and overall the group has a distribution from the Trent as far south as the Upper Thames. At Octagon Farm the short cursus may form the earliest component (Clark forthcoming) with the subsequent construction of rectangular ditched, 'mortuary enclosures', and then ring ditches (representing the sites of round barrows). The development of the site is likely to have lasted centuries, with the major monuments probably dating from the middle Neolithic to early Bronze Age. There is evidence for the continued importance of the site into the Iron Age and Roman periods; later enclosure ditches mark the transition to a settlement dominated landscapes with groups of features indicating domestic activity of Iron Age date.

2.8.2 Statement of potential for further analysis

For the 1994 season many of the project aims related not to the academic potential of the site but rather to measures designed to militate against disturbance of the site during construction. A single project aim, aim 1, can be addressed in terms of the potential of data for further analysis with three further 'themes' suggested. Overall, the potential of the data for further analysis is moderate to good. One of the single most significant sites along the route of the Bypass trench excavation has allowed the investigation of a number of the major monuments with data recovered on their individual form and on the development of the complex as a whole. Good potential exists to characterise the form of the monument complex and classify it within a range of regional types. The identification of settlement features on other Bypass sites appears to confirm the exclusive distribution of settlement and funerary contexts and this has important implications for investigations into the nature and social organisation of Neolithic and Bronze Age communities. The transition from landscapes organised around communal monuments to settlement and agricultural forms is also represented and this forms one of the main research aims of the project (***aim 3.4: Processes of change***) highlighted within by English Heritage as of national importance (EOP, 36).

Original Project aims

Project aim 1: A principal aim of the archaeological recording will be further clarification of the relationship between the structures in the landscape and the areas between them.

Structural

Once the position of the monuments had been confirmed and their condition evaluated, the major thrust of the 1994 fieldwork was directed towards investigating the areas between them. Fieldwalking results suggested no pattern within the lithic material and no contemporary activity was located through excavation. However, the position of the monuments appears to have been determined by microtopography and an examination of the position of palaeochannels and slight rises in ground level in relation to the monuments has **good** potential to address this project aim. In addition, an analysis of the spatial relationship between the different classes of monument and the later field system and settlement nuclei has the potential to elucidate aspects of continuity in the use of the area for ceremonial purposes. A pit (A27) containing decorated pottery of early Iron Age date, and a ceramic object of uncertain function may indicate ritual deposition. Refuse of Iron Age date was recovered from within the upper fills of ring ditches and this was also the case at Village Farm and Harrold (Eagles and Evison 1978). Analysis of this

material has high potential to characterise this activity as either domestic or possibly resulting from some form of continued ritual activity.

New Project aims

Given the restricted nature of the original project aims some attempt can now be made to address the overall significance of the results from all phases of investigation. Three major themes can be addressed;

2. Structural development

The evidence from excavated sections across the monuments has **good** potential to reveal aspects of the construction of individual monuments and for the overall development of the complex. A combination of structural and geophysical data suggests the replacement of small rectangular enclosures with circular barrows (also seen at Dog Farm Willington) and indicates the primacy of the larger rectangular enclosures and the cursus. Developmental complexity can be seen in the sequence of ditch construction around the double and triple ditched barrows, where, in the latter case, progressive enlargement of the barrow mound can be suggested.

Although no direct dating evidence is available for the construction and primary use of the monuments (this reflects a similar situation at Godmanchester) the absence of contemporary domestic or other refuse is significant for the location of settlement and for the nature of ritual activities performed at the site. The range and variety of artefacts and ecofacts found in association with the monuments is limited with an analysis of the lithics collected during fieldwalking possibly holding out the most potential for characterising activity.

3. Continued ritual significance

The ceramics have **moderate** potential to address this aim. It has been established that elements within the study area, as defined by cropmarks, are of early-middle Iron age date, notably rectangular enclosure (1480.18). Others which contained Iron Age material in their upper fills, including 'paperclip' enclosure, 1480.04 and ring-ditch 1480.12, were at least visible features at this time. The small quantity of earlier prehistoric ceramics recovered is in keeping with the apparent 'ritual' nature of many of the monuments. Further analysis has the potential to define the domestic or ritual nature of the Iron Age assemblage

4. Later prehistoric settlement and enclosure

A rectilinear field system, post-dating some of the monuments, may date to the Bronze or Iron Age and represent the change from monuments to settlement features in the landscape. An amount of early to middle Iron Age pottery came from pits and post-holes that may indicate settlement activity. The spatial relationship and density of these features needs to be considered in comparison with other sites to characterise their significance. Both structural and ceramic data have **moderate** potential to address this theme.

2.8.3 Octagon Farm: Summary statement of potential

Table 17 Summary of potential

Aim	Structural	Lithics	Ceramics
1. Areas around the monuments	★★★	-	-
2. Structural development	★★★	★★	-
3. Continued ritual significance	-	-	★★
4. Later prehistoric settlement	★★	-	★★

★★★★	High potential
★★★	Good Potential
★★	Moderate Potential
★	Low potential
-	No Potential

Table 18 Quantification of relevant data for analysis

	Structural	Non ceramics	Ceramics	Human Bone	Animal Bone	Environmental	Other
Topography	440 contexts; fluvio-glacial deposits, palaeochannels, later alluviation	-	-	-	-	-	AP's of palaeochannels and alluvial deposits
Neolithic/early Bronze Age	255 contexts; monument complex	12 Mesolithic-early Neolithic flints, 65 late Neo./EBA	7 early prehistoric pottery sherds	-	-	3 saroples of charcoal	Geophysical survey Fieldwalking Aerial survey
Late Bronze Age/early Iron Age	70 contexts; boundaries and ?settlement	-	172 pottery sherds 77 frags. of fired clay	1 cremation	1 context containing bone	4 samples of charred plant remains 8 charcoal samples	-
Medieval	142 contexts; cultivation	-	-	-	-	-	Documentary
Post medieval	100 contexts; cultivation	-	-	-	-	-	-

Appendix 1: The Archaeology of the Region

(Reproduced from Dawson 1993a)

Introduction

A general assessment of the route based on surveys held within the Planning Department was prepared as part of the Public Inquiry submission (*Public Inquiry into the proposed Bedford Southern Bypass, Proof of Evidence* 23rd April 1990). Since the publication of that report further evidence has been recovered, which has been incorporated into a review of the evidence for archaeological activity in the valley through which the Bedford Southern Bypass is to be built.

The topographical survey took place in 1990; when trial trenching took place two years later in 1992, the farming regime had undergone some changes. This was particularly evident in the lower-lying areas where very poor weather conditions had led to delays both to ploughing and to drilling. Consequently the timetabling of assessment fieldwork had to be tailored to accommodate farming needs. Access was denied altogether to the area of Village Farm HER 2421 and access was delayed until February and March 1992 in other areas.

The archaeology of the Ouse valley between Cardington Cross and Elstow

The Topography

The route of the southern bypass passes along the shallow valley of the Elstow Brook, a tributary of the River Great Ouse. The area is low lying and prone to flooding which has resulted in a concentration of meadow and pasture between the Harrowden Road and Old Harrowden Lane. West of Old Harrowden Lane the generally higher ground of what appears to be a low gravel island has resulted in arable fields dominating the landscape as far as the A6. On the east side of the A600 Harrowden Road the farmland was ploughed in 1991 and seeded with grass.

The topography of the area is dominated by alluvial gravel beds eroded by the Elstow Brook. The gravel beds were laid down at the end of the Last Late Glacial and cross bedding observed nearby, at Willington, suggests erosion has flattened out undulations left by fast running glacial outwash streams. In some areas, notably Octagon Farm, Bunyan's Farm, Manor Farm and Eastcotts, islands of gravel have survived. Some alluvial deposition is evident dating to the late Iron Age and late Roman period, which has further added to a general levelling of the landscape (Robinson 1992b).

Archaeological background

The alluvial soils and river valley route of the bypass have provided a focus for amateur activity which has been concentrated on the Roman kilns at Mile Road and adjacent area, generally in those areas referred to in this report as Bunyan's and Manor Farms. Some archaeological work was undertaken during the construction of the Southern Orbital Sewer when a Roman lime kiln was partially excavated at Mill Farm (White 1977) and a 2nd-century pottery kiln in Eastcotts parish (White 1980). Excavations of two areas of Roman pottery kilns were undertaken by Mr J Dring but have yet to be published in detail (Swann 1984). The building of John Bunyan School north of the Elstow Brook revealed enclosure ditches of Belgic and Roman date. Small-scale excavations took place at a second Peartree Farm site in 1976 (HER 1624; Woodward 1977). Between 1965 and 1972 excavations took place at Elstow Abbey (Baker 1969, 1971), which although off the route of the bypass yielded extensive evidence of medieval activity including a Saxon cemetery and structural remains of the Abbey. There was also evidence of prehistoric, early Saxon and Roman activity.

Cropmark sites near the Elstow Brook at Manor Farm and Bunyan's Farm have been noted from aerial photographs. General surveys (Knight 1984; Hall & Hutchings 1972) have drawn attention to the density of prehistoric settlement. In the protohistoric and historic periods the evidence of settlement is generally more extensive in the area than prehistoric evidence. In the medieval period a series of linear and sub-rectangular earthworks (HER 3920), now close to the railway bridge on Harrowden Road, suggest the location of the deserted medieval village of Harrowden close to the modern dispersed Harrowden village. The site must have been damaged in the mid-19th century by the construction of the railway and later the road bridge of the A600. More recently damage must have occurred during rebuilding of the bridge for the Elstow Brook and the its diversion associated with the construction of the Southern Orbital Sewer (Fig 5 & 6).

The Post glacial Period

Evidence from quarry sections at Willington and Bromham together with excavations at Bromham, Warren Villas and Stagsden has been used to create a model of environmental development since the Late Last Glacial in the middle Great Ouse valley (Rogerson 1987; Robinson 1992b).

The solid geology of the area is Oxford clay through which the river Ouse has eroded to expose both cornbrash and the underlying Great Oolitic limestone. Situated at the edge of the ice sheet in the Late Last Glacial, the origin of the River Great Ouse lies with glacial outwash. This has meant that gravel beds are found both underlying the Ouse flood plain and on terraces to both north and south of the river in Bedfordshire. Initially these gravels were laid down unevenly with considerable cross bedding. The stabilisation of the river soon after the ice retreat and the deposition of alluvium in the valley has had a gradual levelling effect. Occasional islands of gravels however still protrude above alluvial deposits. The resulting topography reflects both post-glacial drainage and the glacial gravel capping boulder clays. This phenomenon is repeated along the northern ridge of Oxford clays which define the Ouse valley. On the southern side of the Ouse valley at Shortstown, glacial drift gravels have been deposited to form a raised platform above the valley of the tributary Elstow Brook. Further south still the greensand ridge forms a distinctive landmark across the county.

The Palaeolithic Period (c 11000BC - 8300BC)

Generally the area has evidence of human activity from the Palaeolithic (Harding et al 1991; Clark 1992).

The discovery of palaeolithic material at Biddenham (Clark 1992) and the re-examination of the quarry section at Deep Spinney (Harding et al 1991) suggest that evidence of the Upper Palaeolithic period in this area of the Ouse will be largely re-deposited.

The Mesolithic Period (c 8400BC - 3000BC)

Subsequent to the ice retreat, evidence of mesolithic activity has been restricted to flint assemblages. These have been recovered as part of assessment work on the M1 widening (Dawson, Coleman & Enright 1993) and more recently at Meppershall (Dawson 1993). The assemblages which include both tools and waste flakes suggest a picture of mobile hunter-gatherer groups. This model can be tentatively proposed for the Ouse valley where microliths and other diagnostic implements have been recovered from, most recently, the Norse Road Link (Clark 1992) and the Biddenham Loop evaluations (Clark 1992).

The Neolithic Period (c 3400BC - c 2000BC) and Bronze Age (c 2500BC - 600BC)

There is evidence of neolithic activity of a similar nature in the Ouse and Nene Valleys, and Holgate (1993) has further suggested that in contrast to Chiltern assemblages, the artefact repertoire of the Ouse valley and its hinterland relates better to East Anglian material. More specifically recent work on the line of the proposed Norse Road link of the Bedford bypass has identified a complex ritual area (Clark 1992).

In many respects recent fieldwork in the Ouse valley is a continuation of the work carried out in the 1970s (Woodward 1978; Taylor and Woodward 1985) as it centres on the large number of ring ditches

and associated cropmarks dating to the Neolithic period and the Bronze Age. Woodward's fieldwalking suggested that a high density of early-to-middle Bronze Age lithic material, and the corresponding Bronze Age settlement, was located on the river valley and its gravel terraces. He was also able to suggest that habitation areas were spatially related but did not impinge on the ring ditch sites, and that the most concentrated habitation areas were located on the junction of the clay and the gravel terraces. Excavations at Roxton (Taylor and Woodward 1985) suggested early Bronze Age dates for many of these ring ditches. More recent work argues for neolithic origins for this landscape.

Since 1987 a series of field projects has added to this picture and it appears that many ring ditches date to the Neolithic period. The information presented below consists of preliminary statements as important results such as radiocarbon dates and environmental analysis are still awaited.

Central to the prehistoric landscape east of Bedford is a complex of cropmarks that are of neolithic origin These include Goldington, the Cardington causewayed enclosure and, to the north of it, a group of cropmarks known as the Cardington cursus complex.

Excavations at Bury Farm, Goldington (Mustoe 1988) have provided information to suggest that the Ouse Valley prehistoric landscape was well established prior to the Bronze Age. A triple ring ditch, immediately north of the river, produced a central burial consisting of two children aged between 7 and 10 years old. Mildenhall pottery, dated to c 2500 BC, was excavated in the primary fill of the earlier ditch. This puts the earlier phase of Goldington well back into the Neolithic period. The burials at Goldington are significant in that out of a total of eight, three were female and the remaining five were children (T Jackman pers comm.).

An adjacent site at Goldington was a henge-type enclosure which contained an inner ring of post holes and a later cremation in a collared urn. As yet no radiocarbon dates are available for these sites, but it would appear that Goldington was used as a funerary/ritual site for a considerable period. Preliminary results suggest that food consumption also took place on site. Goldington, compared to other excavated sites nearby, such as in the Willington Plantation, has produced a relatively larger animal bone assemblage, with a high percentage of meat-bearing cattle bones with clear evidence for butchery (Clark in prep).

In the past soil analysis, including those from buried soils, has failed to provide a clear environmental history of sites or their context. At Goldington a Bronze Age buried soil was examined using micro morphological techniques. Preliminary results suggest the local environment had undergone extensive cultivation and that prior to its burial, the soil was a mature but wet grassland (R Macphail pers comm.). This would support the view that the well-drained terraces of the Ouse were cleared of trees in the earlier Neolithic. Unfortunately soil pollen samples failed to provide detail on the vegetational history (P Wiltshire pers comm.).

South of the River Ouse, but within close proximity to Goldington, a series of small-scale excavations and field surveys have added further information with regard to prehistoric settlement in the Ouse Valley. A group of nearby ring ditches between Bedford and Willington have produced tentative evidence that they date to the Neolithic period. At Mill Farm a ring ditch produced a central pit with a double inhumation similar to that found at Goldington. The bones, however, were in very poor condition. At Willington, a square enclosure produced a central pit containing a female inhumation, and above the body a red deer antler was deposited. Pottery sherds for the associated ditch were undatable, but the association with a red deer antler and other ring ditches in the immediate area could suggest a neolithic date. A second ring ditch in the same group produced a central pit containing poorly preserved pig skull fragments, together with flint flakes of probable neolithic date, and pottery that also dates to the later neolithic period.

The Cardington cursus complex has recently been the subject of archaeological evaluation. The Cardington group of sites occupies an area south of the first river terrace of the Ouse and immediately north of the Elstow Brook. Both Goldington and the other ring ditches occupy adjacent land. The cropmarks show a series of rectangular enclosures, a cursus and numerous ring ditches, including a further triple ring ditch. The orientation of the cursus and the rectangular enclosures suggests common

alignments and archaeological work was conducted over a large area in order to confirm preservation and the date range for the group of sites. Preliminary soil studies suggest that these monuments were located in a relatively wet environment and that some of the monuments appear to have been positioned on natural rises in the otherwise flat topography of the area.

Fieldwalking has produced a relatively large assemblage of Neolithic and Bronze Age flint, including leaf-shaped arrowheads and thumb-nail scrapers. Three polished stone axes and a red deer antler "macehead" were also recovered from the same field by farm workers. The distribution of the lithic material is significant in that the main concentrations of material is markedly reduced in quantity within the enclosures area. This might suggest that domestic and any other activity associated with flint tools did not take place inside the enclosures. Small scale excavation provided stratigraphical evidence indicating that one of the large rectangular enclosures was sealed by a later ring ditch. A geophysical survey has also indicated that a smaller rectangular enclosure predates the construction of a later ring ditch immediately above it (J Gater pers comm). This has been confirmed by recent trial excavations. A further enclosure produced a single sherd of pottery. The form of the vessel has affinities with Ebbsfleet style material and is therefore of earlier Neolithic date (A ApSimon and D Tomlin pers comm). The fabric itself is shell-tempered and in many ways is similar to the Mildenhall pottery from Goldington.

The main concentration of enclosures has been the subject of a detailed geophysical survey. This produced evidence for further ring ditches and likely enclosures. The possibility of a henge type site within this group was also suggested by a ring ditch with a much bigger and deeper ditch, together with evidence for an internal bank. Recent work has confirmed the presence of internal pit features containing a few flint flakes.

The Cardington complex belongs to a group of Neolithic and early Bronze Age sites that have a geographical distribution extending through the Midlands from the Trent valley across to the North Sea and as far south as the Upper Thames. Similar sites include West Cotton, Stratford St Mary and Lechlade (Loveday 1989). They have been referred to as Barford-type complexes (Loveday 1989) and are often characterised as having a cursus as a central element with large rectangular enclosures and ring ditches. Henges are sometimes directly associated with such groups. Published radiocarbon dates for such sites are limited, but they would appear to centre on the earlier third millennium and extend into the early Bronze Age. This suggests a relatively long tradition of use. The evidence from Goldington indicates that this relatively long term activity was also present on the north bank of the River Ouse where the date range of pottery extends from deposits with Mildenhall pottery to cremations in collared urns in the "hengiform" site. It is perhaps significant that the distribution of Barford-type complexes does not appear to extend into the area of the Chilterns.

As to their precise function, the enclosures have been considered as possible long mortuary enclosures and, with the proximity of numerous ring ditches some of which contain burials, it is difficult to argue against such an idea. In addition, it has been suggested that sites of a similar date and ground plan, such as Dorchester on Thames and Godmanchester, were aligned with the movements of the sun and moon, e.g. the midwinter sunset or midsummer moonset (Bradley and Chambers 1988; McAvoy pers comm.). Bradley (Bradley and Chambers op cit.) has noted the possibility that during the mid-third millennium BC, there was a fundamental change in ideology that saw a shift from beliefs centred on the moon to attention focusing on the sun, and that this happened at a similar time to a change from collective to individual burial. Certainly, at Cardington the associated burial tradition would appear to relate to individual burial.

The development of the landscape east of Bedford forms part of the same continuum as sites along the route of the Southern Bypass from Cardington Cross to Elstow. The linear cropmark at Eastcotts (HER 1623) probably forms a western boundary to the area dominated by funerary and ceremonial monuments on the south bank of the Ouse.

Later Prehistory (c 600 BC - c 500 AD)

The Iron Age in the Bedford area is well represented in the landscape. Especially prominent is the hillfort at Mowsbury, the recently evaluated Norse Road Industrial Unit site (Dawson 1993) and a succession of

other possible Late Iron Age sites along the Ouse valley located on the first gravel terrace. In the immediate vicinity of the bypass route are two probable Iron Age rural habitation sites. The closest sites are those at Norse Road, with another now destroyed beneath the Shuttleworth Road Industrial Estate, while a third survives as a cropmark west of Workhouse End (HER 15340). On the south side of the river east of the road route HER 1480 was assessed for the Department of Transport as part of the Bedford Southern Bypass Norse Road link project. Closer still to Cardington Cross was the site at Mill Farm, already noted for its Bronze Age evidence. Extensive but complex cropmarks on the plateau above Shortstown suggest late Iron Age and Romano-British settlement. A general landscape framework for the area has not yet been developed in detail (Clark & Dawson forthcoming 1993), although recent research into late Iron Age and Roman settlement patterns has begun to give greater insight into regional aspects of the landscape development. As late as 1973 evidence of Iron Age settlement in Bedfordshire had been dominated by pottery evidence (Simco 1973) with few sites excavated. Ten years later Knight used a wider range of excavation evidence in a study of the Ouse and Nene valleys (Knight 1984, 304), concluding that settlement density in the hinterland of the two valleys was unaffected by soil differences, noting however, a predilection for sites on south-east facing slopes.

At Stagsden two settlement sites have been excavated recently, discovered on the route of the Stagsden Bypass (Dawson forthcoming). One is on the edge of the clay, west of the modern village and indicates exploitation of the heavier soils (calcareous gley soils of the Hanslope series) had begun by the 1st century BC. In the Roman period (Simco 1984) settlement was similarly once thought to be dominated by sites on the lighter soils, with only sparse settlement in the Oxford clay vale and Woburn Park. Recent excavations and survey work have shown that many more sites are becoming visible in the north of the county on the clays. This is partly due to increased plough erosion on the top of the clay ridges, but is also due to increased assessment work in the area.

The evidence of late Iron Age and early Roman activity in the landscape along the Ivel and Ouse valleys, although dominated by cropmark sites, in the main, seems to indicate Iron Age rural settlement was made up of small farms. These were possibly single family units, comprising an occupation area enclosed in some cases within a ditch and bank. Many, such as Mill Farm (HER 302) and Cople (HER 1480), had limited field systems, but only a few sites occupy more than 6ha. The period of occupation of these sites shows considerable variety. The Iron Age farm site at Stagsden was occupied from the late Iron Age to the 2nd century AD, although in the mid 1st century there seems to have been a re-siting of structures within the same site. A similar site was found one km to the west at Stagsden; it had round houses evident through surviving drip gullies, and seems only to have been occupied in the Roman period. Neither site was fully excavated.

At Warren Villas quarry, less than a kilometre south of Sandy, settlement dating from the late Iron Age continued into the Roman period. The site was on the gravel terrace immediately above what, in the 1st century BC, became the flood plain of the river Ivel (Robinson 1992a 200-201). At Wyboston (Tebbut 1957) a similar settlement established on the gravel terrace, occupied in the Late Iron Age, may have been abandoned for about 60 years after flooding, re-occupation only taking place in the early Roman period. The expansion of agriculture into more marginal areas, increasingly intense agricultural activity, and more extensive ground clearance in the late Iron Age have been suggested as being responsible for raising the water table; this follows the discovery of mould board plough marks in the gravels of the flood plain at Warren Villas. The plough marks, dating to the 1st century BC, have been found with waterlogged environmental material in them which indicates cultivation in very damp conditions (Robinson 1992a 203 & Table 19.1). In the same area the waterlogged silts of ditches highlight the problems, not of seasonal flooding, but of more permanent inundation in a marshy environment.

Survival of some of these settlements into the late Roman period has yet be demonstrated conclusively. At two sites, Norse Road Industrial Unit and Warren Villas, late Nene valley colour coat and shell tempered pottery suggest activity at the end of the fourth century. At Warren Villas the coin series ends with issues of Valentinian (AD 383) but the site material and records have yet to be fully analysed. At Norse Road a complex picture is emerging. The site was occupied in the early Iron Age within a single ditched enclosure. Subsequent occupation may have ceased before re-occupation in the late Iron Age, but in a slightly different location. A pattern of abandonment and re-occupation may account for a series of enclosures on the same site.

One possible major trend occurring in the countryside of the 1st century BC and later is the agglomeration of settlements and the growth of local centres (Fulford 1992, 23-28). In particular the cropmark complex at Willington combines the route of a Roman road with a series of enclosures and probable habitation sites spread over more than a kilometre (Simco 1984 ills 63 & 64). Not all sites follow this pattern: at Salford a palisaded settlement with at least fourteen round house sites and four post structures may have been abandoned by the 1st century AD. This extensively excavated site was an Iron Age village which was first occupied at the end of the Bronze Age. Pottery of the middle Iron Age predominates, but there are three 1st century AD cremations with metalwork, and three small groups of Samian and Roman coarse wares. At another ditched Iron Age enclosure, Willington (Pinder 1986b 22-40), no date closer than the Iron Age could be adduced from the excavated pottery assemblage, although it too seems to have been abandoned by the Roman period.

Thus the transition period around the Roman invasion appears to be one of increasing pressure on the landscape, and although there is tendency towards the growth of hamlets and small villages (Hingley 1989 76-77) this may be tempered by settlement pattern which is still subject to the periodic abandonment of sites.

The lack of settlement dislocation or destruction horizons, despite military action during the conquest period , implies continuity in the pattern of rural settlement in this area.

The Medieval Period AD 500-1600

Excavations in the great Ouse valley have examined sites of all types from the period, and the evidence of parish surveys has provided a detailed overview of settlement patterns from the late Saxon period on. Excavation in Bedford town has shown how the late Saxon burgh grew and expanded first on the north bank of the Ouse (Baker *et al* 1979) while the south bank is occupied by village settlements, probably including Kempston and Harrowden which may have originated in the early Saxon period. Settlement evidence, with pottery showing both early Saxon and Iron Age characteristics, was found at Thurleigh Castle on clay land by Baker and Simco in 1976.

Pagan Saxon pottery was located under Bedford Castle (Baker *et al* 1974), and Middle Saxon wares in both north and south burghs. Pagan Saxon cremations and a later Saxon cemetery have been excavated at Elstow Abbey, founded by Judith, niece to William the Conqueror. Extensive excavation has taken place within the Saxon and medieval town of Bedford, and within Bedford Castle. (Baker *et al* 1979). This work has given a framework for ceramics, environmental evidence and other finds which will aid placing the structural and material culture expected to be recovered from the deserted medieval village site at Harrowden. To this must be added the recent excavations at the medieval village of Stratton (Shotliff forthcoming).

Excavations at the monastic sites of Elstow Abbey and Newnham Priory have established the wealth of such houses but land holdings such as the granges at Fenlake Barns and Willington are outside the scope of this assessment.

The recognition of an overall pattern of landscape development derived from documentary research has been published (Wood 1985) and this has served to raise questions regarding the origin of the settlement at Harrowden which:

> *'was evidently an early focus of human activity. In the Domesday book it appears as 'Herghetone' or 'Hergentone', from the Anglo-Saxon 'hearg-dun'. The first element means a place of heathen worship with some form of sacred grove or shrine, while the second part refers to the slight rise in the ground here.' (Wood 1985, 12)*

Of particular importance in the vicinity of Harrowden is the proximity of the Parish boundary between the parishes of Cardington and Eastcotts which is crossed by the bypass opposite Fenlake Barns. Bilikowski in examining Saxon settlement noted that up to 20% of Saxon burial took place on or near parish boundaries (Bilikowski 1980).

Appendix 2: The Public Inquiry, Contract and Funding

The need for archaeological recording was established at Public Inquiry which took place in Bedford between 24 April and 17 May1990; the Inquiry Inspector was Commander NAB Anson OBE, FRGS. Proof of evidence on behalf of the County Council was submitted by David Baker MA, FSA, MIFA and by the Council for British Archaeology by Richard Morris, then Research Officer, now Director.

The County Council made a number of significant observations:

- The County Council has for some years been seeking to develop its response to the need for unavoidable rescue excavation in terms of a research framework reflecting current archaeological concerns.
- Importance must be attached to individual sites, their relationships at one time and successively through time, and their contexts in a changing landscape.
- That the County Structure Plan, approved by the Secretary of State in January 1987 included policy 86 for archaeological sites: *"When considering applications for planning permission the local planning authorities will ensure, wherever possible, the conservation of the most important archaeological remains in the county."*
- The updated and expanded policy included the *"seeking to ensure that provision is made for an appropriate level of investigation and recording in advance of the destruction of those sites which do not merit permanent preservation."*
- The draft PPG16, now in operation, was also cited in that there should be a presumption in the favour of preservation. Preservation by record could be an acceptable alternative, but is regarded as a second best option. With regard to funding, responsibility for producing a record of archaeological deposits which are unavoidably threatened by development and which cannot be preserved lies with the developer.
- *"If there is an overriding need to develop land now, then the developing agency should accept the financial implications of properly recording archaeological evidence within it as part of the development costs."*

The County Surveyor also outlined the principles of funding (doc 107) and requested an *"unequivocal undertaking"* to fund the archaeological works. David Baker further pointed out that in *"1989 the County Council indicated its intention to object to the draft route on several grounds, including on account of the archaeological damage entailed and the inadequacy of the Department's financial arrangements for dealing with rescue recording in advance of construction."* Adequate archaeological clearance and recording work in advance of construction was seen at the outset to be expensive, even after mitigation procedures in terms of protection and preservation were carried out, because of the extreme, sensitive nature of the archaeology along the route.

The Department's response to the County Council (doc 140) was circumspect with regard to funding, but allowed for the Secretary of State to keep the nation-wide grant of £500,000 for archaeological recording to English Heritage under review. The document embodied a number of important principles such as the mitigation strategies to be used including areas affected by fencing and landscaping including tree planting, the need for "*remains of lesser importance*" to be recorded, and a watching brief. *"The Department acknowledges the deep concern being expressed on this issue but in the circumstances the Department is unable to provide the requested assurance on this issue."*

The Department announced its intention to increase its annual disbursement for rescue archaeology to £500,000 in Roads White Paper *"Trunk Roads, England _ Into the 1990s"* . The County heritage Officer David Baker went on to say *"It was clear at the outset that, however successful subsequent attempts to limit damage through detailed design, the proposed route for the Bedford Bypass would necessitate work costing well over the sum intended for the entire country."* The preliminary costings presented at the Inquiry at November 1988 prices was £575,825 for Bypass archaeological fieldwork (minus publication costs.

The County Council made *"the strongest possible representation that the Inspector recommend the Department be required to accept as part of the overall scheme, or make special provision separately for, the costs of appropriate archaeological clearance as agreed to be necessary by the County council and English Heritage."*

The Council for British Archaeology endorsed the County Council's proposals, expressing concern with regard to the Department's funding arrangements:

- *" We regret that the standards here fall short of those upon which a local planning authority may insist when dealing with a private developer."*

As far as the estimated costs were concerned, they went on to say:

- *" The archaeological programme for the bypass scheme, including pre-construction, and post-construction works - will be expensive. This is because of the quantity of archaeological sites involved. The County Archaeological Officer has estimated the costs at £575,825, or the equivalent of 0.08% of the total budget at 1988 prices. These costs appear to us to be of the right order of magnitude, although we cannot comment in detail on the way in which they have been calculated. The need for watching briefs and a resident archaeologist on a scheme of this kind cannot be over-emphasised."*
- *" it would not be responsible for this road scheme to proceed unless or until adequate provision for its archaeological dimension has been arranged.*
- *"The point we wish to establish here is that if the Department of the Environment considers it reasonable for private developers to meet archaeological costs of work occasioned by development, that expectations of the responsibilities of government departments can scarcely be any less."*

The Department's response to the CBA :

- *"The Department have undertaken extensive discussions with English Heritage, Bedfordshire County Council and RPS (Clouston) who have acted as independent archaeological advisors to the Department."*
- *" The Department, English Heritage and Bedfordshire County Council are now in full agreement about the correct treatment of each site of archaeological interest. However, discussions will continue to ensure full liaison is maintained between all parties."*
- *"The Department note that the CBA rely upon the judgement of the County Archaeology Officer. To this extent the Department assumes that CBA will consider that the agreed treatment(s) will be satisfactory."*

In the event of the **Public Inquiry, the Inspector** was clearly satisfied that
"the treatment of archaeological sites has been agreed between the Department, the County Council, and English Heritage. The extent of funding by English Heritage is current national policy. I have recorded the views expressed but do not consider that any recommendation for change in this policy can be made within the bounds of the inquiry."

However, the **Secretaries of State** noted in June 1991 that:
"Agreement had been reached on the treatment of the archaeological sites affected by the bypass. The Department's policy of funding was outlined in Inquiry Document 140: all requests for funding archaeological work consequent on trunk road proposals are channelled through English Heritage, whose overall grant for archaeology is supplemented by a contribution from the Department, currently £500,000. The level of contribution is kept under review. Exceptionally, excavation has also been funded direct. The Secretaries of State note that the County Council has requested that the Department fund all archaeological work made necessary by this scheme."

In August 1990 Mr G Drake at the Highways Agency's Eastern Regional Office gave a provisional update which included inflation: a projected broad estimate for November 1991 was £766,424. With contingencies and additional identified survey work this totalled £947,464. The scope of the project agreed in outline was later formally presented in detail in the form of project designs, which detailed specifications and costings for pre-construction archaeological recording as well as the academic justification and means of acheiving aims and objectives.

The Department took over full responsibility for archaeological recording occasioned by its road schemes rather than give English Heritage a cost limited grant which was seen to be inadequate for the purpose. The Department was to be advised by English Heritage on the project designs and estimates for archaeological projects, and be involved at key stages in the project as the Department's statutory advisers. Funding was therefore to be applied for through English Heritage in the normal way, and they would apply the same controls they brought to bear on projects funded by themselves; the Department sought additional independent advice on project merits and cost effectiveness from RPS Clouston.

It was agreed from the outset that the County Council's archaeological unit BCAS would undertake the work since they had undertaken all evaluation and ancillary work to date. BCAS produced a costed a set of detailed interlocking project designs, according to Management of Archaeological Projects 2, which were specifically designed to address the A428 Bedford Southern Bypass archaeological recording problem. The project designs and costings described above were negotiated and agreed with English Heritage and RPS Clouston. They later formed the basis for the contract between BCAS and the Highways Agency. The proposals adhered to the standard MAP2 format of detailed and costed work programmes needed to support academic arguments put forward, and took the project through to assessment. Analysis was subject to a further set of updated project designs in the light of results to date, the subject of the present documents.

The standard English Heritage agreement is effectively cost recovery only. It requires any "savings" to be returned to the funding body, but, should a sustainable case be made for additional work, extra funding would be provided to cover it by means of a variation order. These English Heritage style proposals include not only the method of the treatment of the site, the aims and objectives of the archaeological project, but the detailed costings and timings required to do the work.

The Department took the decision instead to conduct the Bedford Bypass project as a lump sum contract according to the model contract it had instigated at Scole. Since the Scole contract was modelled for a different type of archaeological problem, it had to be partially remodelled it fit the A428 Bedford Southern Bypass archaeological recording requirements. There was no provision for variation orders of the kind embodied within English Heritage agreements, and further evaluation was poorly catered for in a contract initially designed for summer season working and good access for evaluation purposes. There were thus insufficient contingencies for winter working or for suspected major problem areas such as unexpected discoveries which unevaluated "blank" areas were expected to throw up. The MAP2 proposal had to be modified, and the problem areas were catered for by applying contingency sums to an agreed set of criteria. These could only be released on the agreement of the Highways Agency on the advice of their consultant.

The lump sum contract was finalised in December 1993, and, at the Highways Agency's instruction, included as standard, non-archaeological requirements which comprised additional sums totalling £158,172. These were on top of the fieldwork and assessment costs, the provisional estimate for post excavation analysis and a wide range of contingency elements specified by BCAS. The watching brief and resident archaeologist were negotiated on a day rate since it could not be estimated in advance of the main contractor's programme. (The watching brief has proved to be not only cost effective, but essential in avoiding major damage to the archaeology and delays to the main contract; it has cost little over £7,000.)

The provisional estimate for analysis, included in the overall contract price, was reduced by the Highways Agency from the English Heritage recommendation of 75% to 50% of fieldwork costs. Analysis is the subject of the present separate request for funding, to be agreed by the Secretary of State advised by RPS Clouston. English Heritage will be consulted at key stages.

The additional sums had the effect of raising the price of the lump sum estimate to over one million pounds from £944,101 to £1,102,273. It is important to note that without the additional sums, and despite considerable additional work identified at a later, this was nevertheless lower than the updated provisional estimate of late 1991 of £947,464. The cost of the project can thus be proven not to have escalated in real terms beyond what was flagged up as early as 1988 as an unavoidably expensive

exercise. The archaeological project has kept within the agreed budget, and was successfully completed with no delays to the main engineering project.