Becoming Romano-British

The Landscape of the Late Prehistoric and Romano-British Periods in the Vale of the White Horse.

A thesis submitted for the degree of Doctor of Philosophy

VOLUME 1

William Wintle
Kellogg College
Trinity Term 2013

Version for Oxford Research Archive

Abstract

B e c o m i n g R o m a n o - B r i t i s h

The Landscape of the Late Prehistoric and Romano-British Periods
in the Vale of the White Horse.

A thesis submitted for the degree of Doctor of Philosophy.

William Wintle
Kellogg College
Trinity Term 2013

This thesis investigates the rural landscape of the Vale of the White Horse in the late Iron Age and the Roman period. Its three aims are to place the Roman temple, amphitheatre and cemetery at Marcham / Frilford within the context of the wider rural landscape, to document the nature of the Romano-British social and economic structure and its relationship to earlier Iron Age systems, and to compare the rural community of the Vale with other communities in the upper Thames Valley.

The first aim is addressed by analysing the archaeological data for the neighbourhood of the religious complex at Marcham / Frilford, integrating recent geophysical survey and commercial archaeological evaluations. It is considered whether the site's function was restricted to an extensive religious complex, or whether it can be classed as a small town. Although there is no evidence for urbanism in terms of densely packed buildings, market activities are possible. It is suggested that the cemetery might be a 'managed cemetery'.

The second and third aims are addressed by presenting and evaluating the archaeological evidence for the use of the landscape. The development of the Iron Age into the Romano-British landscape is seen through changes in settlement density, structure and form, buildings such as villas, ditched field systems, communication via roads and trackways, increasing population and agricultural intensification.

Variations in settlement forms in the Vale of the White Horse are considered within the wider context of settlement in the upper Thames Valley. The Iron Age landscape of the Vale appears similar to that of the gravel terraces north of the river Thames. In the Roman period it differs from the gravel terraces to the north by becoming a region of villas and local centres, which suggests differences in landholding and in social and economic structures. In addition, the late Iron Age and Romano-British settlement in the Vale of the White Horse is compared with other regional studies.

Abstract (OUDCE)

B e c o m i n g R o m a n o - B r i t i s h

The Landscape of the Late Prehistoric and Romano-British Periods
in the Vale of the White Horse.

A thesis submitted for the degree of Doctor of Philosophy.

William Wintle
Kellogg College
Trinity Term 2013

This thesis investigates the social and economic changes in the lives of the inhabitants of the Vale of the White Horse, a rural community, from the late Iron Age and through the Romano-British period. It does this by presenting and evaluating the archaeological evidence for the use of the rural landscape within which people were born, raised, worked and died. For most, working life revolved around an annual cycle of sowing and harvesting crops and raising livestock, together with the processing, storage and transport of foodstuffs, clothing, pottery, metalwork and other materials. Houses, either standing alone or clustered together, were constructed from timber and thatch, as were other forms of shelter for animals and stored produce. Social relationships and obligations were expressed and maintained by exchanges, gifts and tribute. Places may have been set aside for rituals and religious practices associated with the agricultural year. The landscape expresses these activities, and the changes in them, through modifications in settlement density and form, development and maintenance of ditched field systems, trackways and roads, and new types of buildings incorporating new construction materials.

A primary aim of the research presented in this thesis is to place the known archaeological material from the Roman temple and amphitheatre site at Marcham / Frilford within the context of the wider rural landscape of the Vale of the White Horse. Rural Romano-Celtic temples are not uncommon in southern Britain but the association with an amphitheatre, or semi-amphitheatre, is unusual. Unusual too is the association of a temple with a late Roman inhumation cemetery. The development of the temple, amphitheatre and cemetery demonstrate the substantial Roman and Gaulish contribution to social and religious life and to its expression in the landscape.

A second aim is to document and understand the nature of Romano-British social, economic and religious life and its relationship to earlier Iron Age systems. This aim is addressed by presenting and evaluating the archaeological evidence for the use of the landscape. Themes covered include the form and density of settlements, increasing population, the types of buildings, the development of field systems, the intensification of agricultural production, and the use of trackways and roads for communication and control of movement.

The complex and diverse Romano-British settlement patterns in the upper Thames Valley have been linked to earlier differences in Iron Age settlement forms. These

variations in land use and settlement forms suggest differences in landholding and in social and economic structures. The final aim of this thesis is to compare the rural community of the Vale of the White Horse with other communities in the upper Thames Valley in the late Iron Age and Roman period.

The Marcham / Frilford Temple, Amphitheatre and Cemetery

An important feature of the Roman landscape in the central Vale of the White Horse is the temple and amphitheatre at Marcham / Frilford. In much of the Vale the river Ock flows either over Kimmeridge Clay or close to the boundary between Kimmeridge Clay and the Corallian limestone. This is not the case near the temple, amphitheatre and cemetery site at Marcham/Frilford, where Corallian limestone is present on both sides of the river Ock, with important local environmental and archaeological consequences. Here, the land on both sides of the river Ock drains quickly and this area is therefore suitable for a river crossing, either by ford or bridge.

Iron Age occupation occurs on the north bank of the river Ock at this location. Adjacent to the river is an enclosure defined by ditches and containing circular gullies and pits. Further north, excavations in the 1930s located more than forty pits which were interpreted as an open Iron Age village. A nearby penannular ditched enclosure and a stake-circle hut were associated with ritual functions. To the east are three separate clusters of pits and small circular or penannular enclosures possibly representing roundhouse drip gullies ranging in size from 12 to 18 metres. Recent excavation has dated these features from the late Bronze Age to the early Roman period.

The form of the main enclosure, together with a number of large intercutting ring ditches to the east, suggests this was not a normal Iron Age farming settlement. Instead, the site appears to contain a range of ritual structures to enable ritual practices. From this, an unusual Romano-British religious complex was to develop.

Rural Romano-Celtic temples are not uncommon in southern Britain but the association with an amphitheatre, or semi-amphitheatre, is unusual. Hingley has suggested a limited form of urban status or market activity as an explanation for the amphitheatre but recent field survey provides little support for this. There is no evidence for urbanism in terms of densely packed buildings or a rectilinear street system. Nevertheless, market activities are possible and a potential interpretation of the fields and enclosure to the north-west of the cemetery could be to manage stock on market days.

A further unusual feature of the temple is its association with a late Roman inhumation cemetery. Such cemeteries are a distinguishing feature of the late Roman landscape and represent a major difference from Iron Age traditions. The Marcham/ Frilford cemetery has more similarities to urban than rural cemeteries through its general west-east grave orientation and apparent organisation with regular rows of graves. It may be bounded on the north by a ditch, separating it from a small field system. It is therefore suggested that the Marcham / Frilford cemetery might fall into the class of ‘managed cemetery’.

Rural Settlement in the Vale of the White Horse

Evidence for Iron Age and Romano-British rural settlement has been obtained from published excavations, grey literature, geophysical survey, fieldwalking and cropmarks mapped from aerial survey.

In the middle and late Iron Age, Abingdon and Cherbury Camp exhibit signs of status through multiple ditches and banks. Although the construction and maintenance of these ditches and banks required the exercise of power, it is not necessarily the case that the wealthy and powerful resided permanently within them.

The middle Iron Age settlements at Ashville Trading Estate (Abingdon), Farmoor (Cumnor), Coxwell Road (Faringdon), Marcham/Frilford and Tubney appear to be open and this may also be the case at Manorhouse Farm (Hatford). Enclosed settlements by and from the late Iron Age are suggested at Watchfield, Barton Court Farm (Abingdon), and possibly Bowling Green Farm (Stanford-in-the-Vale). The evidence from these excavated sites tends to indicate a preference for open settlements in the middle Iron Age with a growing tendency for enclosure by the late Iron Age and early Roman period. Ditched field systems and trackways become more common from the early Roman period but it is not always clear whether individual farmsteads were enclosed. This is certainly the case at Appleford Sidings and Barton Court Farm (Abingdon) but structural evidence for settlement is lacking at many sites.

Most settlements of the Romano-British period appear to have Iron Age antecedents, most often of the middle Iron Age, which might indicate that the formation of new settlements in the late Iron Age and Romano-British periods was relatively uncommon. Activity at Barton Court Farm does begin in the late Iron Age and Appleford Sidings and the second phase of Barton Court Farm commence early in the first century AD.

Settlement continuity has been considered with regard to two periods of settlement discontinuity identified by George Lambrick: from the middle to late Iron Age and at the end of the first century AD or early second century AD. Sites which appear to be abandoned in the second century AD include Barton Court Farm (Abingdon), Manorhouse Farm (Hatford) and possibly two sites in Wantage. Settlements appearing to commence in the second century AD are limited to Farmoor and possibly Mill Street in Wantage. Only three sites appear to demonstrate settlement throughout the late Iron Age: Ashville Trading Estate (Abingdon), Manorhouse Farm (Hatford) and Bowling Green Farm (Stanford-in-the-Vale) although Barton Court Farm begins at this time.

In the three parishes investigated as part of the Thames Water Abingdon Reservoir proposal up to seven settlements may have been abandoned in the early second century AD while a further six may have commenced at this date. This provides support to Lambrick's suggestion of settlement discontinuity in the early second century AD.

The evidence from the Vale suggests overall stability in the total number of settlements in the late Iron Age / early Roman period as compared to the late Roman period, but frequently in different locations. This may be related to changes in land ownership, or to attempts to manage the land more efficiently and intensively.

Important in the development of the Roman rural landscape is the introduction of villas with their new materials, construction techniques and architectural features. The Vale contained about twenty settlements which can be classed as villas, not all of which are contemporary, and none of which are especially large and wealthy. Most, but not all of the villas are situated within a ditched enclosure. These villas, or villa estates, may indicate changes in landholding and also changes in the economic and social structure of rural society. The re-organisation or re-alignment of trackways and field systems also suggest changes in landholding and land use, perhaps to support agricultural intensification and economic development.

Much more numerous are the non-villa settlements in which the majority of the population lived. Although not always on the site of an earlier Iron Age settlement, they appear to represent an important aspect of continuity in economic and social life from the late Iron Age. The majority of such settlements are enclosed by ditches but these occur in a wide range of forms. This trend from open to enclosed settlements had already commenced by the late Iron Age but enclosed settlement appears to be the dominant form in the Roman period.

An apparent change in the Roman landscape is an increase in settlement size. This is perhaps most clear in the linear settlements at East Hanney, Drayton and Steventon which extend for over a kilometre. Increasing settlement size is also suggested at Bowling Green Farm (Stanford-in-the-Vale), where field survey indicated an extensive Romano-British settlement covering some twelve hectares between Bowling Green Farm and the possible villa at Frogmore Brook. Long term settlement expansion and intensification seems to be present at Appleford Field and possibly Ashville Trading Estate (Abingdon). An extensive settlement is also likely at Wantage. It is not clear whether Abingdon can be considered as a small town and although it remained occupied until the late Roman period, its importance, size and population may have been less than in the late Iron Age.

As the population of the fourth century AD cannot be measured directly, a calculation has been made by estimating settlement density and the average number of people per settlement. For the nineteen analysed parishes this produced an estimate of 3,730 people in 140.5 square kilometres, which yields a population density of 26.5 people per square kilometre. This density provides an estimated population of 14,605 for the 550 square kilometres of the sixty-six parishes in the study area and ca 3.1 million for the 116,000 square kilometres Millett used for the inhabitable area of England.

Domesday Book has been used to construct an estimated population in 1086 for these nineteen parishes of 3,810. If indeed the size of the Romano-British population is similar to that of the late Anglo-Saxon and early medieval period, it is possible that the control of access to, and the use of, land may have been as complex and sophisticated as recorded in Anglo-Saxon land charters and medieval and later documentary sources. Such control could be reflected in the greater length of ditched trackways and extent of ditched field systems in the Roman period, as seen in the linear settlements at East Hanney, Drayton and Steventon.

Settlement Variation

Differences in the late Iron Age settlement pattern of the upper Thames Valley have been highlighted by Hingley, who contrasted the open, closely spaced settlements of the gravel terraces north of the river Thames with the more isolated, enclosed settlements of the Oxford uplands. He suggested the former represented communal control of agricultural resources, with arable cultivation on the gravel terraces and seasonal pasture on the floodplain, whereas the latter indicated individual control of the land and other resources. A different settlement structure continued into the Roman period: villas developed in the uplands but not on the gravel terraces. Hingley interprets this as reflecting economic and social differences: some inhabitants of the uplands were able to accumulate and display personal wealth and status, expressed through a villa, while on the densely populated gravel terraces, communal social obligations may have prevented this

The Iron Age landscape of the Vale of the White Horse appears similar to other parts of the upper Thames Valley. Long lived, open settlements of the middle Iron Age dominate the settlement pattern on the gravel terraces north of the river Thames in the Windrush valley, Cassington and Yarnton. Similar open middle Iron Age settlements in the Vale occur at Ashville Trading Estate (Abingdon), Farmoor (Cumnor), Coxwell Road (Faringdon) and Tubney. Although the Vale appears not to have enclosed settlements such as Mingies Ditch and Watkins Farm, the use and occupation of the lower terraces and floodplain is known from Farmoor and Thrupp Farm (Abingdon). Despite these similarities in settlement during the Iron Age, in the Roman period the Vale of the White Horse differs from the gravel terraces to the north by becoming a region of villas and local centres. From the middle second century AD onwards, villas and other new or restructured settlements developed across most of the Vale of the White Horse. However, these are smaller and less ostentatious than the villas of the Oxfordshire uplands. Thus the Romano-British landscape of the Vale differed from both the gravel terraces of the Oxford Clay Vale and the Oxford uplands to the north. The river Thames forms a boundary between two different social and economic systems in the Roman period, despite their apparent similarity in the Iron Age.

Summary

This thesis has demonstrated both the density and the diversity of Romano-British rural settlement forms which existed in the Vale of the White Horse, and the variety of settlement landscapes which existed within the upper Thames Valley. Such landscape and social differences support Mattingly's view that the term "Romanisation" downplays the variety of responses to the Roman conquest. A gradual trend of Romanisation is apparent in the widespread similarity of the material culture throughout the Vale to that of southern Britain and the north-western provinces of the Empire, as expressed in pottery, metalwork, coins and building forms. But equally important, the observed local and regional variations in settlement density and form demonstrate the variety of responses available in becoming "Romano-British", based on preceding Iron Age social and settlement structures, area of the country, and position in the social hierarchy.

Acknowledgements

In doing the research for this thesis I have walked over many fields in the Vale of the White Horse. I am very grateful to the following managers, farmers and landowners who have given me permission to work on their land: Steve Benson (West Challow), Tony Carter (Frilford and Garford), Richard and Imogen Carter Jonas (Frilford), David and Eileen Cox (Charney Bassett and Hinton Waldrist), Will and Janey Cumber (Marcham), Charles Dingwall (East Hanney), John Duffield and Andrew Iles (Marcham and Frilford), Ben and John Lay (Frilford), Richard Salmon (Woolstone), and Neil Walker (Garford and East Hanney).

In undertaking the geophysical survey and fieldwalking I am very grateful for the assistance of Margaret Andrews, Sharon Bishop, Knight Boyer, Jane Harrison, John Hawes, Patsy Jones, Paula Levick, Karen Selway-Richards, Lynn Simmonds, John Walford, Charles Wrench and students from the annual Marcham / Frilford excavations. I owe a large debt of gratitude to John Hawes who has analysed the pottery from the fieldwalking.

I am also grateful to Mr Chris Welch of English Heritage for permission to perform geophysical surveys on Scheduled Ancient Monuments at Cornhill Villa (West Challow, 2006), the Noah's Ark Inn (Marcham, 2007 and 2009), Cherbury Camp (Charney Bassett, 2007) and Cow Lane (Marcham, 2011).

The geophysical survey work has been undertaken using a Bartington GRAD601 magnetometer generously loaned to the Department of Continuing Education by Bartington Instruments. The geophysical results have been processed by the Archeosurveyor program developed by David Wilbourn of dwconsulting BV.

I am also grateful to the following people and commercial archaeological firms for their assistance in providing information on their excavations: Jill Hind, Oxford Archaeology; Jon Hart, Cotswold Archaeological Trust; Steve Ford, Thames Valley Archaeological Services; and David Bunn, Pre-Construct Geophysics. I am also grateful to Helen Winton and Roger M. Thomas of English Heritage for access to the aerial survey mapping of the Thames Water Abingdon Reservoir Proposal. In addition, the staff of the NMR in Swindon have assisted me in accessing their collection of aerial photographs and have provided electronic data of the Thames Valley Mapping Programme and the Lambourn Downs Mapping Programme. The NMR and English Heritage copyright in these photographs and electronic data is acknowledged.

Susan Lisk and Hugh Coddington at the Oxfordshire HER have given me valuable assistance in examining unpublished excavation reports relating to the Vale, particularly for access to the reports for the Thames Water Abingdon Reservoir Proposal.

Many of the maps in this thesis have been produced using MapInfo for which Ordnance Survey, British Geological Survey and UKBorders boundary data has been obtained from Edina Digimap. Their copyright in this data is acknowledged.

The development of this thesis has twice been reviewed by Professor Sir Barry Cunliffe and Dr David Griffiths and I would like to thank them for their helpful suggestions, ideas and references.

I am very grateful to Roger M. Thomas for his interest in this thesis and for his many helpful and constructive comments.

Finally, I would like to thank Professors Gary Lock and Chris Gosden for supervising this work over eight years. During this time, both on site at Marcham / Frilford, and in Oxford, they have answered numerous questions, provided support and encouragement, and have read and provided insightful comments on various drafts.

Acknowledgements (Oxford Research Archive Version)

This thesis contains a large amount of data produced by other researchers which is used in both figures and tables. I am grateful to the following organisations and individuals who have given permission to allow their data to be used in the online version of this thesis. Their copyright in this data is acknowledged below and in the figure and table captions.

Many figures in this thesis are maps based on data downloaded from Edina Digimap between 2005 and 2013. Edina has allowed the use of the use of Ordnance Survey data, copyright of the Ordnance Survey, Historic OS data, copyright of Landmark Information Group, and Geological data, copyright of the British Geological Survey/NERC. Historic England (formerly English Heritage) has allowed the use of mapping data from the Lambourn Downs Mapping Programme, the Thames Valley Mapping Programme, the Abingdon Reservoir Proposal Mapping (for Thames Water) and mapping for SU49NW. In addition, Historic England has allowed the use of Pastscape data, RCHME plans (figure 6.4) and aerial photographs (figures 4.7, 4.25, 4.31, 4.38, 6.4, 7.7, 7.8, C2.20, C2.21). The Oxfordshire Historic Environment Record has allowed the use of HER data.

The Ashmolean Museum has allowed use of aerial photographs (figures 4.5 and 4.6); the British Museum has allowed use of Portable Antiquity Scheme data (figure 6.24, tables 6.13, 6.14); Cranfield University has allowed use of soil map data (figures 2.6, 7.5, table 2.1), copyright of NSRI; the Geomatics Group has allowed use of Environment Agency Lidar data (figures 3.15 to 3.17, 4.37); the Institute of Archaeology at the University of Oxford has allowed use of Celtic Coin Index data (figure 6.8, tables 6.4, 6.5).

The following organisations have allowed the reproduction of images or illustrations: Antique Print Room (figure 3.6); Berkshire Archaeological Society for *Berkshire Archaeological Journal* (figure C2.29); Berkshire Record Office (figures 3.8, 3.9, 4.24, 4.35, 4.36, 4.39, 4.43, 6.4); British Library (figure 4.41); Council for British Archaeology (figure 7.7); Harry Margary (figures 3.9, 4.33, 4.39, 4.40 and 4.43); History Press (figure 4.29); John Wiley for *Oxford Journal of Archaeology* (figure 4.8) and Ordnance Survey (figure 4.28). The Oxford Architectural and Historical Society for *Oxoniensia* has allowed the reproduction of images and data (figures 4.3, 4.6, 4.20, 7.12, C2.7, tables 4.2, 7.8 to 7.10, 8.4).

The following archaeological units have kindly allowed the use of their data: Cambridge Archaeological Unit (tables 6.10, 6,11, 8.1 to 8.3); Pre-Construct Geophysics (figures 4.21 to 4.24, 4.26, 4.27); Oxford Archaeology (figures 6.3, 7.7, C2.2, tables 4.1, 4.5, 4.6, 4.7, 7.8, C2.4, C2.7); Oxford Archeotechnics (figures 4.11 to 4.14, 4.16 to 4.18, 4.20, 4.42, 6.14, 7.15); and Thames Valley Archaeological Services (figures 4.4, 4.12, 4.15 to 4.20, table 4.4).

Abbreviations

ADS	Archaeological Data Service
AIP	Archaeological Investigations Project
BAR BS	British Archaeological Reports, British Series
BAR IS	British Archaeological Reports, International Series
BGS	British Geological Survey
BRO	Berkshire Record Office
CBA	Council for British Archaeology
CBM	Ceramic Building Material
DEM	Digital Elevation Model
DSM	Digital Surface Model
DTM	Digital Terrain Model
EH	English Heritage
EIA	Early Iron Age
GIS	Geographic Information System
GPS	Global Positioning System
HER	Historic Environment Record
IA	Iron Age
LBA	Late Bronze Age
LIDAR (Lidar)	Light Detection and Ranging
NMP	National Mapping Programme
NMR	National Monuments Record
nT	nanoTesla (a measurement of magnetic field strength)
OA	Oxford Archaeology
OASIS	Online Access to the Index of Archaeological Investigations
OS	Ordnance Survey
OUDCE	Oxford University Department for Continuing Education
PRO	Public Record Office
RB	Romano-British
RCHM(E)	Royal Commission on the Historical Monuments of England
SAM	Scheduled Ancient Monument
SMR	Sites and Monuments Record
TVAS	Thames Valley Archaeological Services Ltd
VCH	Victoria County History

Contents

List of Figures

List of Tables

1 Becoming Romano-British

1.1 Introduction

Three distinct communities can be identified in Roman Britain: the military, the urban and the rural (Mattingly 2006). Numerically, the rural community was by far the largest. This thesis investigates the social and economic changes in the lives of the inhabitants of the Vale of the White Horse, a rural community, from the late Iron Age and through the Romano-British period. It does this by presenting and evaluating the archaeological evidence for the use of the rural landscape within which people were born, raised, worked and died. For most, working life revolved around an annual cycle of sowing and harvesting crops and raising livestock, together with the processing, storage and transport of foodstuffs, clothing, pottery, metalwork and other materials. Houses, either standing alone or clustered together, were constructed from timber and thatch, as were other forms of shelter for animals and stored produce. Social relationships and obligations were expressed and maintained by exchanges, gifts and tribute. Places may have been set aside for rituals and religious practices associated with the agricultural year. The landscape expresses these activities, and the changes in them, through modifications in settlement density and form, development and maintenance of ditched field systems, trackways and roads, and new types of buildings incorporating new construction materials.

A primary aim of the research presented in this thesis is to place the known archaeological material from the Roman temple and amphitheatre site at Marcham / Frilford within the context of the wider rural landscape of the Vale of the White Horse. Rural Romano-Celtic temples are not uncommon in southern Britain but the association with an amphitheatre, or semi-amphitheatre, is unusual. Unusual too is the association of a temple with a late Roman inhumation cemetery. The development of the temple, amphitheatre and cemetery demonstrate the substantial Roman and Gaulish contribution to social and religious life and to its expression in the landscape.

A second aim is to document and understand the nature of Romano-British social, economic and religious life and its relationship to earlier Iron Age systems. This aim is addressed by presenting and evaluating the archaeological evidence for the use of the landscape. Themes covered include the form and density of settlements, the types of

buildings, the development of field systems, the intensification of agricultural production, the use of trackways and roads for communication and control of movement, and population increase.

The complex and diverse Romano-British settlement patterns in the upper Thames Valley have been linked to earlier differences in Iron Age settlement forms (Hingley 1984; 1988; 1989) and, therefore, the final aim of this thesis is to compare the rural community of the Vale of the White Horse with other communities in the upper Thames Valley in the late Iron Age and Roman period. The observed variation in landscape use and settlement forms suggests differences in landholding and in social and economic structures.

To provide a context for the landscape, economic and cultural changes in the Vale of the White Horse presented in this thesis, the wider developments in the south-east of England in the late Iron Age and the Roman period are briefly summarised in the next two sections.

1.2 Cultural Change in the late Iron Age

As archaeological approaches to the study of past human societies have changed, so too have interpretations of cultural change in the Iron Age. Until the late 1960s cultural change in the Iron Age was almost exclusively interpreted in terms of periodic invasions from the Continent. Subsequently, generalising processual models sought to explain such change, particularly in the late Iron Age of south-east England, in terms of trade in prestige goods, developing social hierarchies and core-periphery relationships (Haselgrove 1982; Cunliffe 2005). More recent post-processual approaches have addressed new issues. Creighton (2000; 2006), for example, has used late Iron Age coinage to highlight agency and identity in the strategies of client kings to express power over expanding tribal groups.

Dramatic changes appear in the archaeological data of southern and eastern England during the first century BC and the early first century AD. Innovations in material culture include the introduction and development of coinage, new techniques in metal working

and pottery production, cremation burials accompanied by grave goods, and products from Gaul and Rome. Equally visible developments in the landscape and settlement structure are the abandonment of hillforts and the introduction of new nucleated settlements. These new settlements, or 'oppida', often located in river valleys or on trade routes, may have had both production and distribution functions. These fundamental economic and social changes in late Iron Age societies are likely to have been driven both by external factors such as migration or influence from Continental Europe and by internal factors affecting the structure of the indigenous society, such as population growth or pressure on resources.

Cunliffe (2005, 603) interprets the growing Roman and Gaulish influence in terms of a core-periphery model. Closest to the Continent, a core zone from East Anglia to Hampshire included the tribal areas of the Catuvellauni and Trinovantes north of the Thames and the Atrebates to the south. Beyond this lay a peripheral area, from the Humber to the Exe, encompassing the Durotriges, Dobunni, Corieltauvi, and Iceni. Areas remote from the Continent, to the north and west of the periphery, demonstrate considerable continuity from the middle Iron Age with little or no evidence of cultural or economic change.

Distributions of coins, ceramics and burials are frequently used to attempt to identify social groups and social development (Millett 1990a, 14-20; Cunliffe 2005, 156, 160). Millett (1990a, 21) equates these material culture zones with tribes, and suggests smaller units can be identified through sub-divisions in these distributions with the late Iron Age society of southern Britain consisting of a series of clans with their own leader and aristocracy. The distribution of inscribed coins suggests that these groupings were becoming larger in the early first century AD, seen most clearly in Essex and Hertfordshire, where under the leadership of Cunobelin, the Catuvellauni / Trinovantes appear to dominate much of the core zone. This expansion of political power may be caused not only by the economic and social influence of a Romanising Gaul but also by direct Roman political patronage.

Creighton (2000, 55) highlights the political influence of Rome in south-east Britain after 50 BC. He identifies two coin series of this date: British Q, found mainly in Hampshire and south Berkshire, and from which are derived the inscribed coinages of the

Atrebates; and British L, found north of the river Thames, the basis of the coins of the Trinovantes / Catuvellauni. Creighton (2000, 214) then suggests that the leaders of these tribal dynasties may have been brought up and educated in Rome as *obsides* where they acquired Roman values and aspirations. Armed with Roman identities they sought to increase Roman material culture and social forms in their kingdoms. Similarly, Fitzpatrick (1992, 30-31) has suggested that gold coinage provided cohesion within the developing kingdoms and that "coinage was a medium of inclusion and exclusion", providing a material marker of cultural identity.

The Vale of the White Horse lies on the boundary between Cunliffe's core and peripheral zones, with the Atrebates and Catuvellauni of the core zone to the south and east respectively, and the Dobunni of the periphery to the north and west. Enclosed oppida are located on the river Thames at Abingdon and Dyke Hills near Dorchester-on-Thames.

1.3 Britain within the Roman Empire

The term Romanisation has been much debated and is here briefly summarised. It was introduced by Haverfield (1923) in the early twentieth century to describe the visible changes in the archaeological evidence for language, material culture, art, town life and religion. He proposed two primary reasons for the adoption of Roman culture: official encouragement and a local desire to participate in a civilised culture.

The balance between official policy and local initiative in accepting Roman culture remains a matter of debate. For example, Frere (1987, 296) argues for active Roman encouragement and support for the adoption of Roman institutions, language, beliefs and customs and lists the primary agents of Romanisation as the occupying army, service with the army by Britons, veteran colonies, Continental merchants, together with the policies of governors such as Agricola and client kings such as Cogidubnus. Important later drivers of Romanisation were coinage, a monetary economic system, the legal system and religion. A more active role for the local aristocracy is proposed by Millett (1990b, 37), who suggests Rome's policy was limited to the provision of an effective administration which avoided significant administrative or military costs. In his view, Romanisation was

advanced by the native elite participating in the administrative system, and maintaining and enhancing their social position by identifying themselves with Rome through the use of Roman customs and objects. Roman culture was then spread by emulation of the aristocracy by those further down the social hierarchy.

Common to both approaches is that acceptance of the Roman cultural system was driven through the British elite, whether actively as a matter of Roman policy or by local initiative and agency. Romanisation would therefore occur more widely and rapidly in societies with powerful elites and where there were clear personal advantages in being associated with Rome. These pre-requisites are most closely met in the south-eastern core and periphery regions of the late Iron Age. Common, also, to both these approaches, and to Haverfield, is the understanding that Romanisation produced a society containing elements of Roman, Gaulish and native British traditions. The mixture of these elements was not uniform across the country, but varied by region and by social position. The Roman elements were stronger and more visible in the towns than the countryside, and in the south-east than the north-west.

More recently, Mattingly (1997; 2006; 2011) has objected to the term 'Romanisation' believing it represents a "unilateral transfer of culture" (1997, 9)[1] rather than a more complicated and diverse set of cultural interactions, and that it encourages generalisation, suggesting a single acculturation process rather than a range of different processes. The Roman Empire contained a wide range of cultures and Roman culture was itself affected by the societies with which it came into contact. Both before and after AD 43, Britain was influenced not by a single Roman culture, but rather by a range of Continental cultures, of which Gallo-Roman, also undergoing marked change and development (Woolf 1998), was probably the most important. The material culture of the Roman world contains not only numerous common elements including pottery styles, coinage, architecture and town plans but also considerable regional and local diversity. The term Romanisation remains useful to describe the introduction of the new material culture, lifestyles and social structure, common to a large part of the western Roman Empire and which differs from indigenous British material culture (Woolf 1998, 7).

[1] It is unlikely that Haverfield, Frere, Millett or other authors have used such a narrow definition.

Mattingly (2006) rightly draws attention to the negative consequences of the Roman conquest on many individuals and groups. The experience of Romanisation varied from person to person and he (2006, 17-18) introduces the terms 'discrepant experience' to describe the different Roman and British perceptions of life after AD 43, and 'discrepant identity' for different individual and group identities within Roman Britain. The three main group identities (military, urban, rural) each contain significant variations based on individual and group attributes such as wealth, employment, age, gender and location. The terms discrepant experience and discrepant identity are useful in directing attention to the range of possible experiences of life in Roman Britain, and to the multiple uses which may have been made of Roman and native British material culture.

An important part of the Roman administration was exercised through towns. But in Britain towns were few and far apart. The great majority of the population continued to live in the countryside, far removed from the civilised or Romanised aspects of towns. This is the case in the Vale of the White Horse, located a considerable distance from the major Roman urban centres of Silchester (Calleva), Cirencester (Corinium), and St. Albans (Verulamium). On the eastern edge of the Vale, small towns on the river Thames at Abingdon and Dorchester-on-Thames replaced the earlier enclosed oppida.

The clearest examples of aspirations to Roman identity in the Vale of the White Horse are the development of villas. In addition, the construction and use of the temple and amphitheatre at Marcham / Frilford indicate a significant change in the way ritual and religious obligations were performed. The temple serves as a useful example of the mix of Roman, Gaulish and native British traditions. Two main types of Roman temple are known in Roman Britain, the purely classical and the Romano-Celtic (Jones and Mattingly 1990, 285-290). The Marcham / Frilford temple is of this latter type, found throughout the north-west provinces of the Roman Empire, and Lewis (1966, 9) suggests it arose through "the application of Roman architectural style and building methods to Celtic open-air religion". Similarly, the closest parallels for the amphitheatre, or semi-amphitheatre, are from northern and central Gaul (Kamash *et al.* 2010b, 108). Thus Romanisation at Marcham / Frilford, in terms of the temple and amphitheatre, reflects integration into a Romanised Gaulish culture, rather than classical Roman.

The villas and temple were constructed on stone foundations and incorporated stone, tile, wall plaster and glass in their fabric. Their red roofs would have made a conspicuous social and economic statement, visible from a long distance. Although the villas and temple are outnumbered by other forms of rural settlement, most of which remain based on preceding Iron Age traditions, the Roman landscape of the Vale of the White Horse shows numerous additional signs of change. Agricultural intensification is suggested by a more intensively managed landscape with ditched field systems and a growing network of trackways to control the movement of people and animals.

1.4 Chapter Summary

This study has three aims. The first is to place the known archaeological material at Marcham / Frilford within the context of the wider rural landscape of the Vale of the White Horse. The Marcham / Frilford site, consisting of a temple, amphitheatre and cemetery, forms a small religious complex whose inhabitants would have had economic and social relationships with the surrounding area. This raises questions about the economic resources exploited by the local population and the balance between religious and secular functions. The second aim is to understand the nature of the Romano-British society and economy of the Vale and its relationship to the earlier Iron Age social and economic system: what aspects remained unchanged, which were modified and developed, and what was new? Thirdly, the thesis compares the rural community of the Vale of the White Horse with other communities in the upper Thames Valley in the late Iron Age and Roman period to examine local variation in the use of the landscape and hence variation in social and economic structures.

These aims are addressed by presenting and evaluating the archaeological evidence for the use of the landscape in terms of settlement structure and form, buildings, field systems, communication via roads and trackways, and increasing population. To achieve this, the thesis is structured in the following manner. Chapter 2 provides a brief summary of the physical and human landscape of the Vale of the White Horse, together with a short overview of the known archaeology and archaeological potential. This is followed in chapter 3 by an evaluation of the strength and weaknesses of the sources and methods employed to address the research aims.

Chapter 4 addresses the first aim by evaluating and discussing the archaeological data for the immediate neighbourhood of the religious complex at Marcham / Frilford, integrating recent geophysical survey results and commercial archaeological evaluations. The construction of a Romano-British temple provided a centre for ritual and religious activities incorporating indigenous British traditions with Roman and Gaulish influences. This Roman ritual and religious activity may be a continuation of earlier, Iron Age ritual practices on the site. The unusual association, in a rural context, of an amphitheatre, or semi-amphitheatre, illustrates the substantial Roman contribution not only to social and religious life but to manipulation of the landscape. In addition, social change in funerary practice led to the development of an organised, late Roman inhumation cemetery, an unusual adjunct to a temple. Consideration is given to whether the function of the site was restricted to an extensive religious complex, or whether it also contained a marketing or urban element as a small town.

The second and third aims are addressed in chapters 5, 6 and 7, where a range of landscape and settlement themes are introduced and the relevant archaeological evidence discussed and evaluated. In Chapter 5 an attempt is made to estimate the size of the population in the late Roman period, using the available archaeological evidence for nineteen Vale parishes, together with some plausible but unproven assumptions. In the second part of the chapter, the nature and size of settlements are examined to see whether the growing population was housed in new foundations or by expanding existing settlements. Settlement continuity in the Vale is considered with regard to the known settlement discontinuity on the Thames gravels in the early second century AD (Lambrick 1992).

Chapter 6 moves to a wider consideration of the nature and forms of rural settlement beginning with hillforts, valley forts and enclosed oppida within and adjacent to the Vale, before moving to an analysis of other settlement forms: enclosed, unenclosed, linear settlements, single farmsteads and small communities or villages. The Romanisation of the rural landscape is dealt with in Chapter 7 which opens with a discussion of the villas within the Vale and the introduction of new construction techniques and architectural features. The development of villas, or villa estates, may indicate changes in landholding and also changes in the economic and social structure of rural society. It then discusses the re-organisation or re-alignment of trackways and field systems which may suggest

agricultural intensification and economic development. Chapter 7 also investigates whether such agricultural intensification and innovation can be seen in the archaeological evidence for arable and pastoral agriculture.

Chapter 8 expands on the theme of local and regional variation by comparing the Vale of the White Horse not only with other parts of the upper Thames Valley but also with recent studies of areas of southern Britain. This enables conclusions to be drawn about the nature of the late Iron Age and Romano-British settlement within the Vale of the White Horse.

2 The Landscape of the Vale of the White Horse

2.1 The Physical Landscape

The Vale of the White Horse is an extensive, flat valley running west from the river Thames at Abingdon as illustrated below in figure 2.1. While the greater part of it lies in south-west Oxfordshire (formerly north-west Berkshire) it extends westwards into north Wiltshire as shown in figure 2.2.

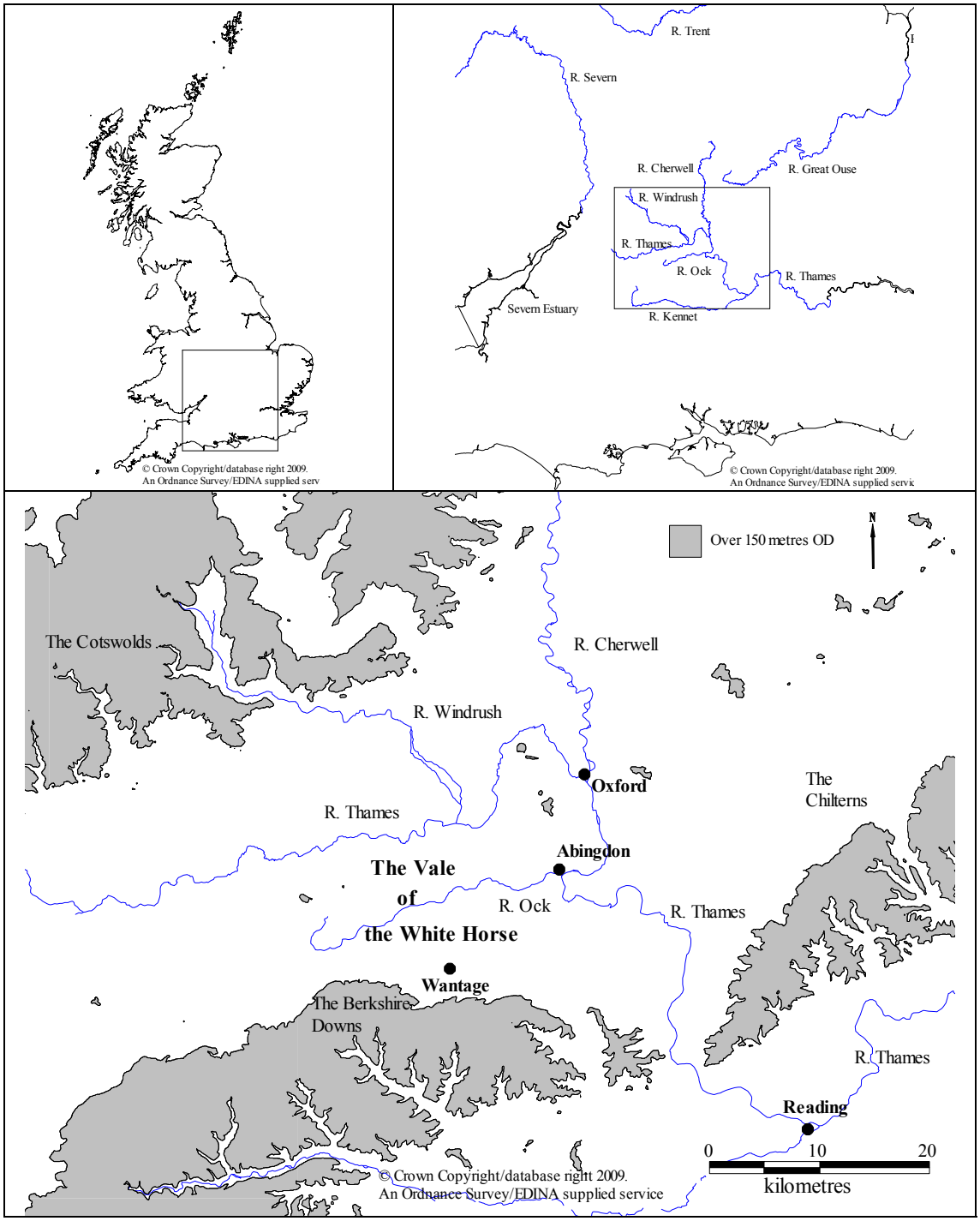


Figure 2.1 – Location of the Vale of the White Horse

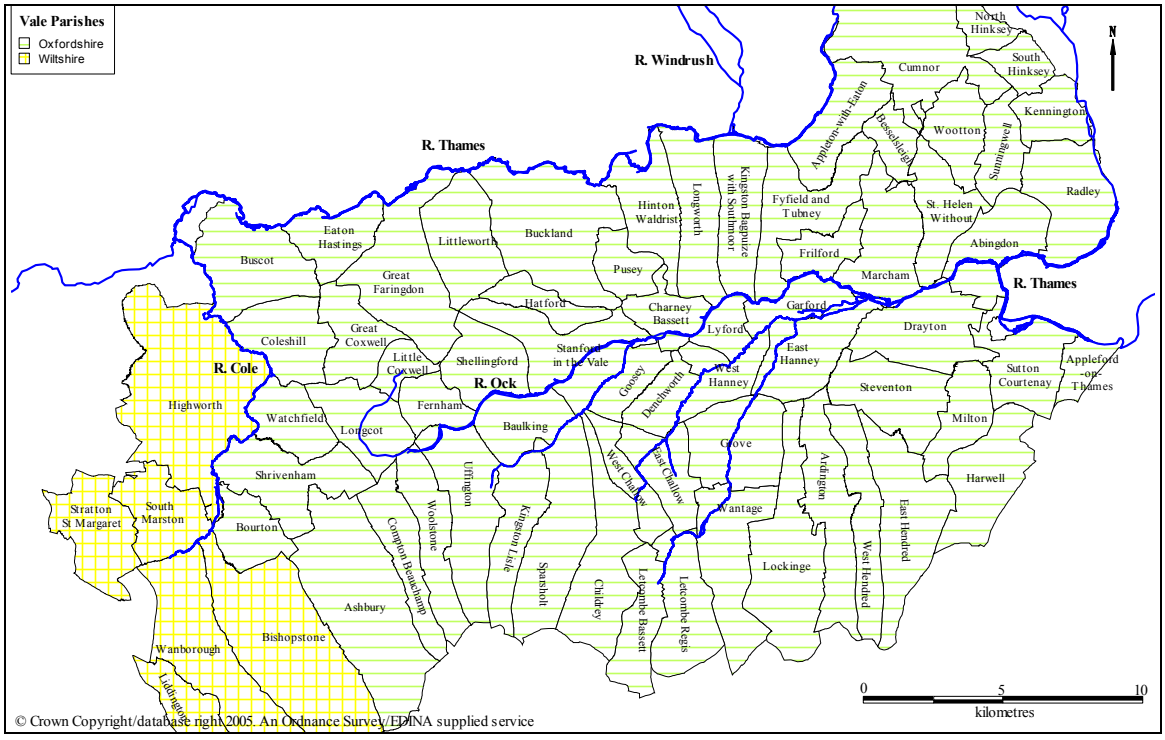


Figure 2.2 – Civil Parishes in Oxfordshire and Wiltshire

As illustrated in figure 2.3, the Vale is bounded on the south by the chalk uplands of the Berkshire Downs which rise to over 200 metres OD, and on the north by the Corallian ridge, occasionally reaching 125 metres OD, and which separates the Vale from the river Thames. The river Ock, the main drainage channel through the Vale, rises in the west near Little Coxwell and flows eastwards to the river Thames at Abingdon. Important tributaries of the river Ock are the Letcombe and Childrey brooks which flow northwards from the Berkshire Downs. In the west the river Cole runs northwards to the river Thames and forms part of the boundary between Oxfordshire and Wiltshire. The very limited fall of the river Ock, from an elevation of about 90 metres OD in the west to about 60 metres OD in the east near Abingdon, can cause problems with soil drainage and flooding. In winter the water table may be very close to the land surface, creating extensive areas of damp or flooded ground. Summer storms can cause localised flooding (Jarvis 1973, 156).

Apart from the two urban centres of Abingdon in the east and Wantage in the south the Vale of the White Horse is essentially rural with a landscape principally defined by small, nucleated villages surrounded by extensive areas of arable cultivation. Interspersed are more limited areas of pasture and woodland.

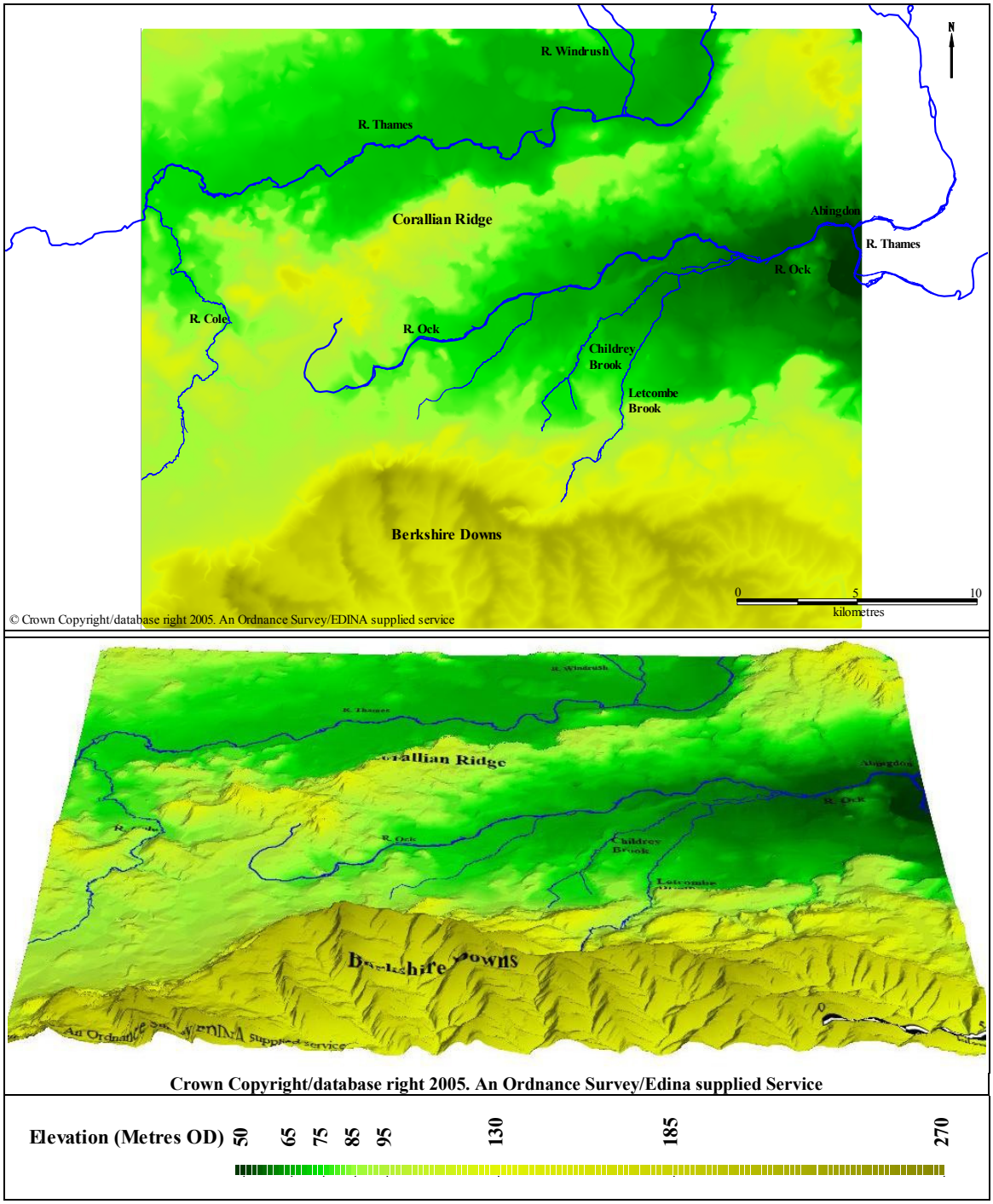


Figure 2.3 – Topography of the Vale of the White Horse
(Three dimensional view - vertical scale exaggerated)

2.2 Geology

The solid geology of the Vale of the White Horse is defined by a range of sedimentary deposits dating from the Cretaceous and the Jurassic (Jarvis 1973, 3-4). These deposits are structured in layers sloping downwards from north to south resulting in a series of sediments running east-west as shown in figure 2.4. The most recent layers are in the south and are the Upper, Middle and Lower Chalk forming the heights of the Berkshire Downs. Exposed on the northern escarpment of the Downs is a band of Upper Greensand, while from the foot of the Downs an extensive band of clay runs northwards towards the river Ock. This consists primarily of Gault Clay in the south and Kimmeridge Clay in the north, sometimes separated by a narrow band of Lower Greensand. Further north, usually to the north of the river Ock, the clay gives way to the Corallian limestones and sandstones. Finally, to the north of the Corallian ridge, and within the upper Thames Valley, is the oldest geological deposit, Oxford Clay.

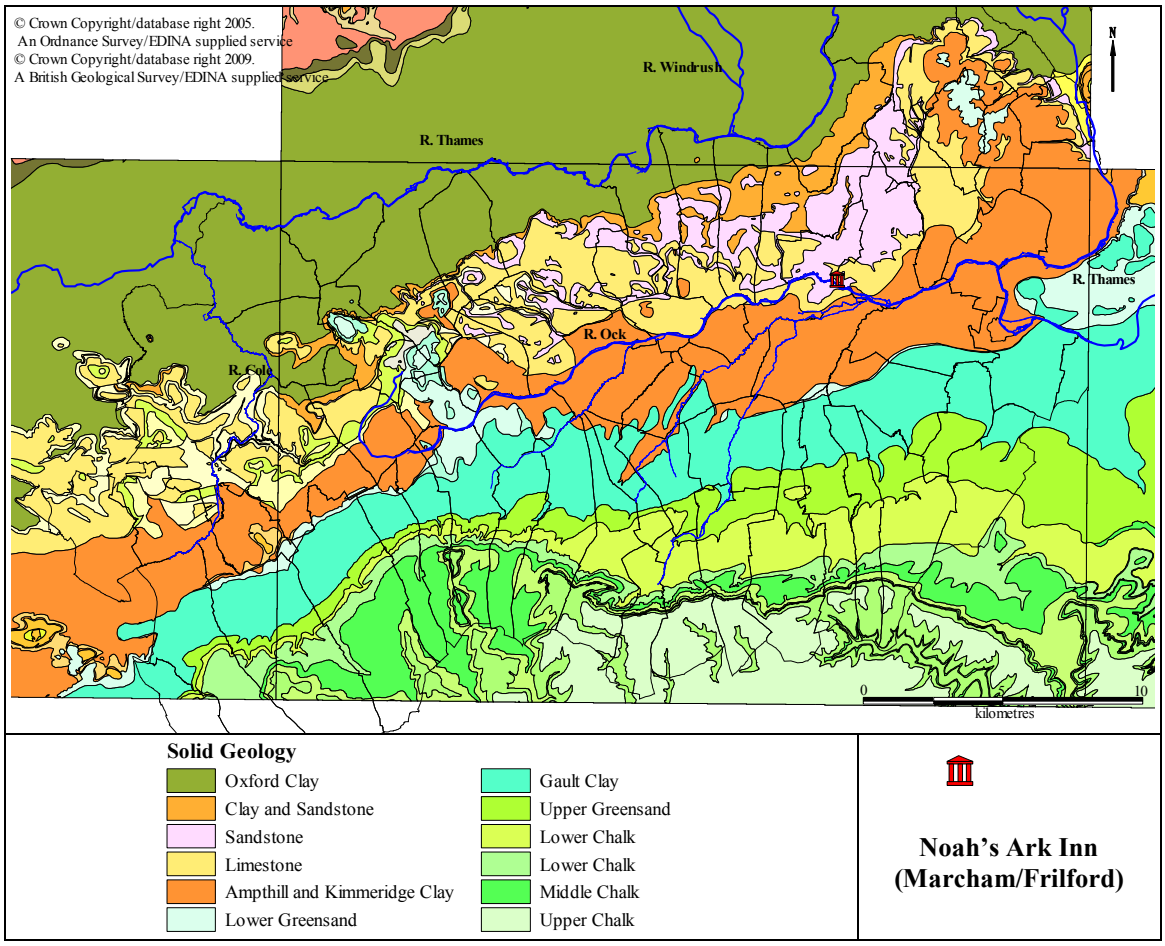


Figure 2.4 – Solid Geology of the Vale of the White Horse
(British Geological Survey Sheets 236 Witney, 252 Swindon, 253 Abingdon and 254 Henley)

In much of the Vale the river Ock flows either over Kimmeridge Clay or close to the boundary between Kimmeridge Clay and the Corallian limestone. This is not the case near the Noah's Ark Inn at Marcham/Frilford and east Garford, where Corallian limestone is present on both sides of the river Ock, with important local environmental and archaeological consequences. Here, the land on both sides of the river Ock drains quickly and this area is therefore suitable for a river crossing, either by ford or bridge.

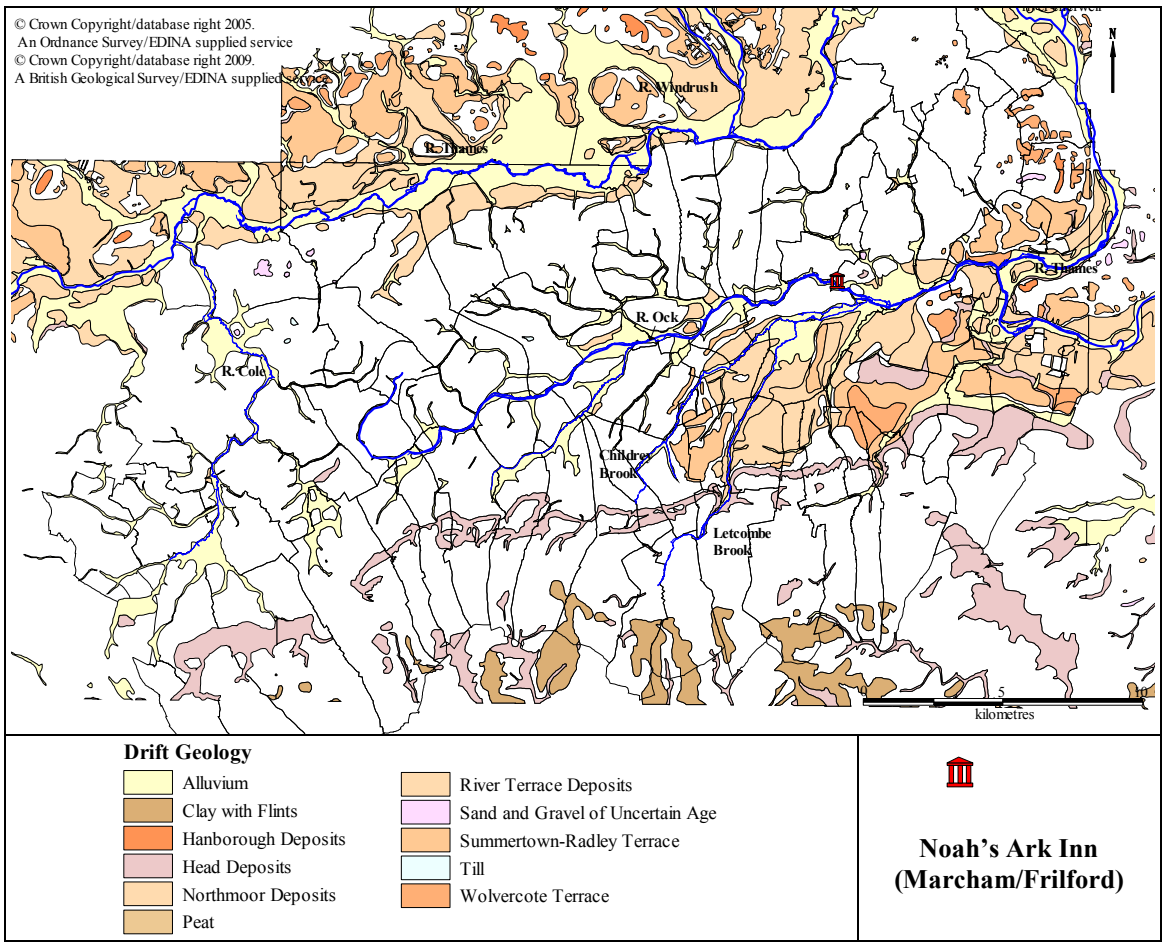


Figure 2.5 – Drift Geology of the Vale of the White Horse
(British Geological Survey Sheets 236 Witney, 252 Swindon, 253 Abingdon and 254 Henley)

Figure 2.5 illustrates the drift geology within the Vale. Alluvial deposits are found adjacent to the river Ock and its tributaries, most extensively near the confluence of the Letcombe and Childrey brooks in Garford and East Hanney and also slightly further east, to the north of the river Ock and south and east of Marcham village. Much of the south-eastern part of the Vale is covered by sands and gravels of the Thames terraces. In the west of this area, around East Hanney and Drayton, are sandy limestone gravels of the first or Northmoor terrace. Further east, and nearer the river Thames, extensive areas of sands and gravels of the second or Summertown-Radley terrace are present in Drayton,

Steventon and Milton. The first terrace re-appears close to the river Thames in Abingdon and Sutton Courtenay. To the south of the river Ock at Steventon and Drayton there are isolated sands and gravels of the Wolvercote or third terrace. Head deposits are found at the foot of the Berkshire Downs and result from the slow movement of waterlogged soil from the Downs.

2.3 Soils

Soils are largely determined by the weathering of the underlying solid and drift geology but are also influenced by factors such as waterlogging and the incorporation of organic matter (Jarvis 1973, 21). Chalky soils are found on the Berkshire Downs while chalky drift deposits within the Vale of the White Horse originate from the scarp of the Downs. Heavy clay soils are distributed over the Oxford, Kimmeridge and Gault clays. Between the Oxford Clay in the north and the Kimmeridge Clay to the south the Corallian ridge contains extensive areas of unconsolidated sands and bands of harder limestones. The gravel deposits beside the river Thames, mainly composed of oolitic limestone from the Cotswolds mixed with local rock, strongly influence the soils on the river terraces. Associated with the river Ock and its tributaries, such as the Letcombe and Childrey brooks, are narrow bands of clayey alluvium (Jarvis 1973, 21-25).

A distinction can be made between the soils of the south-east and south-west of the Vale of the White Horse. In the west the soil is principally a surface-water gley soil of the Denchworth or Rowsham series (Jarvis, 1973, 66). These soils are more suited to grass than arable cultivation and the western Vale has traditionally been an area of dairy herds. The clays of the east are influenced by drift deposits which provide a lighter, better drained soil, particularly where the drifts include gravel deposits. This is especially the case at Grove, West and East Hanney and Steventon where the soils are usually from the Grove Series, a gleyed calcerous soil. In these areas it is possible to cultivate wheat, barley, oats and beans within a mixed agricultural system. But even in the east there are areas of Rowsham series soils containing more clay and this often leads to grass (Jarvis 1973, 136).

A similar picture of the agriculture of the Vale in the early nineteenth century is drawn by Mavor (1809, 23) who described the western part of the Vale as largely pasture with dairying predominating in parishes such as Buscot, Eaton Hastings, Coxwell, Shrivenham and Uffington. The middle and eastern parts of the Vale were generally arable and he considered them "amongst the most productive wheatlands in the kingdom".

The agriculture of the gravel terraces of the upper Thames Valley is largely arable with wheat, barley and potatoes important crops. Between the rivers Thames and Ock the sandstones and limestones of the Corallian ridge provide a diverse range of mostly light, easily cultivated soils, mainly brown calcerous soils of the Marcham series or brown earths of the Fyfield and Frilford series, where cereals are the main crop (Jarvis 1973, 136). Further north, the soils of the Oxford Clay in the Thames Valley are similar to those of the clay Vale with Denchworth and Rowsham series, and this is also a traditional dairying area.

Since the 1970s the proportion of land given over to arable cultivation within the Vale has increased, aided by improved ground drainage and more powerful machinery. A useful way of classifying the modern agricultural potential of soils is through their Land Use Capability (Jarvis 1973, 144) as described in table 2.1 below. This table also gives the extent of these classes as mapped on Sheet 253 of the Soil Survey of England and Wales and the classes are illustrated in figure 2.6.

Class	Description	Area (ha)	Percentage
1	No limitations	105	0.2
2	Minor limitations that reduce choice of crops and interfere with cultivation	16,480	29.7
3	Moderate limitations that reduce the choice of crops and demand careful management.	21,160	38.1
4	Moderately severe limitation restricting choice of crops and needing very careful management.	12,160	21.9
5	Severe limitations restricting use to pasture, forestry or recreation.	1,770	3.2
6	Very severe limitations restricting use to rough grazing, forestry and recreation.	50	0.1
Unclassified	Built-up areas (towns, villages, airports, industrial areas).	3,750	6.6

Table 2.1 – Land Use Capability Classes (Jarvis 1973, 144-149).

The principal land use limitations are wetness, slope, soil depth and stones. Within the Vale of the White Horse waterlogging and flooding are the main impediments to arable cultivation. During the twentieth century this has been partly addressed through improved field drainage.

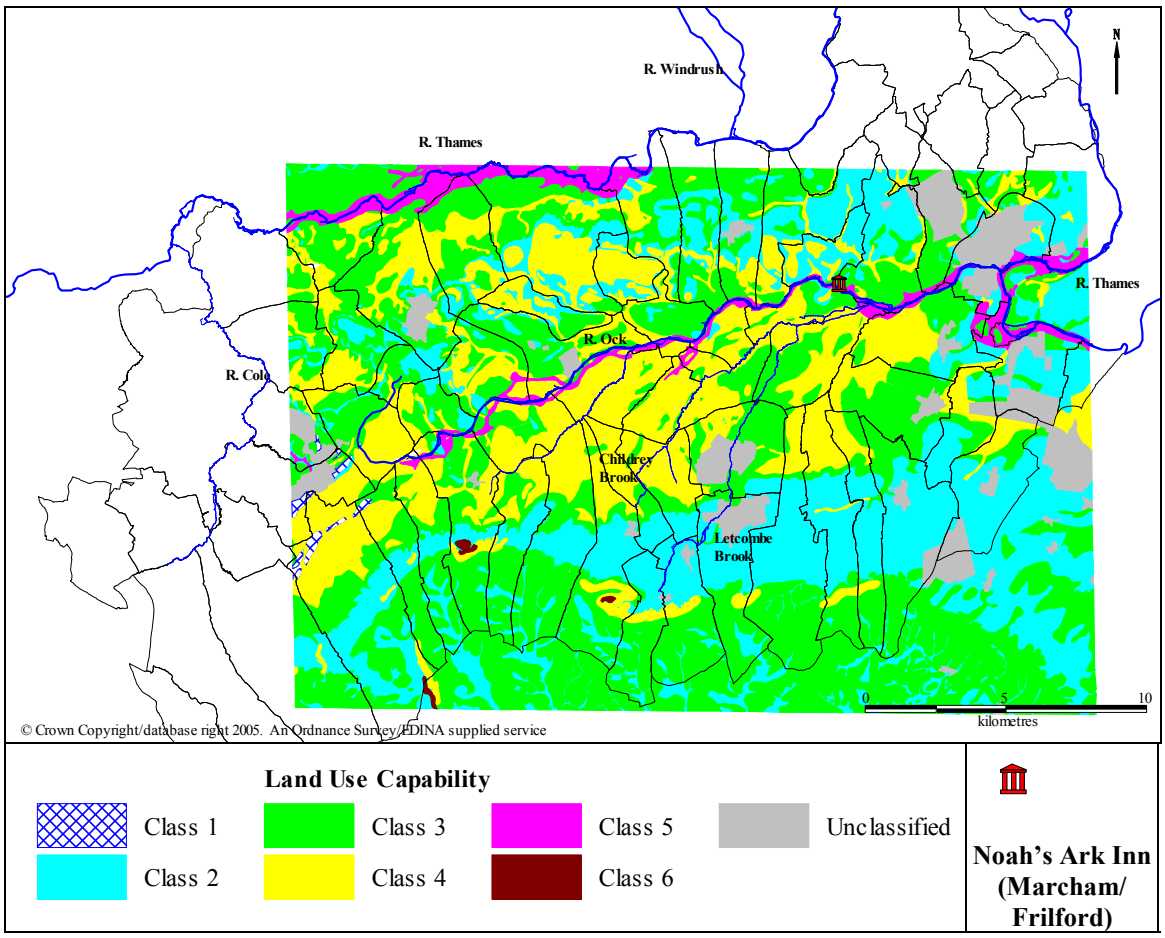


Figure 2.6 – Land Use Capability in the Vale of the White Horse
(Soil Survey of England and Wales – Sheet 253 (Jarvis 1973))
(Soil map © Cranfield University (NSRI) 2015 used with permission)

Table 2.1 and figure 2.6 demonstrate that 90% of the land within the area of sheet 253 is of class 2, 3, or 4. Much of the clay Vale south of the river Ock is of class 4 with small areas of class 3 land interleaved. North of the river Ock the land quality is slightly higher with extensive areas of classes 2, 3 and 4. Land of class 5 is found immediately adjacent to the rivers Ock and Thames, where the major limitations are soil wetness and occasional flooding. Although these are important limitations for arable agriculture the land is still useable for grazing and indeed can be an important meadow resource. The only area of class 6 within sheet 253 occurs immediately to the north of Uffington Castle and includes the steep slopes of the Manger and Dragon Hill. This demonstrates that poor quality agricultural land does not exclude the possibility of important archaeological sites.

Care must be used in projecting these land use capabilities back onto prehistoric and Roman agriculture when the limitations on land use are likely to have been more keenly felt. In addition, centuries of manuring and the addition of organic material may have improved the soil quality. Nevertheless, then as now, the most fertile land is likely to have been on the upper Greensand at the foot of the Berkshire Downs. More difficult for cultivation is the clay band between the upper Greensand and the river Ock. Further to the north, beyond the river Ock, the sandstones and limestones of the Corallian ridge would have been more fertile and easier to cultivate.

2.4 Climate and Environment

The modern climate of the Vale of the White Horse is typical of much of central southern England. Jarvis (1973, 15) records that the daily mean temperature at Abingdon varies from 4.1°C in January to 17.0°C in July and estimates that the growing season in much of the Vale extends from the end of February to the end of November. This is about four to six weeks longer than the higher parts of the Berkshire Downs. Rainfall is related to relief and averages 760 mm per year on the Berkshire Downs and 605 mm in Abingdon (Jarvis 1973, 16).

The current climate in terms of temperature and rainfall is not necessarily the same as in the late Iron Age and Romano-British periods. There have been a number of small-scale climatic fluctuations since the end of the last Ice Age. Evidence for a fall in average temperatures during the first millennium BC is provided by oxygen isotopes in Greenland ice cores and by lake carbonates from southern Sweden (Bell 1995, 146). The mean temperature in much of Britain is estimated to have fallen by 2°C between 1000 BC and 750 BC (Lamb 1981, 55), resulting in a shorter growing season. In the north, and in upland areas, the possible decline or failure of arable cultivation would cause social and economic disruption. Indeed there is considerable evidence for the abandonment of many upland fields and settlements during this late Bronze Age period (Cunliffe 2005, 29). Even in the south, where a shorter, cooler summer may have had less impact, some earlier Bronze Age field systems on the chalk downlands were cut by extensive new linear earthworks (Cunliffe 2005, 50), possibly indicating a change from cereal farming to stock raising in response to the deteriorating climate.

Evidence of former environmental conditions is also obtained from British lake and valley sediments, peat bogs and deposits from archaeological sites. Peat bogs provide widespread evidence of increased rainfall between the eighth and fifth centuries BC (Bell 1995, 146). Thus upland fields may have been affected not only by cooler weather, but also by the development of peat bogs in the wetter conditions. Peat bogs developed on Dartmoor (Cunliffe 2005, 29) and on the Pennines (Turner 1981, 260) in the first half of the first millennium BC. Increasingly wetter weather in the Somerset levels is suggested by the construction of new wooden trackways between 1100 BC and 500 BC (Turner 1981; 257; Cunliffe 1991, 606). However, increasingly wet local conditions can also be caused by land clearance and the effects of man and nature are not always easily distinguishable.

Climate trends towards the end of the first millennium BC are less clear, although slow peat growth may indicate drier conditions from 400 BC onwards (Bell 1995, 147). Lamb (1981, 56) has suggested that between about 150 BC and the Roman conquest the European climate improved to become similar to that of today. This improvement continued until AD 400 giving much of the late Iron Age and Roman period a slightly warmer and drier climate.

This suggests that the Vale of the White Horse throughout much of the first millennium BC may have been slightly colder and wetter than at present. The lower temperature may have had little impact but the greater rainfall would increase the risk of waterlogged soil and flooding. By the end of the millennium and throughout the Roman period the Vale may have become drier and warmer with a climate similar to today.

The environmental evidence from the upper Thames Valley has recently been summarised (Lambrick and Robinson 2009, 29-51; Booth *et al.* 2007, 17-32). From the middle Bronze Age onwards the water table began to rise, causing seasonal flooding in low lying parts of the Thames floodplain by the middle Iron Age. This rising water level may have been a consequence of extensive tree clearance, or climate change, or both. Lambrick and Robinson (2009, 35) suggest the gravel terraces supported a relatively open landscape, probably dominated by grassland, from the middle Bronze Age. This open area may have been restricted to a corridor on either side of the river Thames within a more wooded landscape.

Extensive field and enclosure systems dating to the middle Bronze Age in the upper Thames Valley have been identified by Yates (1999). Further expansion occurred in the late Bronze Age with two settlement groups in the upper Thames Valley centred on Wallingford and Lechlade. Yates interprets these new land divisions, defined by substantial ditches, to indicate the importance of pastoral farming with evidence for both cattle and sheep. Bronze Age settlements are not restricted to the edge of the river Thames and three new sites have been detected in the Vale of the White Horse (Hearne 2001).

2.5 The Iron Age and Romano-British Landscape

Woodland clearance and gradual agricultural intensification on the gravel terraces of the upper Thames Valley continued through the late Bronze Age and the Iron Age. By the middle Iron Age the gravel terraces were largely cleared and formed an extensive managed agricultural landscape. Grassland may still have predominated, particularly on the lower terraces subject to seasonal flooding, but there is widespread evidence for cereal processing on the higher terraces (Lambrick and Robinson 2009, 43-44). Most excavated Iron Age sites in the upper Thames Valley provide evidence of mixed farming through animal bone assemblages and charred cereal or waterlogged deposits. Further evidence for arable cultivation may be provided by storage facilities such as four-posters and pits (Lambrick and Robinson 2009, 271-277).

This process of agricultural intensification continued throughout the later Iron Age and into the early Roman period, by which time rural settlements were often enclosed by ditches and linked by ditched trackways. While arable cultivation is likely to have increased at the expense of pasture on the gravel terraces, its extent and importance elsewhere remains unclear (Lambrick and Robinson 2009, 50). The balance between arable and pasture, and the ratio of sheep to cattle, is likely to have varied between the floodplain, the gravel terraces, the clay Vale and the drier Corallian ridge. New agricultural methods are suggested with the first evidence for hay meadows dated to the early second century AD (Lambrick and Robinson 2009, 49).

Seasonal flooding in the floodplain continued through the later Roman period (Booth *et al.* 2007, 26). As the floodplain became increasingly restricted to pasture and seasonal hay meadow, the reduction in arable cultivation on the floodplain was replaced by increasing cultivation of the terraces and clay lands further from the river. Booth *et al.* (2007, 26) consider that the agricultural exploitation of the upper Thames Valley reached a level not subsequently attained until the Norman conquest. Associated with this agricultural intensification is a greater population density, indicated by insect evidence (Lambrick and Robinson 2009, 49; Booth *et al.* 2007, 24).

Woodland on the gravel terraces was largely removed during the Roman period by the expansion and intensification of arable and pasture (Booth *et al.* 2007, 27). Away from the terraces woodland may also have been reduced by expanding arable cultivation. Earlier archaeologists have often portrayed the prehistoric clay lands of the Vale as being covered by an extensive forest separating the more open countryside of the Berkshire Downs and the Corallian ridge (Bradford and Goodchild 1939, 3-5; Huntingford 1936, 158; Peake 1931, 47, 71), but recent survey and excavation in the east of the Vale, where the soils are influenced by the gravel terraces of the river Thames, have located eighteen Iron Age and Romano-British sites (Hearne 2001). This demonstrates that large parts of the eastern Vale were cleared and farmed in the Iron Age and Roman period.

Although the Vale has a number of small woods it has relatively little woodland. This was also the case in 1086 as Domesday Book indicates very little woodland north of the Berkshire Downs (Campbell 1962, 263 figure 83) and instead has a large extent of meadow along the rivers Thames and Ock (Campbell 1962, 266 figure 84).

2.6 Summary of Iron Age and Romano-British Settlement

The gravel terraces of the upper Thames Valley and the chalk uplands of Berkshire Downs have been mapped as part of English Heritage's National Mapping Programme (Fenner 1994; Small 2002). In contrast, the Vale of the White Horse was believed to have less potential for aerial survey and was not mapped by the National Mapping Programme. To the north of the river Ock, on the Corallian ridge, there is considerable cropmark and other evidence for late prehistoric and Romano-British settlement. But to the south of the

river Ock, on the clay of the southern Vale, evidence for settlement is more elusive. Since 1990, as part of the Thames Water Abingdon Reservoir Proposal, extensive areas of the south-eastern Vale have been mapped by English Heritage (Winton 1999), and a range of sites excavated (Hearne 2001). This has provided important new archaeological evidence for Iron Age and Romano-British settlement.

Hillforts form an important element of the early and middle Iron Age landscape. Along the Berkshire Ridgeway are the hillforts of Uffington Castle, Rams Hill, Hardwell Camp and Segsbury Camp. Many hillforts appear to have been abandoned during the middle Iron Age but new and larger enclosed sites, frequently built in valley locations near rivers, appear towards the end of the Iron Age. The earliest of these low-lying enclosures may be Cherbury Camp, which is relatively small with an enclosed area of only four hectares. Much larger is the enclosure at Dyke Hills, near Dorchester-on-Thames, where over 40 hectares of low-lying ground between the rivers Thames and Thame were defined by a substantial ditch and banks. Similar in scale is the enclosure at Abingdon, where a series of ditches run in a semi-circle between the Ock and the Thames to enclose about 33 hectares (Lambrick and Robinson 2009, 362).

At the end of the first millennium BC the Vale of the White Horse appears to lie on or close to the boundary between the Atrebates with their tribal centre at Silchester (Calleva), and the Dobunni with an important centre at Bagendon. Hingley (1985, 209) suggested the clay Vale may have formed a largely unpopulated zone between the more densely occupied north Wessex (Atrebates) and the upper Thames Valley (Dobunni). Other possibilities for a possible tribal boundary include the Coxwell area where two hillforts are located on higher ground, or possibly further west on the river Cole (Jones and Mattingly 1990, 154, figure 5.11). The political and economic influence of the Catuvellauni to the east, centred on St Albans (Verulamium), was increasing. The banks and ditches at Dyke Hills and Abingdon may reflect this political development.

Following the Roman conquest, civitas capitals were established at Silchester (Calleva), Cirencester (Corinium), near Bagendon, and St. Albans (Verulamium). It is possible the boundary between the administrations based at Calleva and Corinium passed through the Vale. Dorchester-on-Thames, the successor to Dyke Hills, became a small town, later walled. Abingdon may also have become a small town.

The Vale is located a considerable distance from any major Roman urban centre but within a triangle of important early Roman roads. To the north of the Thames, Akeman Street runs from Cirencester (Corinium) to St Albans (Verulamium) via Alchester, while to the south and west of the Berkshire Downs, the Ermine Way runs from Cirencester to Silchester (Calleva). Completing the triangle in the east is a road northwards from Silchester to Alchester. It has been suggested that the straight road from Wantage to Besselsleigh and which crosses the river Ock at Frilford, adjacent to the temple, is a Roman road (Evans 1897 ; Bradford and Goodchild 1939).

2.7 The Research Area

The Oxfordshire district of Vale of White Horse contains sixty-nine parishes transferred from Berkshire in 1974. In addition, thirteen parishes transferred from Berkshire are now within the South Oxfordshire district. The research area covers sixty-six parishes within the Vale of the White Horse, as listed in table 2.2[1]. Not all of these have been studied to the same depth: nineteen centrally located parishes, marked with an asterisk in table 2.2, have been studied in detail and are listed in Catalogue C1.

The Oxfordshire HER records for prehistoric and Roman sites and artefacts for the Vale of the White Horse were extracted from the HER database in late 2005. The number of HER records for each parish is illustrated in figure 2.7, where the size of the green circle is proportional to the number of HER records. This is a map of known archaeological information and is biased by post-war development. Urban development in and around Abingdon accounts for the large number of entries for Abingdon and Radley, while quarrying for sand on the Corallian ridge, particularly in Buckland, Hatford and Stanford-in-the-Vale has identified (and destroyed) a number of late prehistoric and Romano-British settlements. In contrast, there are few HER records for the parishes in the clay Vale south of the river Ock. Apart from the area near Wantage there has been less development and the information available from aerial photographs is limited.

[1] Parishes in the Vale of White Horse district not included in the research are Blewbury, Chilton and Upton. The thirteen former Berkshire parishes transferred to the South Oxfordshire district are Aston Tirrold, Aston Upthorpe, Brightwell-cum-Sotwell, Cholsey, Didcot, East Hagbourne, Little Wittenham, Long Wittenham, Moulsford, North Moreton, South Moreton, Wallingford and West Hagbourne.

Parish Name	Record Counts		Parish Name	Record Counts	
	HER	NMR		HER	NMR
Abingdon	110	70	Kingston Bagpuize*	16	15
Appleford-on-Thames*	24	26	Kingston Lisle	18	17
Appleton-with-Eaton*	5	8	Letcombe Bassett	12	9
Ardington	13	9	Letcombe Regis	9	19
Ashbury	39	47	Little Coxwell	3	0
Baulking	2	2	Littleworth	3	71
Besselsleigh	2	1	Lockinge	23	24
Bourton	1	0	Longcot	6	1
Buckland	25	91	Longworth*	8	23
Buscot	18	40	Lyford*	2	2
Charney Bassett*	15	25	Marcham*	28	27
Childrey	17	23	Milton*	11	14
Coleshill	1	2	North Hinksey	10	10
Compton Beauchamp	12	16	Pusey	7	22
Cumnor	26	16	Radley	96	56
Denchworth	0	0	Shellingford	2	3
Drayton*	51	62	Shrivenham	4	3
East Challow	4	3	South Hinksey	5	2
East Hanney*	1	2	Sparsholt	25	22
East Hendred	8	16	St. Helen Without	5	8
Eaton Hastings	1	3	Stanford in the Vale*	18	19
Fernham	5	4	Steventon*	5	2
Frilford*	29	13	Sunningwell	14	6
Fyfield and Tubney*	12	12	Sutton Courtenay*	25	38
Garford*	16	15	Uffington	23	20
Goosey*	1	0	Wantage	44	23
Great Coxwell	11	2	Watchfield	3	7
Great Faringdon	19	10	West Challow	4	2
Grove	2	1	West Hanney*	4	5
Harwell	6	7	West Hendred	4	7
Hatford	13	32	Woolstone	16	11
Hinton Waldrist*	13	18	Wootton	8	2
Kennington	10	2	Wytham	23	20

Table 2.2 – HER and NMR Record Counts for Sixty-Six Parishes in the Vale of the White Horse (Prehistoric and Roman) (* nineteen parishes subject to more intensive investigation described in Catalogue C1)

Online data from two NMR databases is available: the Excavation Index and Pastscape. Information on prehistoric and Roman artefacts and features has been extracted from Pastscape and the number of entries for each of the sixty-six civil parishes is illustrated on figure 2.8, where the size of the red circle is proportional to the number of extracted Pastscape records. In some parishes the number of HER and Pastscape records correspond very well while in others there are more Pastscape records than HER records. This is usually due to information derived from the National Mapping Programme where parishes such as Littleworth and Buckland contain a wide range of undated features recorded by the Thames Valley Mapping Programme.

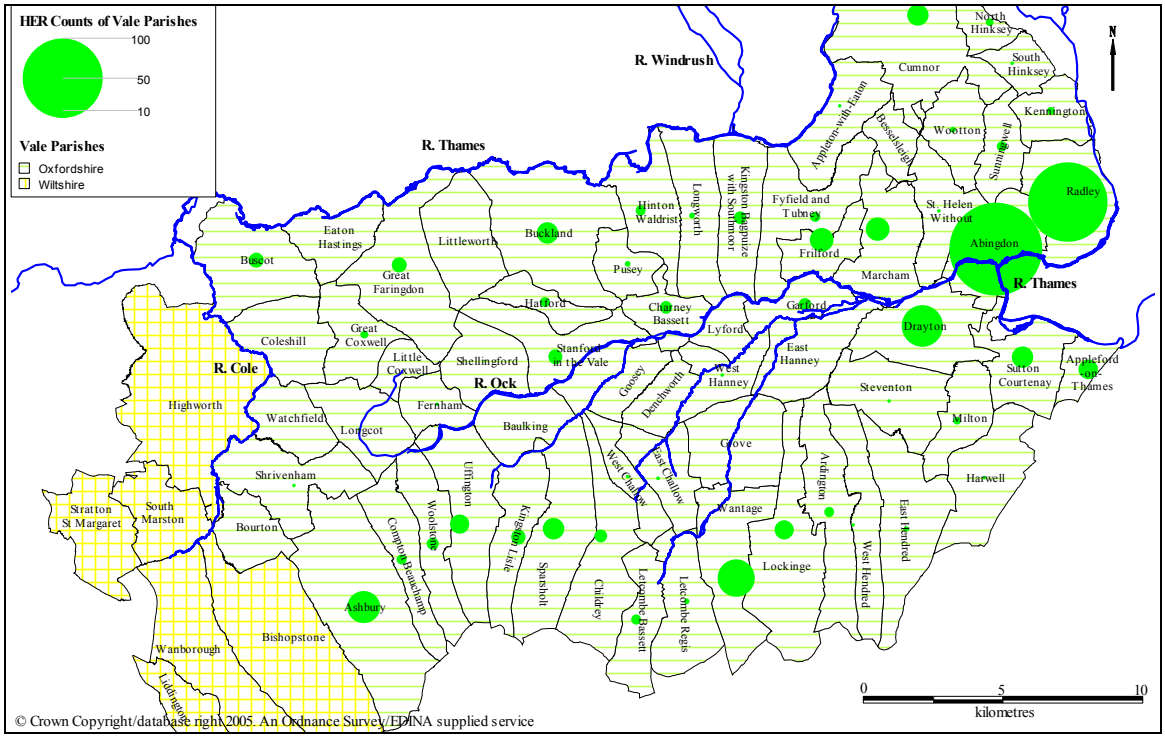


Figure 2.7 – Number of HER References (Prehistoric and Roman) per Civil Parish

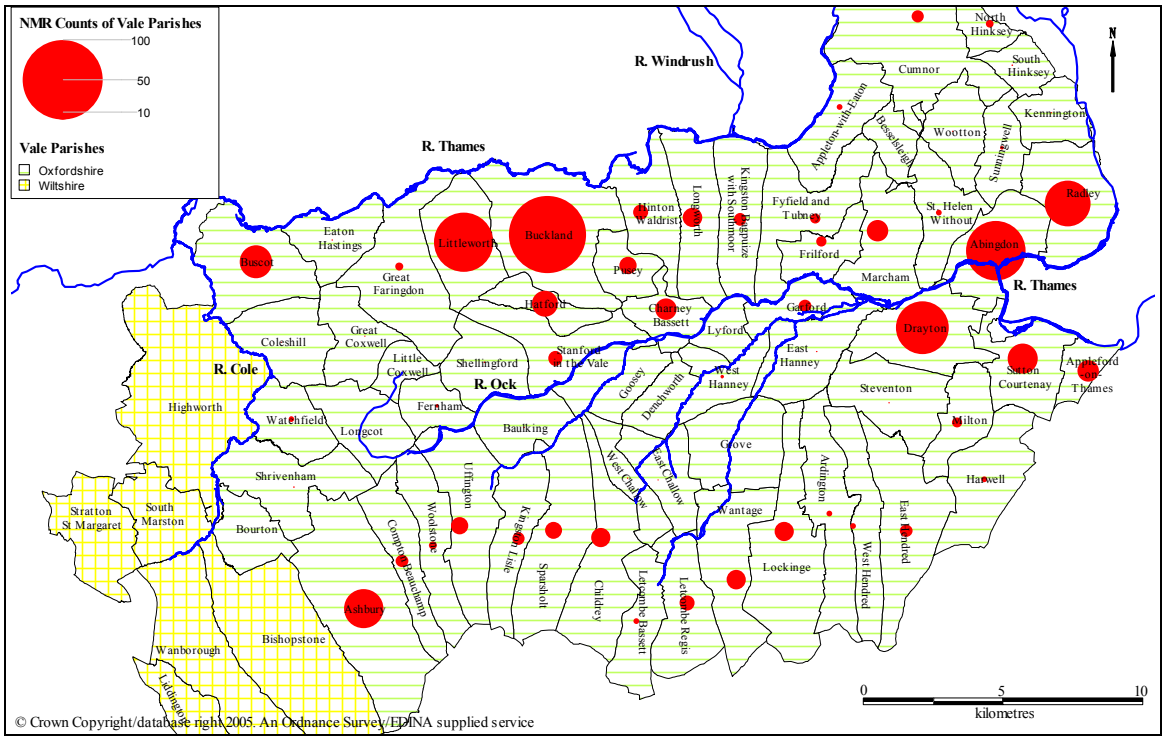


Figure 2.8 – Number of NMR Pastscape References (Prehistoric and Roman) per Civil Parish

For reasons given below, fieldwork has been restricted to the smaller area shown in figure 2.9. This is an L-shaped region extending eleven kilometres from east to west and eight kilometres from north to south, and covers sixty-four square kilometres. The main

east-west axis has been defined to include the Iron Age enclosure at Cherbury Camp and its adjacent hinterland in the west, and the Marcham / Frilford area in the east. The north-south axis runs from Marcham / Frilford southwards past East Hanney to the base of the Berkshire Downs. Included in this fieldwork area are three small villas at Frilford, Garford and East Hanney.

This restricted fieldwork area has been chosen to cover both the Corallian limestone and the clay of the Vale. In both cases the majority of the land is used for arable cultivation with only a limited amount of pasture. The fieldwork area does not extend eastwards into the urban area of Abingdon, due not only to the difficulties of conducting fieldwork within an urban area but also because a substantial body of published material already exists from a range of rescue and development excavations.

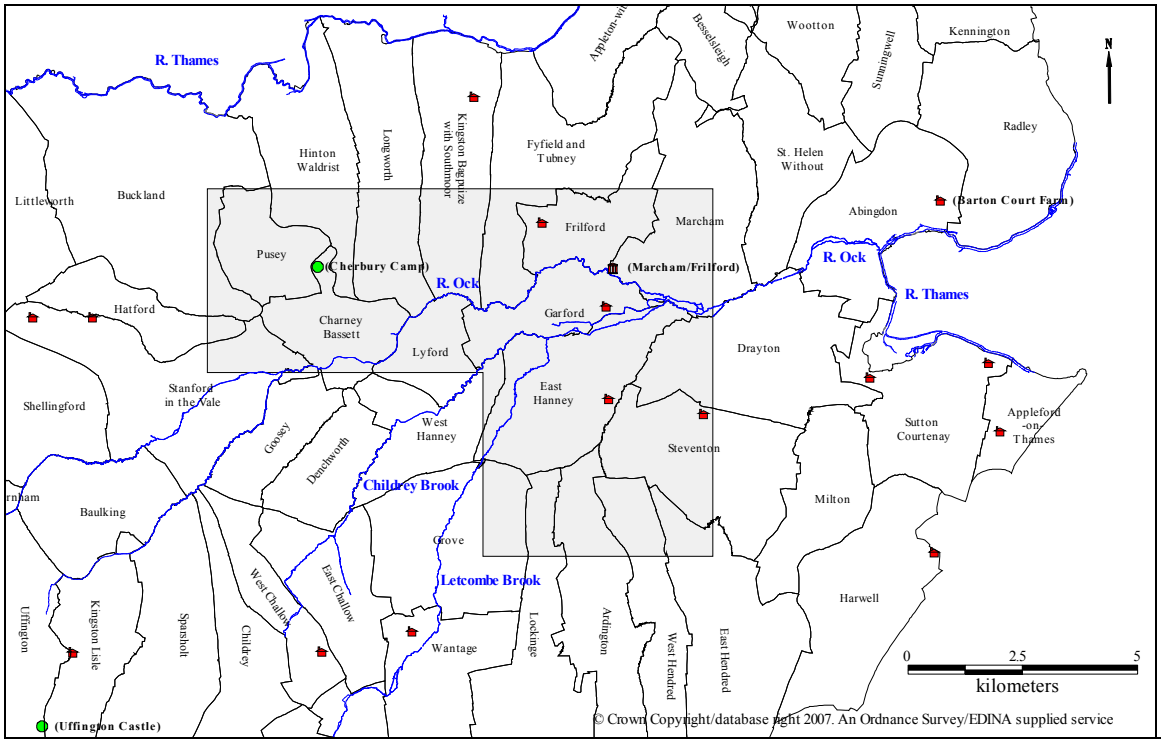


Figure 2.9 – Fieldwork Area within the Vale of the White Horse Villa Hillfort Temple

Following this brief summary of the natural, Iron Age and Romano-British landscapes of the Vale of the White Horse, the next chapter considers the strength and weaknesses of the available archaeological evidence for its ability to answer the research aims outlined in chapter 1.

3 Sources and Methods

3.1 Introduction

The available archaeological material for the late prehistoric and Romano-British periods in the Vale of the White Horse includes published excavation reports and regional syntheses, unpublished archaeological reports and evaluations, Oxfordshire HER records, National Monument Record (NMR) information, English Heritage's National Mapping Programme of aerial photographs, and also aerial photographs held in the NMR and other collections. To add to this material, geophysical survey and fieldwalking have been employed to generate new data. The combination of aerial photographic interpretation, geophysical survey and fieldwalking can add important new archaeological information without excavation. The sources and methods are discussed below, with particular emphasis on their strengths and weaknesses for the late prehistoric and Romano-British periods in the Vale of the White Horse.

3.2 Published Literature

The archaeology of Berkshire as known at the end of the nineteenth century is reviewed in the first volume of the Victoria County History of Berkshire (VCH 1906). For the Roman period, small villas had been discovered at Frilford (Evans 1897) and West Challow (Davey 1876) while mosaics and walls had been detected at Woolstone (Anon-a 1884). Finds of pottery at Chinham Farm at Stanford-in-the-Vale hinted at a villa there. Many parishes had yielded varying amounts of Roman pottery and/or metalwork, including Barton Farm about a mile to the north of Abingdon. In addition, the late Roman and early Anglo-Saxon cemetery at Frilford had been discovered and investigated (Akerman 1865, Rolleston 1868; 1880). The road from Besselsleigh to Wantage via Frilford was suggested to be of Roman origin (VCH 1906, 209) but is not so indicated on the map of Roman Remains. For the Iron Age, hillforts on the Berkshire Downs are described at Alfred's Castle (Ashbury), Uffington Castle (Uffington), Segsbury Camp (Letcombe Regis) and Hardwell Camp (Uffington). Within the Vale hillforts are identified at Badbury (Great Coxwell) and Cherbury Camp (Charney Bassett). The White Horse at Uffington was felt to date to the Iron Age because of its similarity to horses on Iron Age coins (VCH 1906, 190).

A general survey of Berkshire was provided by Harold Peake (1931) with a period by period summary, a parish gazetteer, and a series of maps of Neolithic, Bronze Age, Iron Age and Roman Berkshire. These maps suggest an essentially unchanging vegetation of thick woodland on the Kimmeridge Clay of the southern Vale and Oxford Clay of the Thames Valley, with relatively open land of scrub and woodland on the Corallian ridge.

Prior to the Second World War, excavations were undertaken at Frilford cemetery (Dudley Buxton 1921; Bradford and Goodchild 1939), Frilford temple (Bradford and Goodchild 1939), and Cherbury Camp (Bradford 1940) while a summary of earthworks was provided by Huntingford (1936). These were followed after the war by limited excavations at Woolstone (Hamilton 1959), and Frilford temple (Harding 1987). Berkshire hillforts were reviewed by Cotton (1960).

Examination of the *Journal of the Newbury District Field Club* and the *Berkshire Archaeological Journal* identified other papers from the pre-Second World War period which describe aspects of the Vale of the White Horse, and for the post-war period *South Midlands Archaeology*, *Oxoniensia*, the *Berkshire Archaeological Journal* and *Britannia*[1] have been searched for references. A discussion of the Romano-British countryside in the upper Thames Valley by Miles (1982a) summarised fieldwalking surveys in Hinton Waldrist, Stanford-in-the-Vale, Garford and Frilford. More recent work includes the research survey undertaken in the west of the Vale of the White Horse (Tingle 1991), following earlier surveys on the Berkshire Downs at Maddle Farm (Gaffney and Tingle 1989), and rescue and developer funded excavations in advance of urban development or sand and gravel extraction. Examples include Ashville Trading Estate, Abingdon (Parrington 1978), Farmoor (Lambrick and Robinson 1979), Appleford Field (Hinchliffe and Thomas 1981), Barton Court Farm (Miles 1986), Bowling Green Farm, Stanford-in-the-Vale (Chambers 1988; 1989; 1990; Mudd 1993), Manorhouse Farm, Hatford (Bourn 2000; Booth and Simmonds 2005) and Appleford Sidings (Booth and Simmonds, 2009). These excavations are biased towards urban centres such as Abingdon and Wantage, the Thames gravels and the sands of the Corallian ridge. Some balance has now been achieved by extensive survey and excavation within a large area of the clay Vale around East Hanney as part of the Thames Water Abingdon Reservoir proposal (Hearne 2001).

[1] Principally 'Roman Britain in 19xx and 20xx'

Since 2000 important surveys and syntheses have been published for the Iron Age and Romano-British periods for Oxfordshire (Henig and Booth 2000) and the upper Thames Valley (Lambrick and Robinson 2009; Booth *et al.* 2007; Miles *et al.* 2007). Iron Age and Romano-British settlement within the Vale can be contrasted not only with a range of sites to the north of the Thames including Watkins Farm (Allen 1990), Mingies Ditch (Allen and Robinson 1993), Gravelly Guy (Lambrick and Allen 2004) and Yarnton (Hey *et al.* 2011) but also with the Berkshire Downs to the south with recent excavations at the hillforts of Uffington Castle (Miles *et al.* 2004) and Segsbury Camp (Lock *et al.* 2005).

3.3 Unpublished (Grey) Literature

The introduction of Planning Policy Guidance Note 16 (Archaeology and Planning) in 1990 ushered in a new age of commercial archaeological investigation as part of the planning and development process The documented output of this work is usually a 'client report', a term covering desk-based assessments, field evaluations, research projects, building survey and geophysical investigations. These reports are usually printed in small numbers and deposited in local HERs. Although normally publically accessible, they can in practice be difficult to obtain or copy. Moreover, a report can only be found if it is known to exist.

To assess the archaeological potential of these reports, English Heritage commissioned the Archaeological Investigations Project (AIP) at Bournemouth University to document annually the nature and extent of archaeological fieldwork carried out[2]. The results include a set of gazetteers and an online searchable database[3].

A search of the AIP database for entries for the Oxfordshire district "Vale of White Horse" produced 319 references dating from 1988 to 2010. The various archaeological companies whose reports have been catalogued by AIP are listed in table 3.1 while the number of reports per civil parish is listed in table 3.2[4]. The references cover all types of reports and periods but include a short summary indicating what was found and periods

[2] http://csweb.bournemouth.ac.uk/aip/aipintro.htm
[3] http://194.66.65.187/index3.html
[4] This lists 277 rather than 319 reports as some cover more than one parish, while for some reports there is no parish entry in the AIP data.

covered. It is therefore possible to establish which reports are likely to be relevant for the prehistoric and Roman periods.

Company	Reports	Company	Reports
Abingdon Area Archaeological and Historical Society	1	National Trust	9
AOC Archaeology Group	4	Network Archaeology Ltd	1
Archaeological Services & Consultancy Ltd	1	Northamptonshire Archaeology	1
Birmingham Archaeology	1	Oxford Archaeology	122
Corylus Planning & Environmental Ltd.	1	Oxford University	3
Cotswold Archaeological Trust	25	Oxford University Archaeological Society	1
Finial Associates	2	P Haskins	1
focsa Services (UK) Ltd.	1	RCHME	1
Foundations Archaeology	3	RWE nPower	1
GSB Prospection	5	Stratascan	1
J M Cormier	1	Tempus Reparatum	4
John Moore Heritage Services	35	Thames Valley Archaeological Services	64
Land & Mineral Management Ltd.	1	Trust for Wessex archaeology	2
Lang Hall Archaeology	3	University of Leicester Archaeological Services	1
Lingard, Claire and Wilson, Martin D	1	Wessex Archaeology	17
Mike Lang Hall, Archaeological Consultancy	1	William Wintle	2
Museum of London Archaeology Service	2		

Table 3.1 – AIP References for Grey Literature in the Vale of the White Horse (Archaeological Consultants / Contractors)

Not all archaeological investigations which have taken place in the Vale of the White Horse have been entered into the database under "Vale of White Horse" district. A search for "Oxfordshire" yields 1690 references dating from 1987 to 2010. Amongst these, but not in the original 319 references, is the report on Oxford Archaeology's 1987 trenching at the Noah's Ark Inn (Miles and Wait 1987). The AIP database, although extensive, is not complete. For example, the geophysical survey conducted by Pre-construct Geophysics (Bunn 2004) as part of the Marcham Bypass evaluation is not listed by AIP, although the later excavation report by Oxford Archaeology (Cockin 2005) is.

Table 3.2 demonstrates the uneven distribution of commercial archaeological work across the Vale. Urban development and new housing emphasise Abingdon, Wantage and Great Faringdon, while gravel and sand extraction have occurred at locations such as Appleford, Drayton, Sutton Courtenay and Stanford-in-the-Vale.

Parish	Reports	Parish	Reports	Parish	Reports
Abingdon	59	East Hendred	2	Milton	3
Appleford	7	Fernham	1	North Hinksey	1
Appleton	2	Frilford	4	Radley	6
Ardington	2	Fyfield and Tubney	2	Shellingford	1
Ashbury	9	Garford	1	Shrivenham	2
Besselsleigh	2	Great Coxwell	4	Sparsholt	3
Blewbury	4	Great Faringdon	9	St. Helen Without	2
Buckland	3	Grove	4	Stanford in the Vale	18
Buscot	2	Harwell	3	Steventon	1
Chalgrove	1	Hinton Waldrist	3	Sunningwell	1
Charney Bassett	2	Kennington	1	Sutton Courtenay	20
Childrey	5	Kingston Bagpuize	3	Uffington	4
Chilton	3	Kingston Lisle	1	Wantage	23
Coleshill	3	Letcombe Bassett	1	Watchfield	3
Cumnor	6	Letcombe Regis	3	West Hagbourne	3
Denchworth	1	Little Coxwell	1	West Hanney	1
Drayton	11	Long Wittenham	1	West Hendred	1
East Challow	2	Longworth	3	Woolstone	1
East Hanney	5	Marcham	7		

Table 3.2 – AIP References for Grey Literature in the Vale of the White Horse (Number of Reports per Parish)

The first stage to analysing unpublished literature is to know what exists: the second is to obtain the relevant reports. Most often this is achieved by visiting the HER but more recent reports may be accessed online using the Online Access to the Index of Archaeological Investigations (OASIS[5]), a joint English Heritage, Archaeological Data Service (ADS) and AIP project for HERs, archaeological units and others to upload electronic copies of reports. These can then be searched and accessed via an ADS search on the Grey Literature Library[6]. A search for "Vale of White Horse" lists forty-one reports available to be downloaded, ranging in date from 2006 to 2012, with twelve from Thames Valley Archaeological Services, five from Oxford Archaeology and three from Cotswold Archaeology. All reports prior to 2006, including the important investigations in East Hanney, Drayton and Steventon for the Thames Water Abingdon Reservoir proposal must be accessed in the HER.

[5] http://ads.ahds.ac.uk/project/oasis
[6] http://ads.ahds.ac.uk/catalogue/library/greylit/index.cfm?CFID=3854625&CFTOKEN=69309093

3.4 The Historic Environment Record (HER)

The Oxfordshire HER records for prehistoric and Roman sites for the Vale of the White Horse were extracted from the HER database in 2005. Subsequently, part of the HER database can be accessed online and this initial HER information has been periodically updated. The HER database has been used to provide parish distribution maps where findspots and archaeological features have been distinguished. Although finds are often reasonably well dated, their locations are frequently poorly recorded. In contrast, the location of features is well known, but their dating may be uncertain. An important aspect of the HER information has been the references to primary sources.

3.5 The National Monument Record (NMR)

Information on prehistoric and Roman artefacts and features has been extracted from the online Pastscape database[7]. There is naturally considerable duplication of results with the HER information although for some parishes there are significant differences. In particular, the NMR Pastscape records have information from the National Mapping Programme while the HER may have information from earlier, county based programmes of aerial survey. Occasional errors have been detected in both sources. As with the HER data, the NMR Pastscape records have been useful in identifying primary sources.

Figures 3.1 and 3.2 of Frilford and Garford serve as examples for the sixty-six parishes in the research area and show the location of the HER and NMR Pastscape records in relationship to the geology. A weakness of all archaeological distribution maps is that they show only known archaeological features and artefacts and are biased by research activity and modern development. Moreover, such simple distribution maps fail to differentiate between the significant and the less significant: for example, the late Roman cemetery at Frilford is awarded the same importance as an isolated coin find. The known prehistoric and Roman material in Garford appears restricted to the eastern half of the parish, an area of sandstones and limestones of the Corallian ridge. The western half, on Kimmeridge Clay, contains no recorded prehistoric and Roman material. In Frilford the distribution of HER and NMR records is more evenly distributed apart from Frilford Heath in the north-east of the parish.

[7] http://www.pastscape.org/

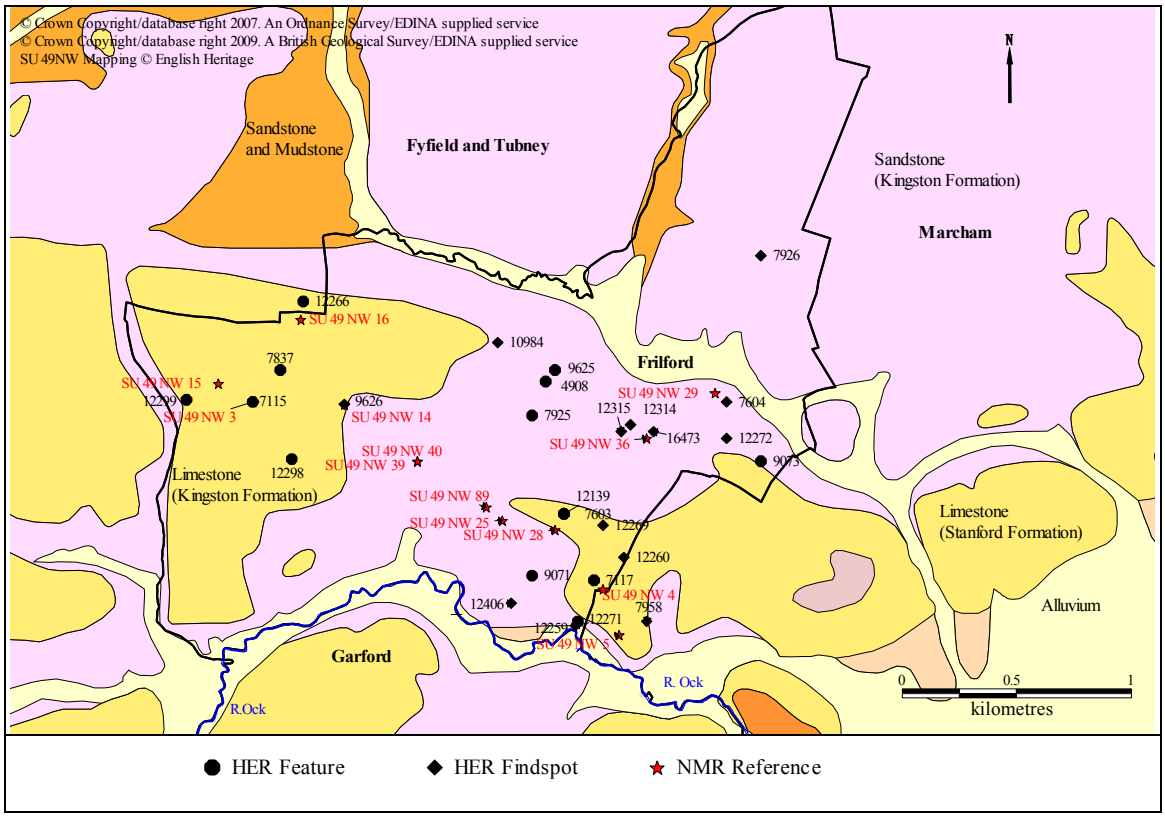


Figure 3.1 – HER and NMR References (Prehistoric and Roman) in Frilford

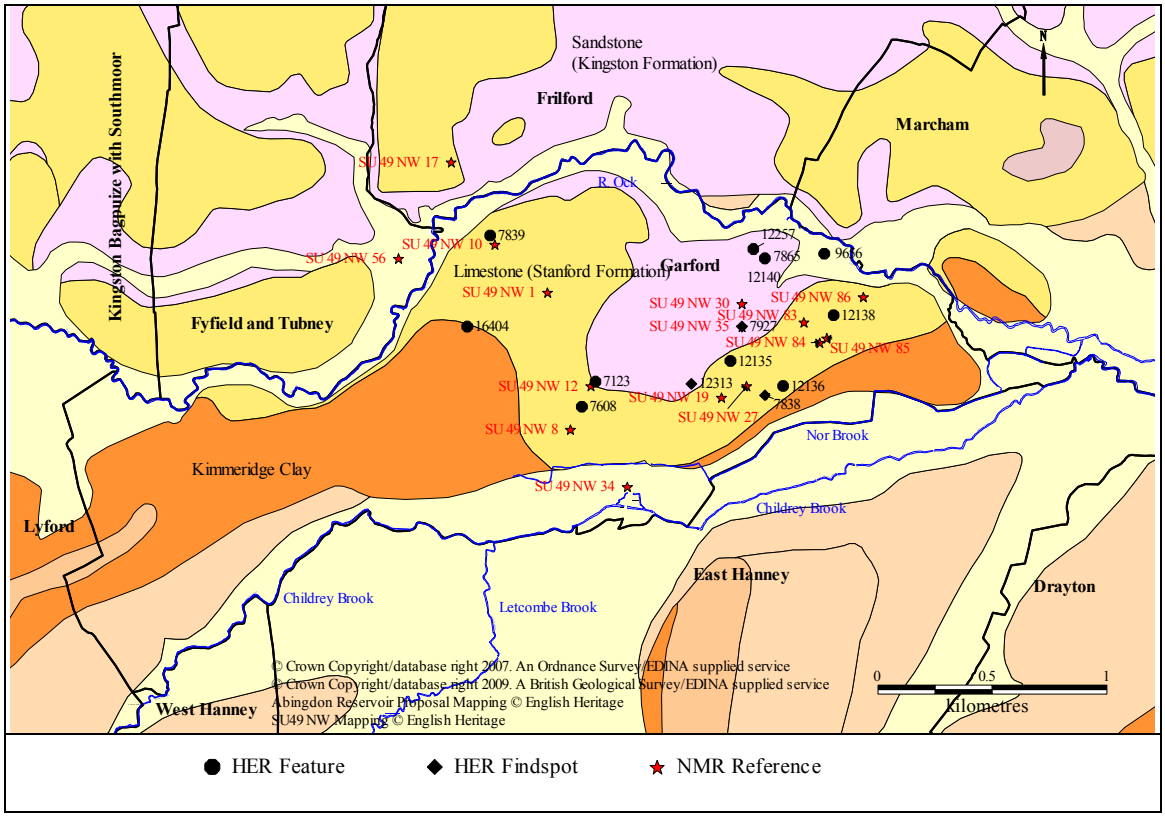


Figure 3.2 – HER and NMR References (Prehistoric and Roman) in Garford

3.6 Aerial Photographs

The analysis of aerial photographs is a crucial tool in landscape archaeology. In many areas of southern England sequences of aerial photographs of archaeologically important sites extend back to the 1930s. Aerial photography during the 1960s and 1970s substantially increased the understanding of prehistoric settlement and land use on the gravel terraces of the upper Thames Valley (Benson and Miles 1974) and the Berkshire Downs (Richards 1978). More recently, these two areas have been mapped within English Heritage's National Mapping Programme: the Thames Valley Mapping Project (Fenner 1994) and the Lambourn Downs Mapping Programme (Small 2002).

Cropmark formation, and hence aerial survey, suffers from two major biases: the nature of the soil and how the land is used. The soil not only plays an important role in modern and earlier agriculture and settlement, but also on the ability to detect archaeological features through aerial photography. Modern arable farming materially assists the detection of cropmarks, parch marks or soil marks in aerial photographs. These are more likely to be visible on the light, well drained soils of the sandstone and limestone of the Corallian ridge than on the heavy clay soils in the southern part of the Vale. In consequence this area of clay has not been mapped by the National Mapping Programme. Helpfully, an extensive area between the above two mapping projects was mapped by English Heritage in the 1990s for the Thames Water Abingdon Reservoir proposal (Winton 1999). Additionally, the quarter sheet SU49 NW which covers much of Frilford, Fyfield and Tubney was mapped by English Heritage in 2009. Illustrated in figure 3.3 is the extent of English Heritage mapping of aerial photographs within the Vale of the White Horse. Only the western end of the Vale, including parishes such as Stanford-in-the-Vale, Shellingford and Great Coxwell, remains unmapped.

The Thames Valley mapping, from the early 1990s, used conventional mapping techniques and the resulting maps have been scanned for computer use as image or raster data. The later Lambourn Downs, Thames Water Abingdon Reservoir and SU49 NW mapping employed modern digital techniques and are available as vector data for processing in a geographic information system (GIS). An example of the Thames Valley Mapping Programme and the Thames Water Abingdon Reservoir mapping in the vicinity of Cherbury Camp and Charney Bassett is shown in figure 3.4, while figure 3.5 provides

an example of SU49 NW mapping at Frilford. Banks and ditches are represented by different colours.

Although the mapping of aerial photographs by the National Mapping Programme is an extremely useful archaeological resource, not all the mapped features can be dated. Possible dates range from prehistoric to modern and one cropmark may contain multiple phases of widely different dates. Features believed to be archaeological are identified by their morphology using shape, form and size, and are compared with similar known and dated types (Wilson 2000, 88). This may occasionally lead to errors and in many cases English Heritage have left features undated.

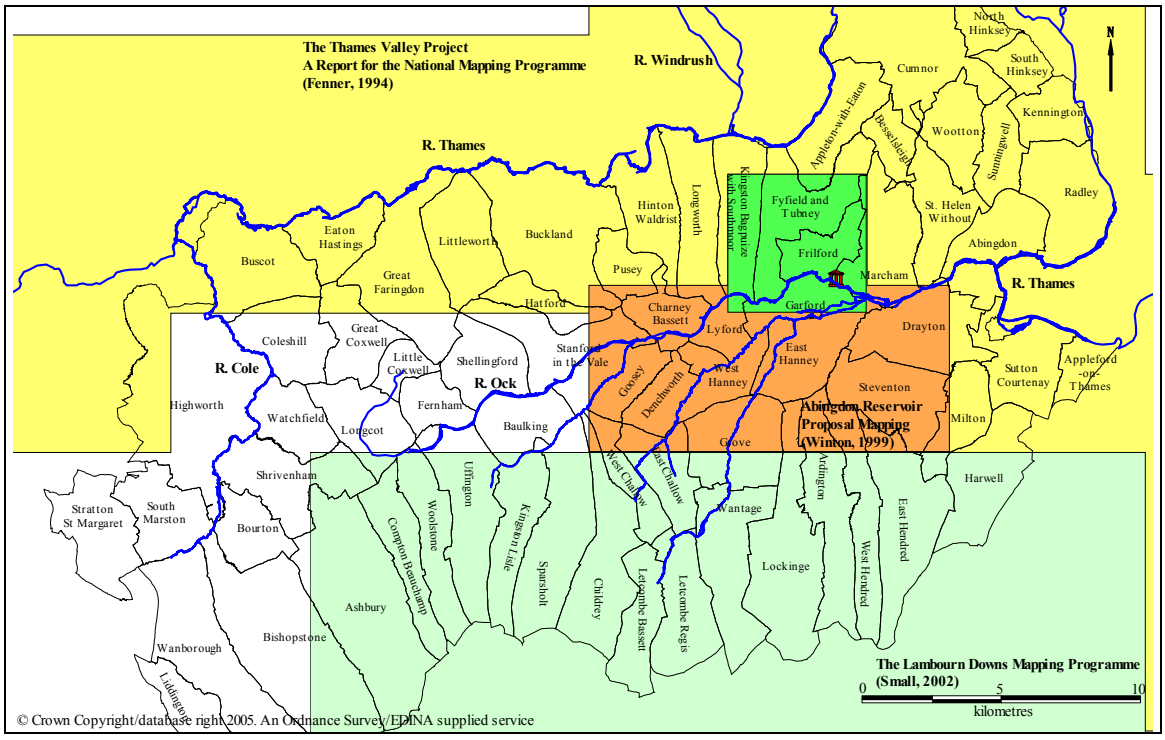


Figure 3.3 – English Heritage and National Mapping Programme Surveys in and near the Vale of the White Horse with Ordnance Survey Grid Quarter Sheets.

Thames Valley Mapping Programme (Yellow)
SU49 NW Mapping (Green)
Abingdon Reservoir Proposal (Brown)
Lambourn Downs Mapping Programme (Blue)

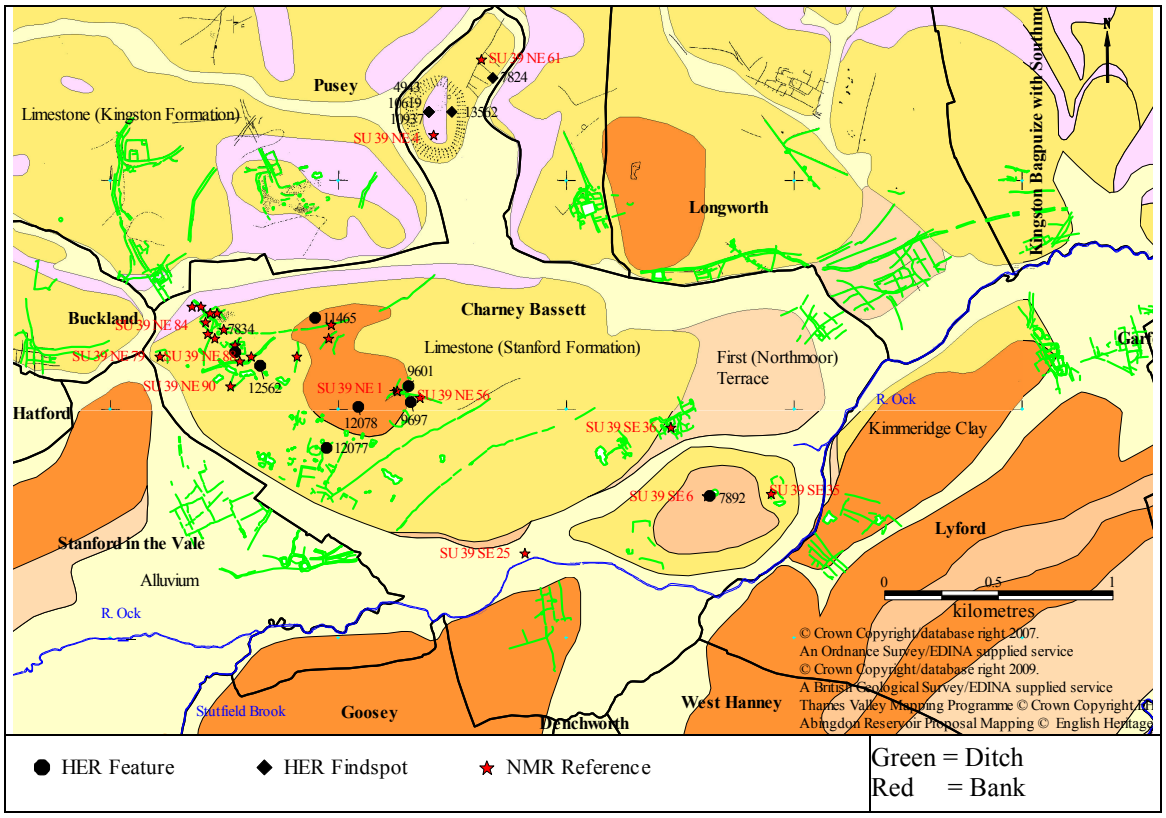


Figure 3.4 – Thames Valley Mapping Programme (black) and Abingdon Reservoir Proposal Mapping with HER and NMR References for Charney Bassett

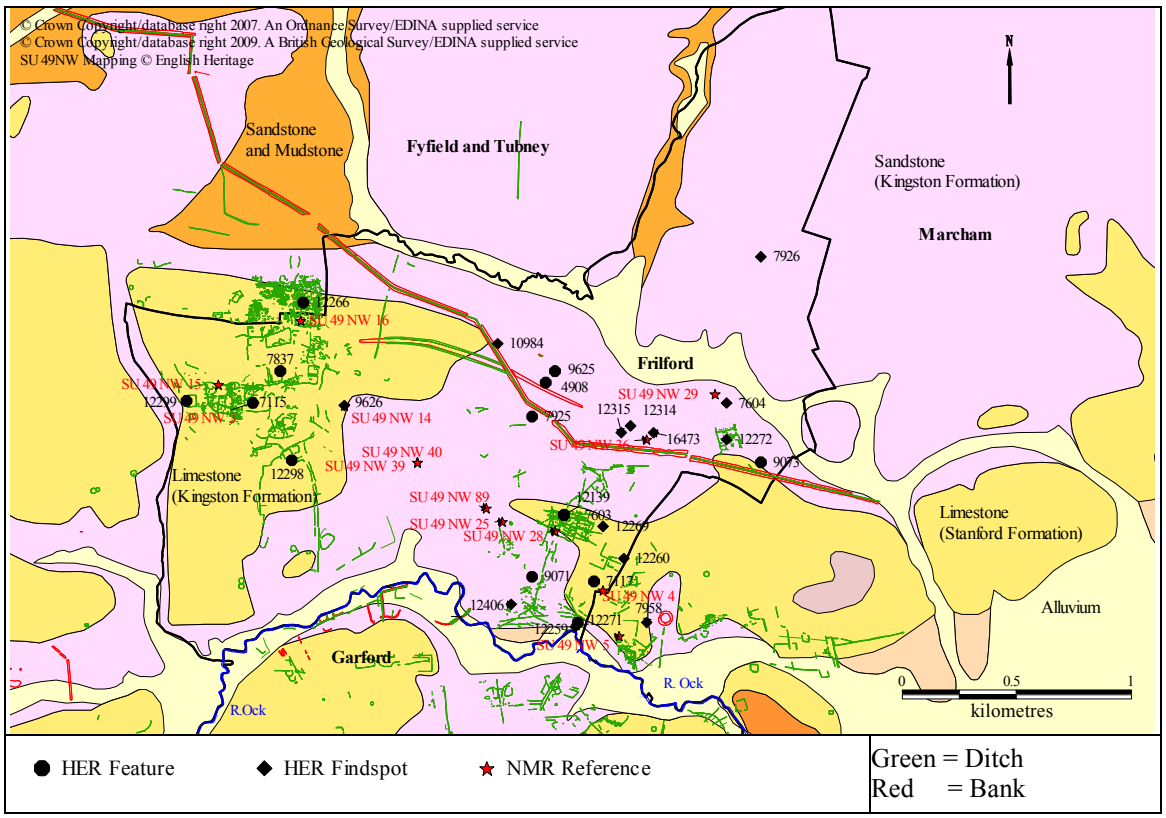


Figure 3.5 – SU49 NW Mapping with HER and NMR References for Frilford

3.7 Historic Records and Maps

There is no written reference to the Vale of the White Horse in any surviving Roman document. The nearest road mentioned in the Antonine Itinerary is Itinerary XIII which runs eastwards from Caerleon, passing Gloucester and Cirencester, to cross the Berkshire Downs via Durocornovio (Wanborough) and Spinis (Speen) on its way to Calleva (Silchester) (Rivet and Smith 1979, 175-176). The river Thames, which defines the eastern boundary of the Vale, is mentioned in Roman sources, but the earliest reference to the river Ock, a pre-English name, comes from Anglo-Saxon charters (Gelling 1973, 15). A further pre-English name referred to in Berkshire charter bounds is the Icknield Way, at the foot of the northern escarpment of the Berkshire Downs.

Place-names and Anglo-Saxon charter bounds provide the earliest documentary evidence for the landscape of Vale of the White Horse. Many place-names are based on local topographic and geographic features while charter bounds, as well as delimiting a specific area, may contain references to natural landscape features such as streams and rivers and man-made features such as paths, roads, burials and tumuli. Of seventy-four Anglo-Saxon charter bound surveys which survive for Berkshire, forty-two describe estates in the Vale of the White Horse and therefore provide an important introduction to the late Anglo-Saxon landscape of the Vale (Gelling 1976, 617). The first detailed analysis of Berkshire charter boundaries and the information they might provide on Roman roads was undertaken by Grundy (1917), who later published individual parish commentaries in the 1920s. Gelling (1976) provided a comprehensive review together with a series of maps, and more recently, Kelly (2000; 2001), in her analysis of the Anglo-Saxon charters of Abingdon Abbey has provided an extensive discussion of the vernacular charter bounds. These charter bounds provide little or no information on the earlier Roman landscape although prehistoric features such as barrows are occasionally mentioned. In much of the clay Vale parish boundaries are frequently defined by streams and small water courses and it is therefore difficult to relate them to possible Roman estates and land holdings.

In any analysis of past landscapes it is necessary to attempt to date the important landscape features. Maps can play a significant role by indicating changes over time and hence suggest dates before which or after which landscape features have appeared or

disappeared. The most useful maps for this purpose are Morden's map of Berkshire from 1695, Rocque's map of Berkshire from 1761, a range of parish enclosure maps from the late eighteenth and early nineteenth century, parish tithe maps from the 1830s, private estate maps from the late eighteenth and early nineteenth century, and the first edition Ordnance Survey maps from the 1870s in 6" and 25" scale.

The earliest useful map of the Vale of the White Horse is Robert Morden's map of Berkshire produced as part of a series of county maps in a new edition of Camden's Britannia published in 1695, with further editions (and maps) in 1722, 1753 and 1772. An extract of this map covering the Vale of the White Horse is illustrated in figure 3.6. Although Morden's map has a number of errors it provides the first indication of the early modern road network.

The work of John Rocque set new standards in cartography and his map of Berkshire, published in eighteen sheets in the early 1760s, shows Berkshire in the late 1750s just as enclosure was gathering pace. It provides a useful glimpse of the later medieval landscape and of the developing modern landscape. Figure 3.7 shows the parishes of Garford, Frilford and Marcham as depicted on sheets X and XI. Rocque's map provides the earliest documentary evidence for a bridge over the river Ock and for the existence of the Noah's Ark Inn[8].

Next, figure 3.8 provides an example of a private estate map from the late eighteenth century showing the parish of Garford with its medieval fields and furlongs in the west and an enclosed farm in the east. In 1771 the road from Besselsleigh to Wantage had been turnpiked with a toll house adjacent to the Noah's Ark Inn. Neither the older landscape in west Garford, nor the newer landscape in the east, is aligned with the turnpike road and presumed Roman road. Finally, figure 3.9 provides an example of the combination of two parish maps (within a Geographic Information System) to allow the integrated analysis of historic landscapes larger than a single map. The Marcham map shows the Noah's Ark Inn, the turnpike tollhouse, and a field system similar to the modern fields.

[8] Figure 3.7 has combined two sheets of Rocque's map – close examination of the left hand sheet shows two bridges – possibly an engraving error as the two sheets do not join well at this important location.

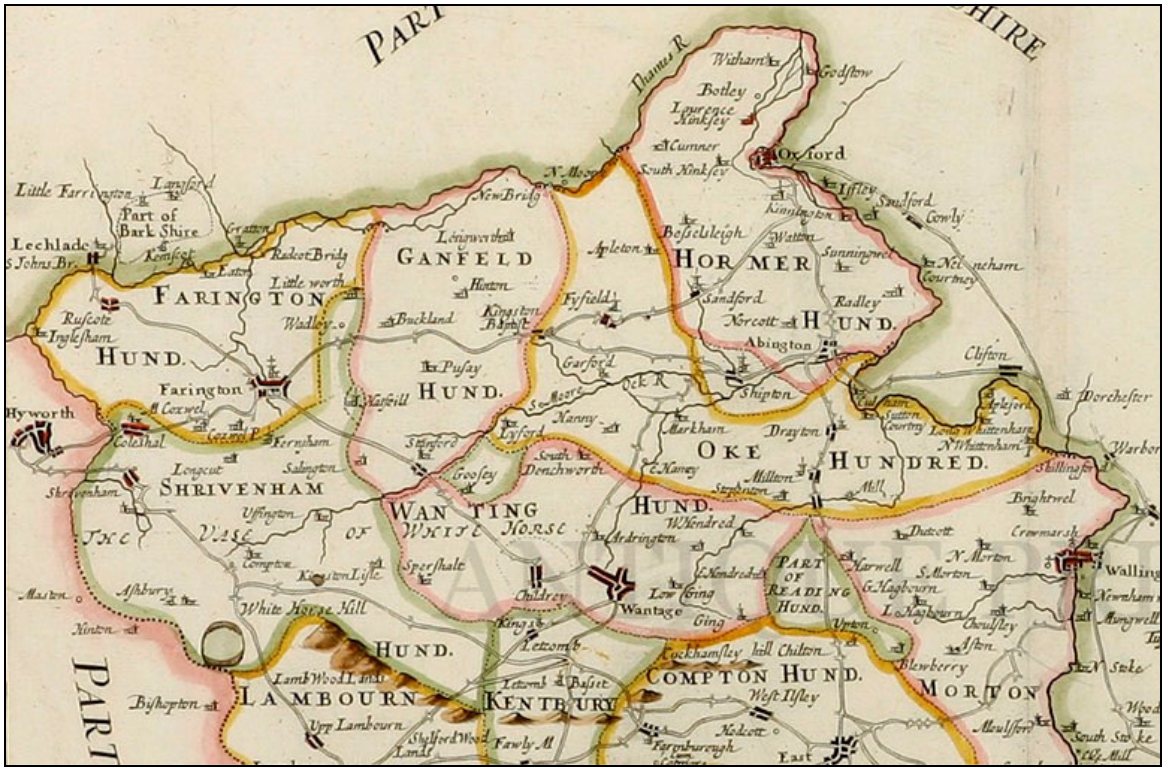


Figure 3.6 – An extract from Robert Morden's map of Berkshire published in 1695.
(http://www.antiqueprintroom.com/catalogue/view-raw-image?id=8499e09d01f22871d9d366e382051845
© The Antique Print Room, Sydney, Australia)

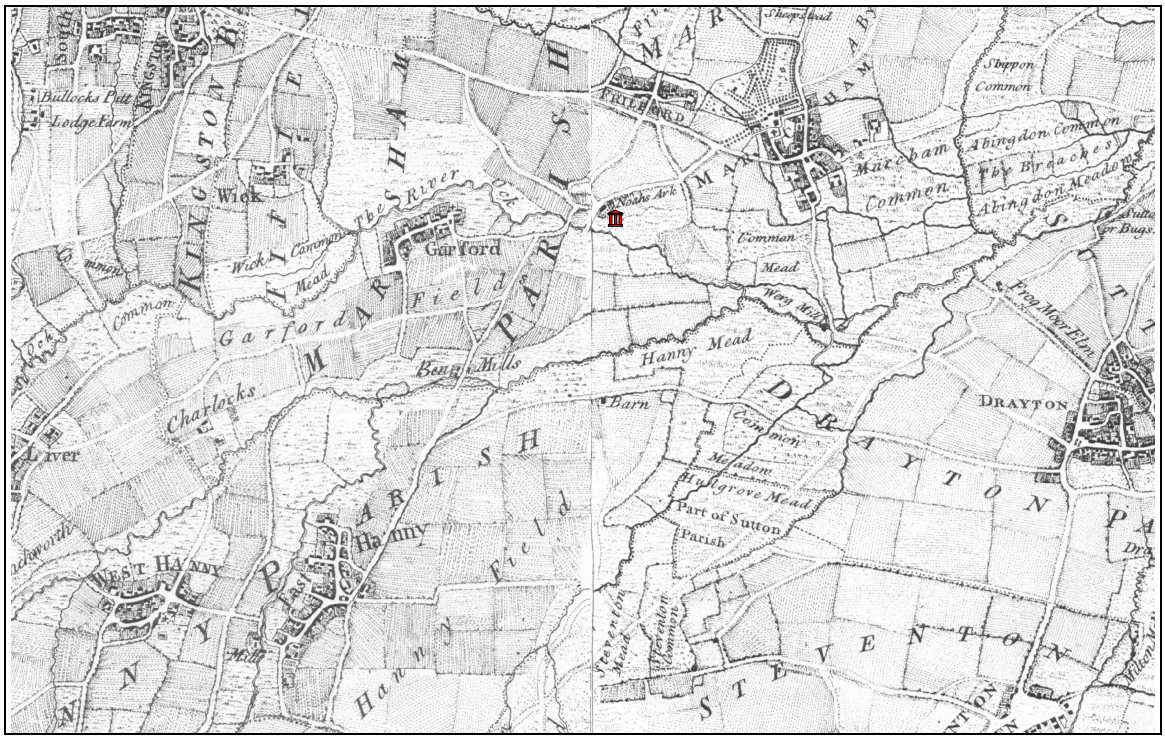


Figure 3.7 – An extract from John Rocque's map of Berkshire published in 1761-1762
(H Margary 1973 © Harry Margary)

Noah's Ark Inn (Marcham/Frilford)

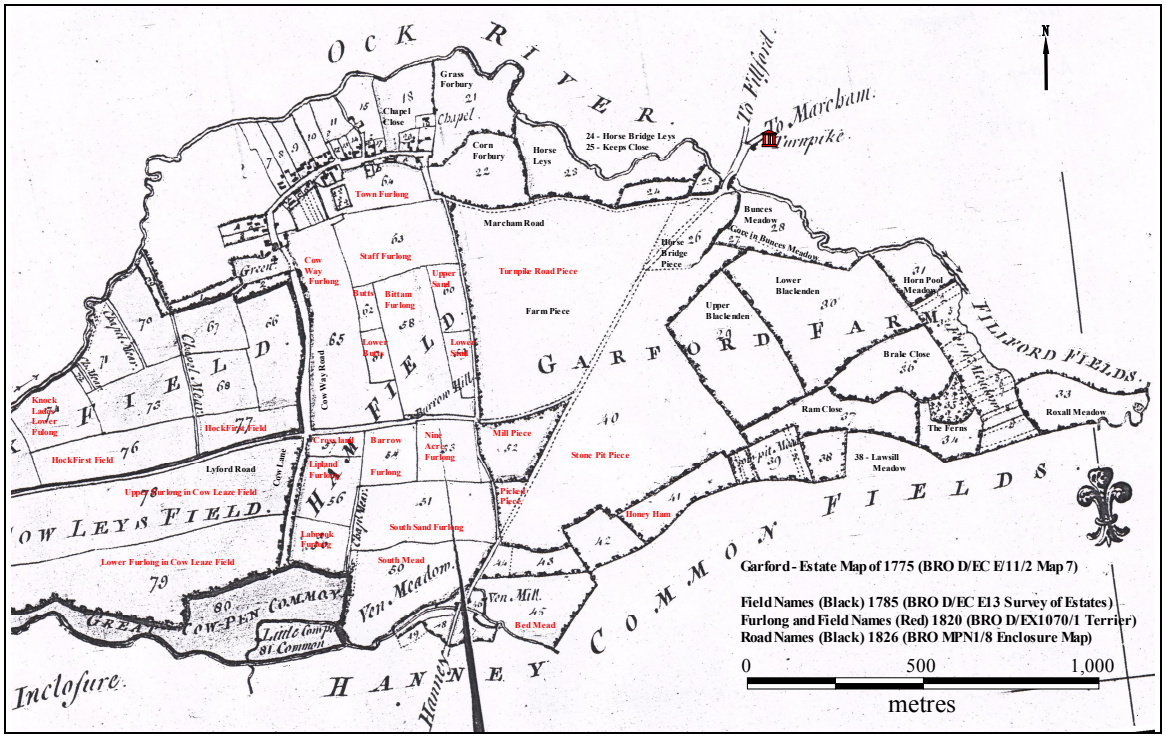


Figure 3.8 – Garford Estate Map of 1775 (BRO D/EC E/11/2 Map 7 © Berkshire Record Office)

Noah's Ark Inn (Marcham/Frilford)

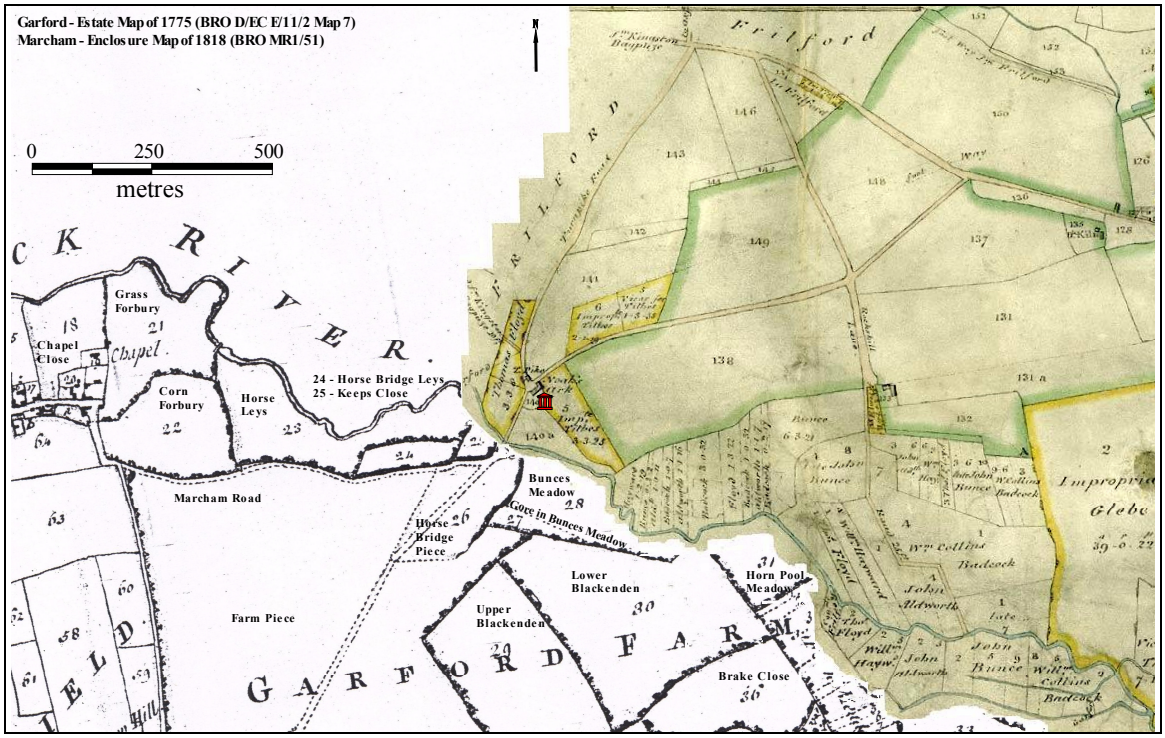


Figure 3.9 – Garford Estate Map of 1775 and Marcham Enclosure Map of 1818. (BRO D/EC E/11/2 Map 7 © Berkshire Record Office and BRO MR1/51 © The National Archives)

Noah's Ark Inn (Marcham/Frilford)

3.8 Geophysical Survey

Geophysical survey is an important element of modern archaeological landscape study and the term covers a range of techniques including electrical resistivity, magnetometry, magnetic susceptibility, and ground penetrating radar (Gaffney and Gator 2003; Clark 1996). The common feature of such techniques is their ability to detect potential archaeological features within the soil and subsoil by measuring very small differences in certain physical properties compared to the surrounding area. The physical properties most commonly measured are soil magnetic susceptibility, local variations in the earth's magnetic field, and the resistance of the topsoil to an electric current. These techniques vary in speed, image resolution, type of feature detected and applicability to specific sites.

The fieldwork undertaken for this thesis has primarily employed magnetometer survey in conjunction with limited amounts of resistivity survey. Both can reveal considerably more detail than is obtainable from aerial photographs. A magnetometer survey is a relatively quick technique able to cover a hectare or more in a day, In contrast a resistivity survey is much slower but is preferable in areas where there is a high level of ferrous metal present, for example fences and pylons, which would interfere with a magnetic survey, or where it is believed there is buried masonry. As with aerial photographs, a negative result from geophysical survey does not imply there are no archaeological features present. Instead, the ground conditions may not be responsive to the technique employed, or the archaeological features may be too deeply buried to be detectable.

Magnetometry measures variations in the earth's magnetic field. Experimentally, it was found that magnetometers could detect soil-filled features such as pits and ditches if there is a measurable difference in the magnetic susceptibility between the topsoil and subsoil (Clark 1996, 17). The effects of human occupation, either through importing non-local materials, or through burning, may increase the magnetic susceptibility of the topsoil, thereby enhancing the contrast with the subsoil. In a resistive survey a weak alternating electric current is injected into the ground and the resistance to the flow of this current is measured systematically over the survey area.

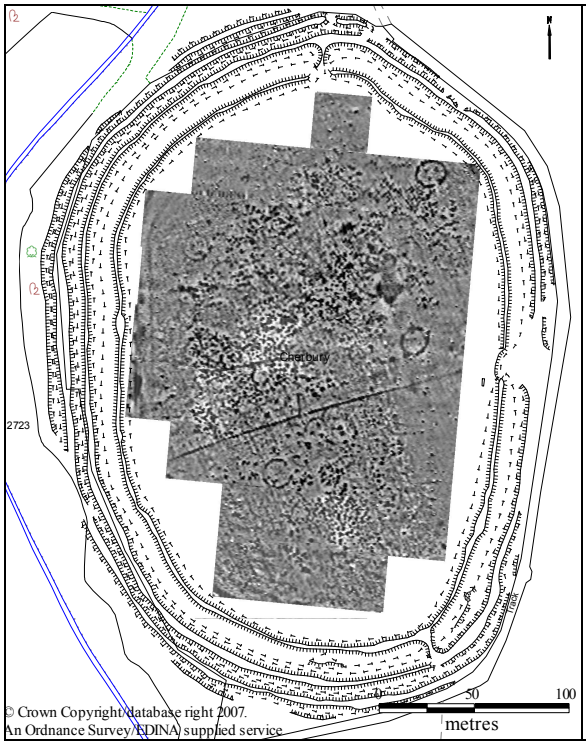


Figure 3.10 – Magnetometer Survey at Cherbury Camp, Charney Bassett

Figure 3.11 – Magnetometer Survey at East Hanney

The magnetometer surveys for this thesis employed a Bartington Instrument's GRAD601 gradiometer with either a single magnetometer tube or dual magnetometer tubes and the results have been processed by ArcheoSurveyor to produce block shaded images using a grey-scale. Areas of positive magnetic anomalies are shown as dark grey or black and typically represent cuts into the subsoil by ditches or pits while areas of negative magnetic anomalies are shown as light grey or white and often represent masonry. This convention assists in comparisons with black and white aerial photography. An example of a survey on the sandstones of the Corallian ridge is shown in figure 3.10 of Cherbury Camp, Charney Bassett. The survey suggests the hillfort contains a substantial number of pits, and there are at least a dozen circular features which can be interpreted as gullies surrounding Iron Age roundhouses. Surveys have also been undertaken in the clay Vale and figure 3.11 illustrates the results from East Hanney where substantial additional detail has been added to the known villa site. This is an area of the clay Vale which provides few cropmarks on aerial photographs.

The resistivity surveys were undertaken using a Geoscan Research RM15-D resistivity meter and the results have been processed by ArcheoSurveyor to produce block shaded images using a grey-scale. To allow for easier comparison with the magnetometer

surveys, and black and white aerial photographs, areas of high resistance are shown as light grey or white and of low resistance as dark grey or black. An example of a resistivity survey of a small villa at Garford is shown in figure 3.12.

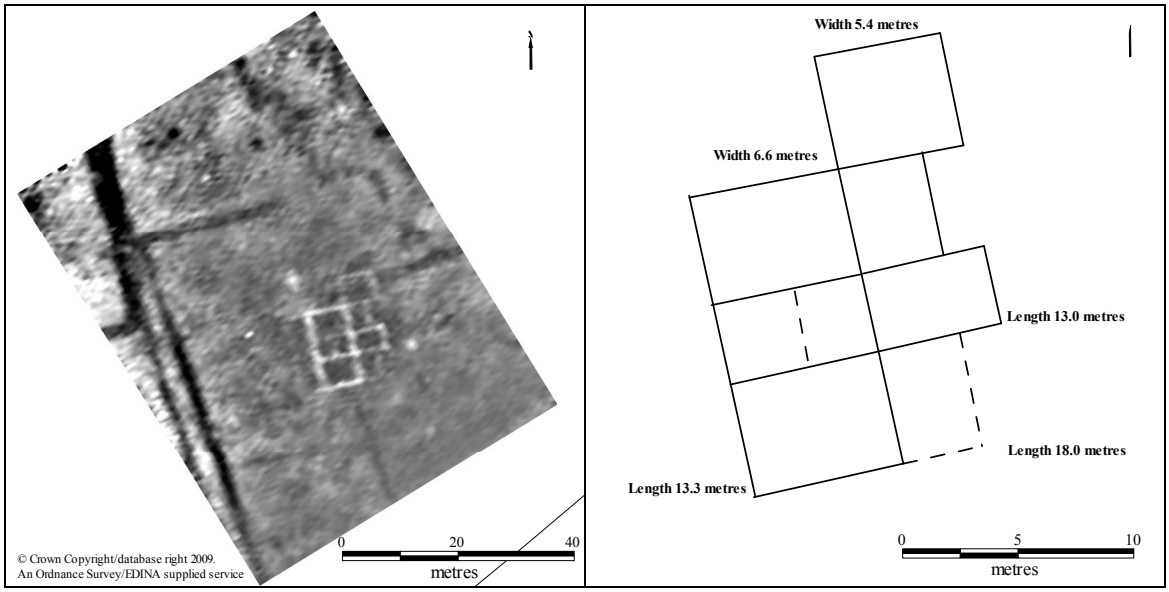


Figure 3.12 – Resistivity Survey at Garford

Geophysical survey does not provide any direct dating evidence. Instead, as with aerial photography, features believed to be archaeological are identified by their morphology in terms of shape, form and size, and are compared with similar known and dated types. Other indications of date may be provided by information from the HER and NMR or from artefacts recovered by fieldwalking. Frequently there are a range of features of different dates which need to be disentangled and phased. To assist in interpretation the geophysical surveys have been traced (using a Geographic Information System) from a raster image onto one or more vector interpretation layers for phasing, identification and dating. The discussion by Wilson (2000) on analysing aerial photographs has proved useful for the interpretation of geophysical surveys.

In 2011 the Institute for Archaeologists adopted a Standard and Guidance procedure for geophysical surveys (IFA 2010). Many of the surveys presented here were performed before the adoption of these standards but the survey work generally conforms to them. Geophysical survey data has been provided to the Oxfordshire HER, and for surveys of Scheduled Ancient Monuments, detailed reports have been provided to English Heritage and the HER.

3.9 Fieldwalking (Surface Survey)

A primary aim of many surface collection surveys is to locate possible settlement or activity sites by identifying areas containing a high density of artefacts. The principal artefacts recovered are lithics, mostly flints and worked stone, and ceramics, mainly pottery sherds together with tile and other building material. In addition, the presence or absence of ceramics may provide information on past agricultural practices, with pottery suggesting the manuring of arable fields, and the absence of pottery suggesting pasture.

The research for this thesis has employed fieldwalking for two purposes: firstly, to locate evidence for Iron Age and Roman-British settlement through pottery scatters, and secondly, to provide potential dating evidence for features detected by aerial photography and/or geophysical survey. The fieldwalking has therefore concentrated on pottery and ceramic building material.

Central to any analysis of surface collected ceramics is an understanding of two important processes. Firstly, how, when and why did the artefact enter the soil, and secondly, how has artefact moved horizontally and vertically from its point of deposition to its point of collection. Four mechanisms by which pottery enters the soil have been suggested by Hayes (1991, 82): rubbish disposal, manuring, burials and accidental loss. Most relevant are the first two. Rubbish disposal is likely to be associated with high densities of artefacts and bones in areas adjacent to long-term occupation. This domestic rubbish would have been thrown on a rubbish heap or buried in pits, and later dispersed by ploughing. The expected pottery density distribution would therefore be high near the original source, with a rapid fall-off with distance. Manuring the surrounding arable fields with domestic rubbish from the settlement is more likely to produce extensive, low-density pottery scatters. Also possible is the build up of material on a site as it is abandoned, termed ‘de-facto refuse’ by Haselgrove (1985, 16). Such material may not relate to the original functions and activities of the site.

Post-depositional processes have been investigated through experiment and computer simulation. On level ground artefacts appear to move between 20 centimetres and 10 metres after 20 to 30 years of ploughing (Clark and Schofield 1991, 93).

Artefacts recovered from the surface need to be dated by association with other similar objects already dated through excavation. In the case of pottery, where much of it is small, abraded sherds, the achievable dating is usually very imprecise and limited to broad periods such as Iron Age or Roman. Quantification of pottery collected from surface survey is usually limited to sherd counts and weights. This provides an important measure: artefact density, usually expressed as sherd count (or weight) per hectare. From this it may be possible to map the overall density of finds across the landscape, and through very broad periods of time.

To cover a large area in a timely and cost effective manner, large-scale surface surveys usually only collect artefacts from regularly spaced transects, providing a limited but representative sample of the total area. A number of important recent fieldwalking surveys. listed in table 3.3, show a prevalence of studies with transects spaced every twenty-five metres with the collected material bagged every fifty metres. Where sites are known and it is believed the surface artefacts are directly derived from underlying archaeological material, more intensive sampling may be appropriate. At East Hanney, illustrated in figure 3.13, fieldwalking was undertaken to re-locate a known villa previously subjected to limited excavation (Rutland and Thomas 1968). To provide an accurate location, pottery and ceramic building material was collected on transects spaced ten metres apart and bagged every fifty metres. The quantification of the results uses the weights and counts of pottery and ceramic building material respectively. This approach differs from the more intensive collection strategy adopted at Maddle Farm (Gaffney and Tingle 1989, 19) where total collection was employed within five-metre squares.

A second example is from Millets Farm, Frilford, where an enclosure was known from aerial photographs and was presumed to be of Roman date. Here the principal activity was geophysical survey to define the enclosure in more detail to allow comparison with other enclosures further west. Systematic line fieldwalking was not undertaken and instead pottery was collected during the geophysical survey and bagged according to survey grid. In addition, a small number of pottery sherds were collected without recording their position within the survey area. A total of 1815 sherds was collected and figure 3.14 illustrates the pottery distribution with respect to the geophysical survey. Over 90% of the pottery dates to the Roman period and therefore provides confirmation of a Roman date to the features detected by the geophysical survey. Overall, the assemblage

suggests a third and fourth century date. Unlike East Hanney, there was little or no ceramic building material.

Reference	Area	Methodology	Period
Shennan (1985)	East Hampshire	Line walking, 15 pace spacing, bag every 100 metres	Mesolithic to Medieval
Lobb and Rose (1996)	Lower Kennet Valley	Line walking, 25 metre spacing, bag every 25 metres	Paleolithic to Medieval
Ford (1987)	East Berkshire	Line walking, 25 metre spacing, bag every 50 metres	Paleolithic to Medieval
Gaffney and Tingle (1989)	Berkshire Downs	Line walking, 25 metre spacing, bag every 50 metres	All periods but focus on Roman
Tingle (1991)	Vale of White Horse	Line walking, 25 metre spacing, bag every 50 metres	Neolithic to Post-Medieval
Richards (1990)	Wiltshire (Stonehenge)	Line walking, 25 metre spacing, bag every 50 metres	Prehistoric
Lock *et al.* (1999)	Sangro Valley (Italy)	Line walking, 10 metre spacing, bag every 250 metres	All periods.

Table 3.3 – Selected Fieldwalking (Surface Survey) Studies

The studies listed in table 3.3 highlight two potential biases in the data: fieldwalkers of varying ability and the difficulty of dating pottery assemblages which consist largely of small, abraded sherds. Moreover, these surveys have demonstrated that not all periods are equally susceptible to analysis through fieldwalking. Although large quantities of pottery may have been discarded throughout the prehistoric period, it does not always survive in the soil. Similarly, the poor quality of most Anglo-Saxon pottery, and possibly the limited amounts produced, severely limits the chances of detecting Anglo-Saxon settlement. In contrast, the large amount of pottery produced in the Roman period, and its ability to survive in the soil, make Roman settlement highly visible. In the fieldwalking for this thesis the first bias has to some extent been mitigated by using the same small number of fieldwalkers for all the surveys. The vast bulk of pottery collected has been Roman, but small amounts of middle and late Iron Age pottery have also been recovered at a number of sites. No Anglo-Saxon pottery has been found during the fieldwalking.

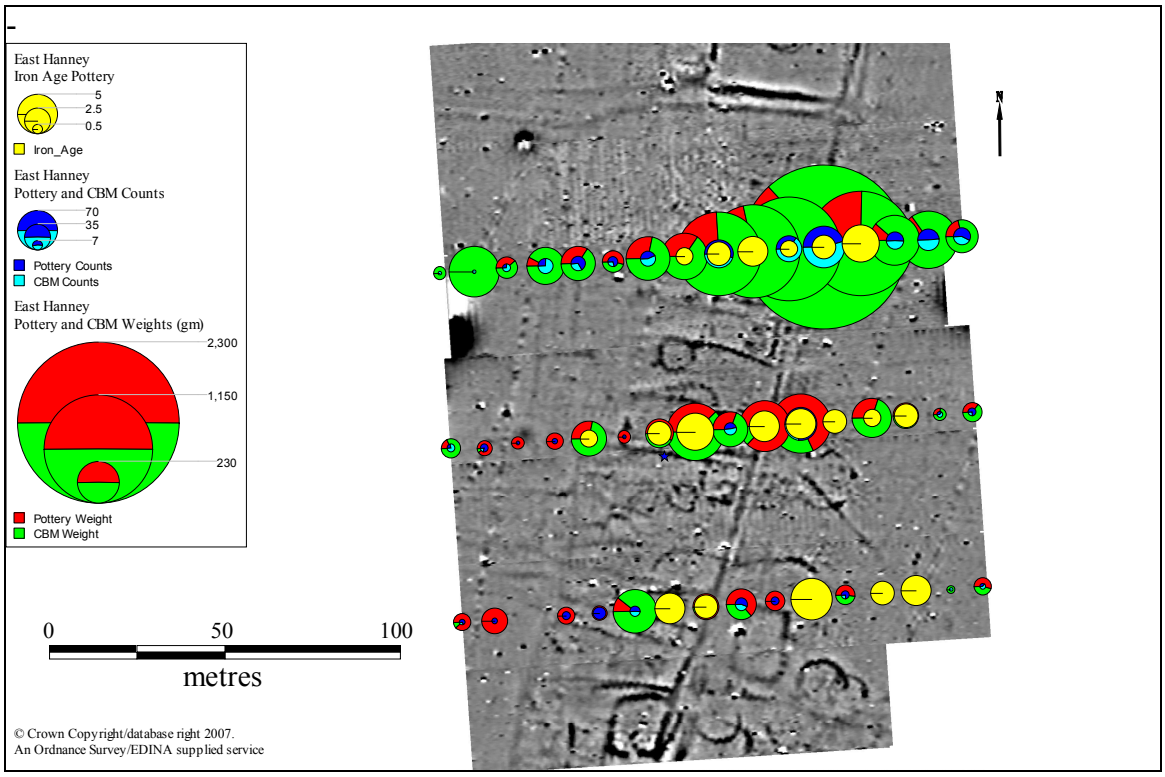


Figure 3.13 – Fieldwalking at East Hanney Villa – Pottery, CBM[9] and Geophysical Survey

Figure 3.14 – Fieldwalking at Millets Farm, Frilford – Pottery[10] and Geophysical Survey

[9] Pottery analysis by Knight Boyer.
[10] Pottery analysis by John Hawes.

3.10 Airborne Lidar

Lidar stands for Light Detection And Ranging and refers to the technique whereby a laser mounted in an aircraft is used to provide an accurate measurement of ground height. The position of the aircraft (and hence the laser) is measured accurately by GPS while the varying orientation of the aircraft is also measured.

For each laser pulse emitted there may be a range of reflections depending on the vegetation cover and the nature of the ground. In woodland the laser light will be reflected from the leaves and branches as well as the ground surface. Thus for each location (x,y co-ordinate) there may be a range of height (z) values. This type of data with multiple z values for each x,y position is referred to as a point cloud. Two important Lidar measurements are the first return and last return: normally the first return is from the upper levels of vegetation and the last return from the ground surface. In open landscapes almost all the laser signal is the last return from the ground surface. These first and last return values can be used to create digital surface models.

The Environment Agency, through the Geomatics Group, sells Lidar data with a vertical accuracy of 5 cm to 15 cm and with a spatial resolution of 25 cm to 2 metres. The data is provided in tiles of 1 kilometre squares and is either a Digital Terrain Model (DTM) where surface objects have been removed or a Digital Surface Model (DSM) where surface features are still present. In general, the DTM data corresponds to last return and the DSM data to first return. The data is available either as processed digital images or as ASCII data. In the latter case the data needs to be processed to construct a Digital Elevation Model (DEM) of either the DSM or DTM data.

Lidar data has been widely used for archaeological purposes to detect earthwork features within woodlands or on upland pasture and moors. In arable areas features such as ploughed-out field boundaries or in-filled ditches may still survive as small variations in the ground surface (Crutchley and Crow 2009, 17-18). As with aerial photography, features believed to be archaeological are typically identified by their morphology: shape, form and size, and are compared with similar known and dated types. The analysis of Lidar elevation model data is therefore very similar to the analysis of aerial photographs.

Six Lidar tiles have been purchased to cover an area of three by two kilometres over parts of Garford, Frilford and Marcham and centred on the Noah's Ark Inn and Trendles Field excavations, to produce a Digital Terrain Model with a spatial resolution of 1 metre (one million readings per tile). The data has been processed in MapInfo to produce a Digital Elevation Model as shown in figures 3.15 to 3.17. The Lidar data does not appear to have revealed any prehistoric or Roman field systems as there is no apparent correlation with the ditches and enclosures revealed by aerial photographs and geophysical survey. However, it has clearly highlighted the remnants of late medieval ridge and furrow together with their furlong boundaries. Although these furlong boundaries can still be detected as slight ridges in the fields the Lidar data provides an extensive overview. Surviving areas of ridge and furrow can be observed in the south-east and south-west while in the centre the furlong boundaries can be seen in Garford Farm, which had been enclosed by 1775. Thus the Lidar data confirms the furlong boundaries known from the 1775 estate map of Garford, shown in figure 3.8, and also indicates their position prior to the enclosure of eastern Garford as Garford Farm. This has confirmed and extended the landscape information available from historic maps.

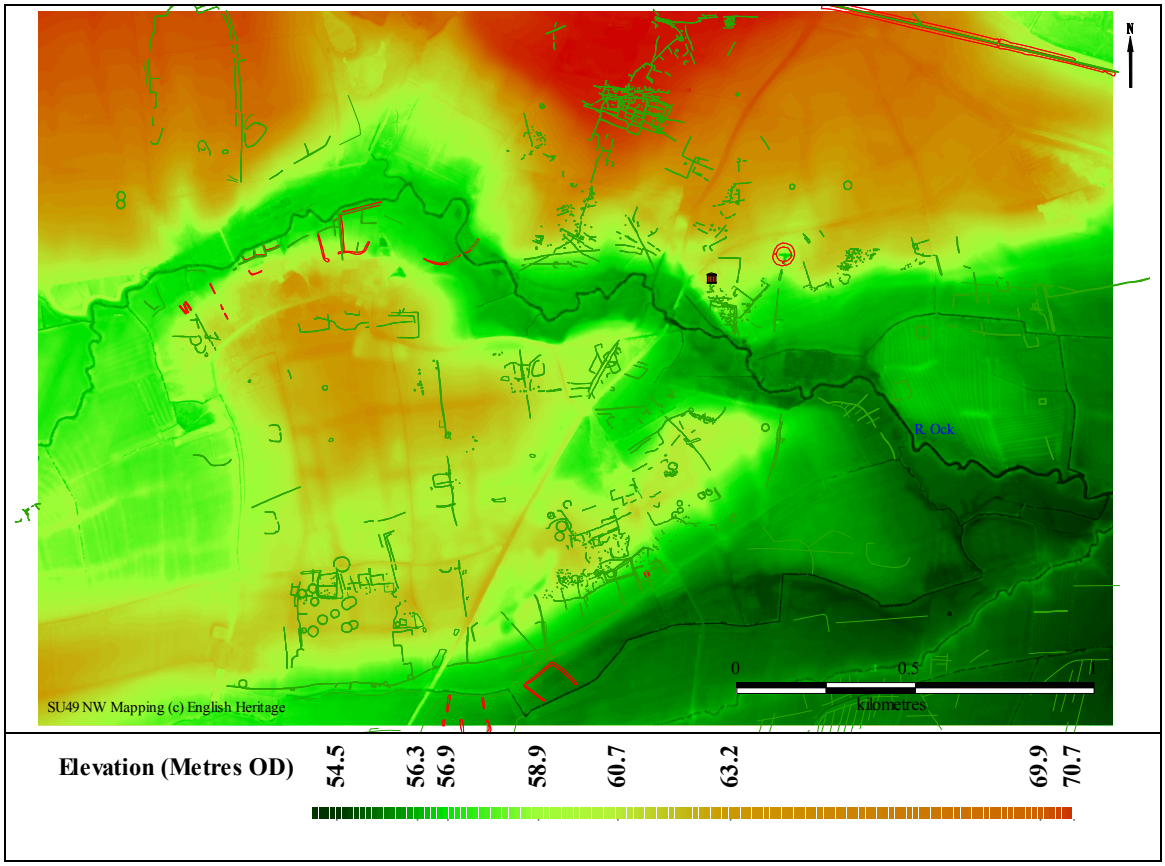


Figure 3.15 – Digital Elevation Model of Lidar data in Garford, Frilford and Marcham with cropmarks as mapped in SU49 NW
© Environment Agency copyright 2013. All rights reserved.

Noah's Ark Inn (Marcham/Frilford)

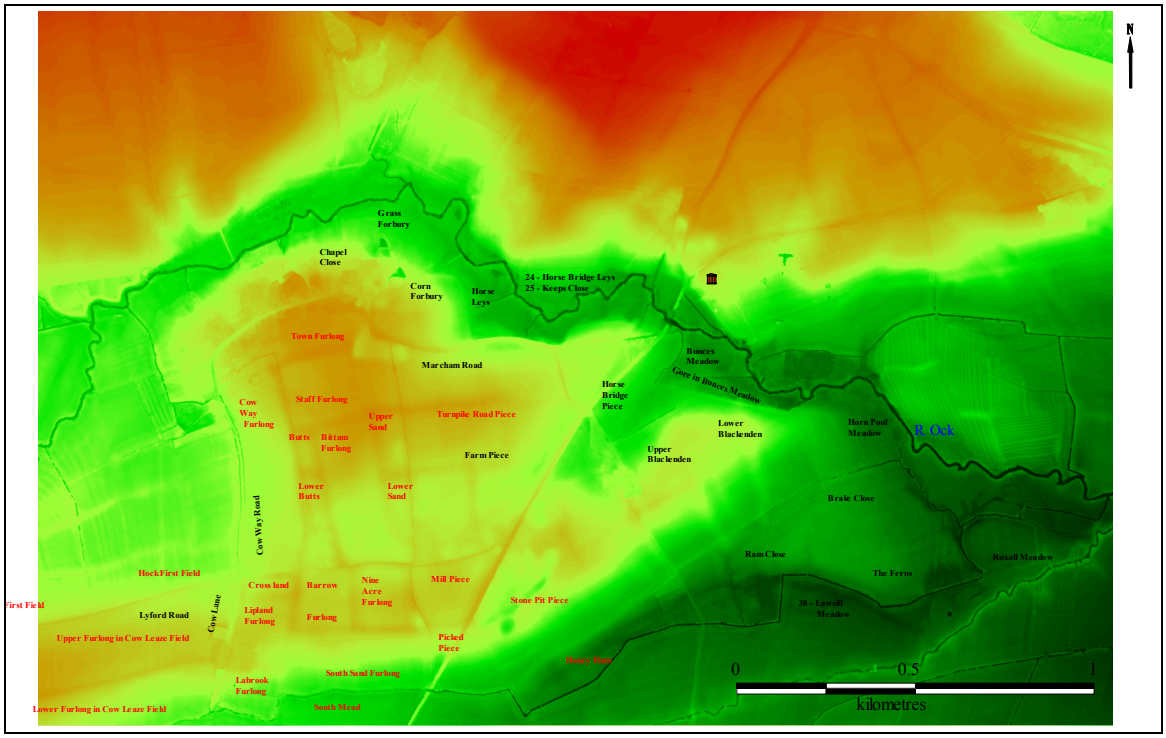


Figure 3.16- Digital Elevation Model of Lidar data with Garford Field Names (black) and Furlong Names (red)
© Environment Agency copyright 2013. All rights reserved.

Noah's Ark Inn (Marcham/Frilford)

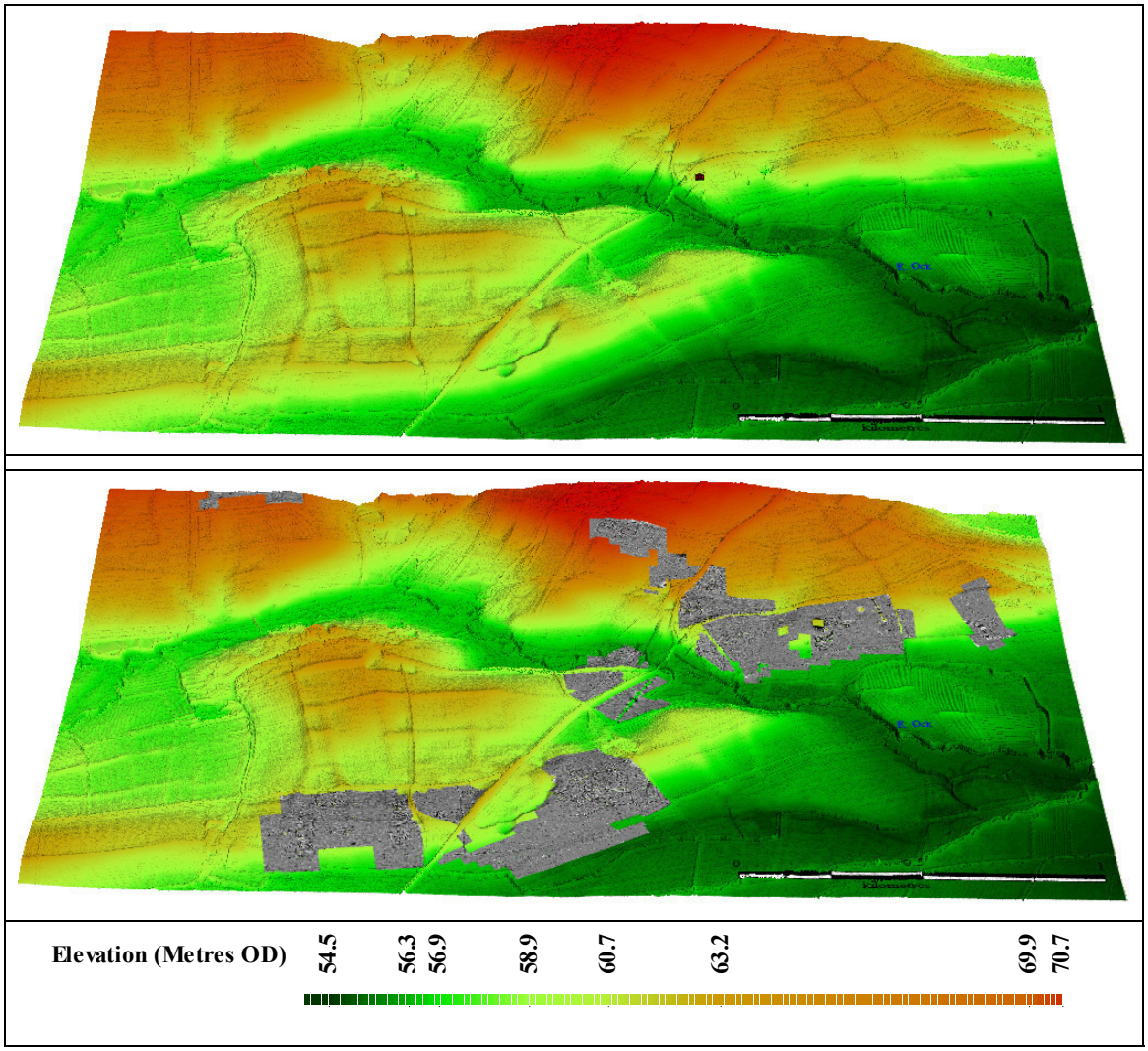


Figure 3.17 – Digital Elevation Model of Lidar data with Geophysical Survey data in 3D View

Noah's Ark Inn (Marcham/Frilford)

3.11 Geographic Information Systems (GIS)

Central to landscape archaeology is the concept of space and the understanding and interpretation of spatial relationships. Geographic Information Systems (GIS) provide a computerised database for storing, manipulating and displaying spatial relationships. In addition, maps can be produced to display selected aspects of this data. This study uses MapInfo Professional as a geographic information system and the various data sources used and discussed earlier are illustrated in figure 3.18 below.

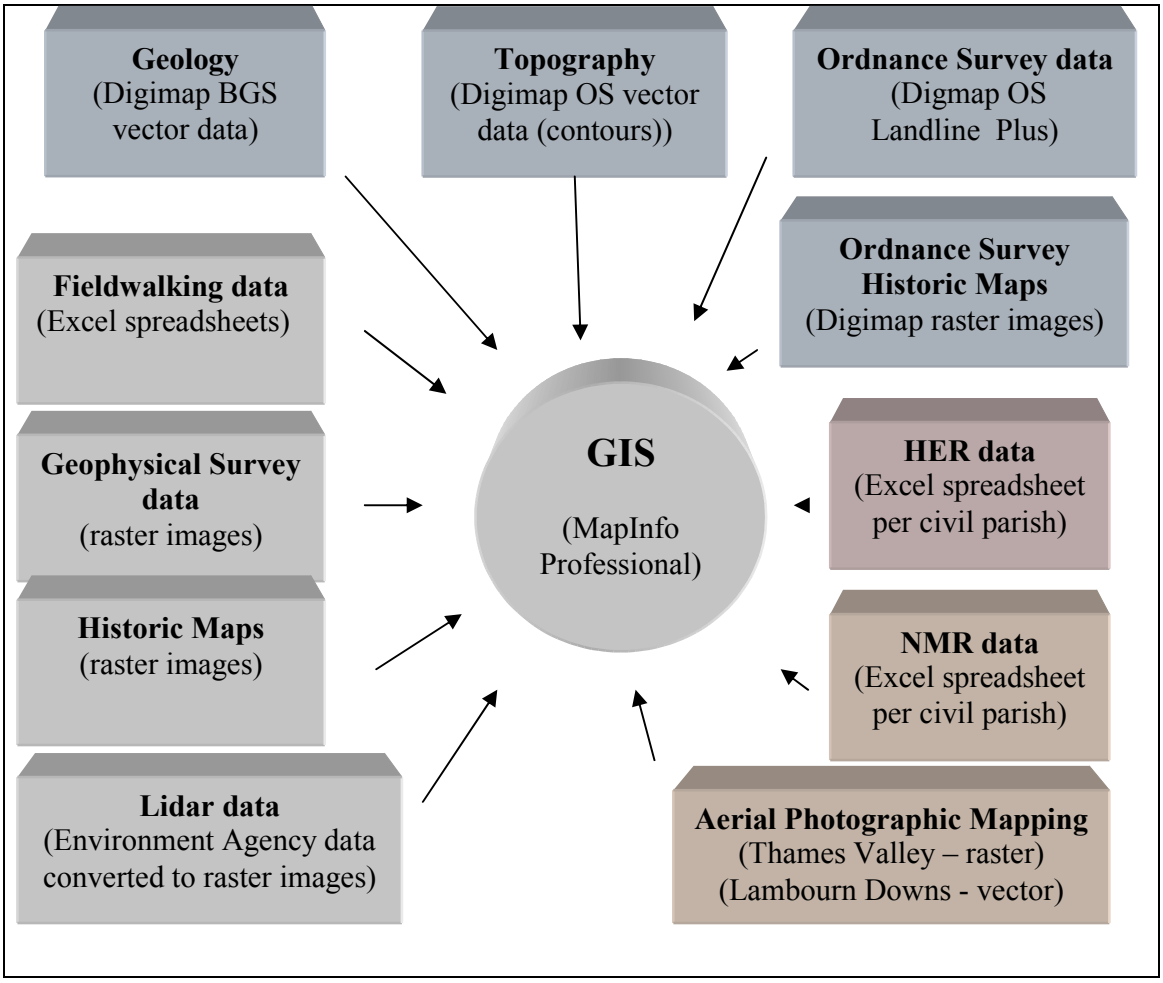


Figure 3.18 – Integration of archaeological data using a geographic information system (GIS)

As well as providing a passive data repository, GIS has the potential to derive new information from the active processing and combination of existing datasets. An example of such new information is the creation of viewsheds from topographic or contour data. Similarly, information on the magnitude and direction of slope can be derived from contour data and then used as the basis for modelling movement within the landscape.

These GIS modelling capabilities are reminiscent of processual archaeology, where theoretical models are compared to archaeological data and statistical tests applied to support or refute the theory. There is therefore an apparent conflict between GIS and more recent post-processual thinking. But relevant is Hodder's (1991) contextual approach which involves searching for patterns in an object's context within appropriate context dimensions. A GIS provides a powerful tool to store large amounts of different types of data and to search for spatial patterning within this data and therefore appears ideal for contextual approaches involving spatial data. Moreover, the ability to represent and display the data and patterns allows for continual movement between theory and data (Hodder 1991, 150).

Difficulties arise when the nature and representation of the data is considered: most GIS studies employ a combination of archaeological and environmental data. The environmental data used in this study includes solid and drift geology, topographic data, soil classes and water courses. An important criticism of GIS analysis is its use of such data and the risk of environmental determinism. That the environment plays a role in selecting settlement and other types of sites is not in doubt, but the relative importance of environmental factors versus cultural and social factors is unclear. The balance between the two may vary not only over time and between different societies but also on the scale of analysis. Van Leusen (Gaffney and van Leusen 1995, 369) has suggested that on a global scale human settlement patterns are largely determined by environmental factors such as the climate and topography but that cultural factors may be more important and noticeable on a regional scale. A common application of GIS is to search for correlations between site locations and environmental factors. Although such correlations may not indicate causality, it is often argued that in explaining such relationships an insight may be gained into the decision making processes by which past societies chose their sites. But equally it may be that particular environmental factors have selected these sites for survival, or for discovery, from an initially much larger set of sites in more varied environments.

Two basic attributes of past human societies are their geographical extent and their position in time. Space is represented in a GIS as a two-dimensional surface within which objects are located: it is measurable but essentially an empty, abstract surface upon which archaeological data is placed. It is therefore not necessarily an adequate representation of the physical and cultural landscapes in which past societies lived. A distinction can be made between abstract space, as represented in a GIS, and place. Places are seen by Lock

(2003, 173) as culturally significant locations in which and through which human activity and cultural processes are expressed and experienced. This cultural aspect is strongly emphasised in many post-processual approaches where space, or the human landscape, are seen as being shaped and formed by social actions (Wheatley and Gillings 2003, 8). This socially constructed human landscape is experienced in a variety of ways by its inhabitants and therefore contains social and qualitative attributes in addition to the environmental and quantitative archaeological attributes normally held within a GIS (Witcher 1999, 13-14).

Time is also a problem. It is not a natural dimension within a GIS and is normally represented as either a discrete or continuous attribute of the archaeological data. This leads to an analysis or display of either multi-period data, which is not necessarily related, or to discrete time-slices where the relationship to previous and later events is lost (Wheatley and Gillings 2003, 242-243). Yet past landscape features may remain important to later inhabitants and influence subsequent landscape use. Furthermore, modern western concepts of time may not correspond to how past societies perceived the passage of time. GIS lack mechanisms for concepts of cultural or historic time related to space and cultural practice (Gaffney and van Leusen 1995, 377-378; Witcher 1999, 14).

There are other important limitations in representing archaeological data within a GIS. While contextual analysis requires large volumes of data other post-processual approaches are more theoretically based and may rely more on qualitative than quantitative data. Difficulties in representing qualitative data obtained from excavation and survey restricts the ability to integrate these approaches into GIS analysis. Complicated landscapes with subtle differentiation may be simplified to sets of points. The consequent loss or inadequate representation of such data makes it unclear whether the relationship between people and landscapes can be adequately modelled (Lock 2003, 174). How can the interactions between people and landscape, by which features, patterns and meanings are created, expressed and maintained, be included in a GIS analysis?

One suggested approach to link people and place uses the phenomenological ideas and concepts of Martin Heidegger (1889-1976) of ‘being-in-the-world’ and ‘dwelling’ to provide the required connection (Lock 2003, 175; Wheatley and Gillings 2002, 8). Using such ideas the landscape can be considered as a set of places or locales where social activities or practices are performed and which are linked by pathways for movement and communication. These practices include the routines of domestic life, agricultural or craft

production, trade and exchange, and ritual ceremonies. Visibility and movement analysis are widely used in an attempt to introduce a 'being' or body into GIS and provide the "eyes and legs" to see and move within a digital landscape (Witcher 1999, 16).

It has been argued that visibility studies locate the analysis within the personal experience of a landscape and may therefore model how the landscape was perceived in the past (Lock 2003, 177-180). Yet there are many difficulties in such analyses. These range from clarity of vision versus distance, intervening obstructions such as trees and houses, and the accuracy and resolution of the visibility model. Underlying all visibility analysis is a digital elevation model. Elevation is a continuous variable across the land surface but within a GIS a discrete value is assigned to a raster cell of specified size. Reducing the cell size increases the model's resolution and accuracy at the expense of increased processing and storage requirements. The digital elevation model of the Vale of the White Horse illustrated in figure 2.3 has been constructed with Ordnance Survey contour data and a cell size of ten metres. The contours are separated by ten metres in height, which limits the accuracy of the model and its use in the relatively flat Vale. More accurate is the digital elevation model illustrated in section 3.10, which has a cell size of one metre and a vertical error at any point probably less than 15 centimetres. This provides a more useful model for visibility studies in the Vale.

The analysis of movement may allow a GIS to approach the human perception of landscape. This is achieved using cost surfaces to model either the time or the energy taken to move between two points (Wheatley and Gillings 2002, 151-156). Both energy and time are usually related to the slope, derived from the digital elevation model. The cost surface may also model other environmental and social factors: for example, a marsh or swamp will be more difficult to cross than firm ground while rivers may either aid or hinder movement. Cemeteries or other taboo areas may need to be avoided, while ownership and control of land may restrict passage.

Both visibility and movement are primarily based on elevation data and there is a risk that both techniques fail to capture all or any aspects of human perception and are instead functionally deterministic models based on a single aspect of the physical environment. The slight variation in elevation in the flat Vale of the White Horse limits the use of such techniques, although in Chapter 4 the visibility of the Romano-British temple at Marcham / Frilford is modelled.

3.12 Discussion

One aim of this thesis is to place the known archaeological material from the Roman temple and amphitheatre site at Marcham / Frilford within the context of the wider rural landscape of the Vale of the White Horse. Chapter 4 discusses this site and its immediate neighbourhood using published and unpublished excavation reports[11], geophysical survey and fieldwalking. Historical maps are used to examine the evidence for a Roman road through the Vale and Lidar data is used to construct a GIS visibility model for the Romano-British temple.

Chapters 5 to 7 examine the late Iron Age and Romano-British landscape by drawing on a wide range of evidence including published excavations from sites throughout the Vale of the White Horse[12]. An important source used in all three chapters is the recently available material from the Thames Water Abingdon Reservoir project (Hearne 2001), including the aerial survey mapping and associated report (Winton 1999), together with the unpublished evaluation excavation reports[13]. In addition, geophysical survey and fieldwalking has been undertaken at selected sites. This provides a substantial body of archaeological evidence with which to explore themes such as changes in settlement density, structure and form, the development of ditched field systems and trackways, the introduction of villas, increasing population, and agricultural intensification. These sources are also used to examine variations in settlement forms within the wider context of settlement in the upper Thames Valley.

[11] Bibliographic references are summarised in Appendix 2.
[12] Bibliographic references are summarised in Appendix 3.
[13] Bibliographic references are summarised in Appendix 4.

4 The Romano-British Religious Complex at Marcham / Frilford

4.1 Introduction

The University of Oxford has a long tradition of research and excavation in Frilford and Marcham. In the mid-nineteenth century a late Romano-British and early Anglo-Saxon cemetery was discovered at Frilford through quarrying (Akerman 1865a; Rolleston 1869;1880) and further excavations were undertaken just after the first World War (Dudley Buxton 1921). A small Roman villa a few kilometres to the west of the cemetery was excavated by Arthur Evans in 1884 (Evans 1897), and in the 1930s Evans suggested to Bradford and Goodchild the potential of excavating in the vicinity of the Noah's Ark Inn, which lies a short distance to the south-east of the cemetery (Bradford and Goodchild 1939). This excavation revealed a small Romano-British temple and an Iron Age settlement. Part of the area excavated in the 1930s was re-excavated and re-interpreted by Dennis Harding in the 1960s (Harding 1987).

Fresh impetus to research in Frilford was provided by the fieldwork of Richard Hingley of Southampton University, with the discovery and initial excavation of an amphitheatre in Trendles Field, directly to the east of the Noah's Ark Inn (Hingley 1982; 1985). Hingley (1985) interpreted the three closely related sites, temple, amphitheatre and cemetery, as an extensive religious complex containing both monumental buildings and domestic structures. This view is repeated by Burnham and Wacher (1990) who include Frilford in their list of specialised religious sites. More recently Henig and Booth (2000, 68) have described Frilford as a "major settlement" and have questioned its perceived specialised religious function by observing that temples were normal components of sites such as Alchester, Sanson's Platt and Gill Mill. This however neglects the close association of amphitheatre and late cemetery. But certainly they are justified in asking whether the various, separate activity zones identified by Hingley through fieldwalking and aerial photographs represent individual, unrelated activities or connected elements of a single, extensive site.

Excavations in Trendles Field by the University of Oxford between 2001 and 2011 have revealed additional components of a complex Iron Age and Roman landscape. The extensive geophysical survey undertaken by Tony Johnson of Oxford Archaeotechnics

prior to these excavations has been supplemented by further geophysical survey for this thesis. These surveys and excavations have provided much greater detail on the nature and extent of Iron Age and Romano-British settlement and activity, and suggest a strong spatial relationship between the Romano-British temple in the garden of the Noah's Ark Inn and the amphitheatre and other structures discovered in Trendles Field (Kamash *et al.* 2010b).

Evidence for the surrounding landscape is provided by a number of commercial archaeological evaluations (Lock 2008a). The first and most extensive of these began in the mid 1990s as part of Thames Water's plan for a large reservoir west of Abingdon and south of the river Ock. A large block of land to the south and east of Frilford was surveyed using aerial photography (Winton 1999) and geophysics, and followed up by evaluation excavations (Hearne 2001). More recently, an area to the north of Trendles Field was investigated by an evaluation for a proposed A415 Marcham Bypass (Bunn 2004; Cockin 2005). Between this proposed bypass route and Trendles Field a watching brief and evaluation excavations were carried out during the construction of a water pipeline (Hart *et al.* 2012). Finally, over one hundred evaluation trenches were opened in advance of planned sand extraction to the north and west of the Romano-British cemetery (Cass and Ford 2008).

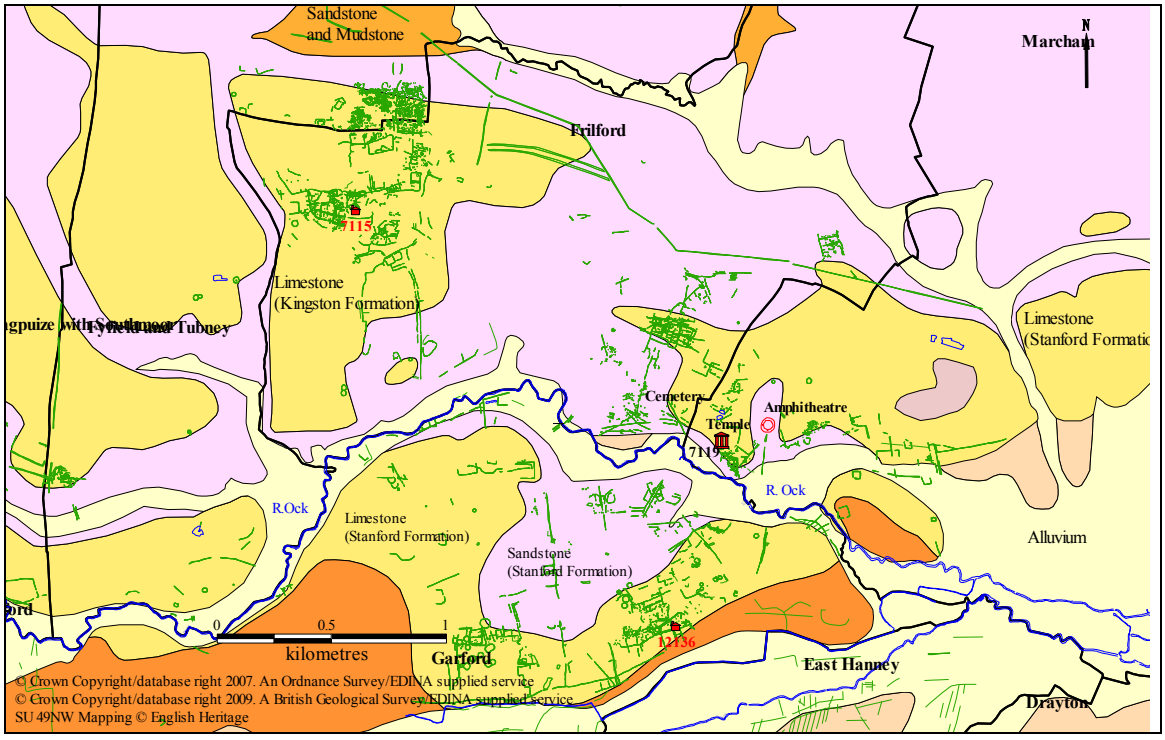


Figure 4.1 – Marcham, Frilford and Garford Geology and Cropmarks

This chapter will initially summarise the known archaeological results in the immediate vicinity of the cemetery, the temple at the Noah's Ark Inn and the amphitheatre in Trendles Field. This is followed by a discussion and analysis of the wider landscape surrounding the religious complex in order to understand its context. This area is illustrated in figure 4.1 and includes south-west Marcham, south-east Frilford and east Garford, which lie on the sandstone and limestone of the Corrallian ridge. The river Ock flows eastwards to the south of the temple and amphitheatre and is joined by the Childrey and Appleton brooks in the south-east. Within the area covered by figure 4.1 are two small villas and extensive cropmark evidence for prehistoric and Romano-British activity. The villas and some cropmarks have been investigated by geophysical survey and fieldwalking and are discussed in chapters 5 and 7.

4.2 The Romano-British and Anglo-Saxon Cemetery

The cemetery was the first element of the religious complex to be located. Roman and Anglo-Saxon graves were found in 1864 in a quarry just north of the river Ock at Frilford (Akerman 1865a) as illustrated in figure 4.2. Akerman's three trenches uncovered thirty-eight graves, many of which were oriented on a west-east axis, and included two burials in lead coffins. Although he realised that the lead coffins represented Romano-British burials he believed that the majority of the graves represented Anglo-Saxons converted or partly converted to Christianity.

Further rescue work was carried out between 1867 and 1870 by George Rolleston (Rolleston 1869; 1880) who discovered Anglo-Saxon cremations overlying inhumations, and felt many of Akerman's supposed Anglo-Saxons were actually Romano-British. Rolleston described five classes of burial – two Romano-British and three Anglo-Saxon. The two Romano-British classes were burials in lead coffins (five), and inhumations, possibly in wooden coffins, arranged in semi-oriented graves in parallel or nearly parallel rows running from north of west to south of east. This second class was the most numerous with more than fifty examples.

The first of the three Anglo-Saxon classes were cremations: ten urns were located, generally close to the surface with some having been damaged by ploughing. Secondly,

there were shallow Anglo-Saxon inhumations with various orientations containing grave goods such as shield bosses, spear heads and brooches. The final class consisted of Anglo-Saxon inhumations in graves of the same alignment and usually the same depth as the Romano-British graves, but differing from them in having stones set along the edge of the grave, possibly to represent a coffin[1]. These usually contained grave goods and were aligned west-north-west to east-south-east. Rolleston (1869, 442) attributed this final class of inhumation as belonging to a period of transition from heathen (as in the shallow graves) to Christianity, with a deeper, aligned burial, but retaining grave goods.

The importance of these discoveries lay in the suggestion of continuity, at least in burial location, between the late Romano-British population and early English settlement in the upper Thames Valley and in the Vale of the White Horse.

Further excavations undertaken in early 1920 by the Oxford University Archaeological Society located an additional forty graves (Dudley Buxton 1921). At least thirty-three of the thirty-four burials to the north-west of the quarry were Romano-British and were separated from five Anglo-Saxon burials and an empty cist to the east. The Romano-British graves, cut deeply into the oolite rock and positioned with the head to the north-west and the feet in the south-east[2], were aligned in reasonably well defined rows, placed head to foot with considerable regularity, and appear to correspond with Rolleston's second class of Romano-British burials. Where a new grave disturbed an earlier burial, the earlier one appears to have been carefully replaced. The five Anglo-Saxon graves differed by not being dug through the oolite layer and therefore had not been so well preserved. Although shallow, the graves seem to be aligned and therefore appear to be oriented versions of Rolleston's second class of Anglo-Saxon burials.

The cemetery was again investigated in 1937 when a series of trenches excavated to the north of the 1920 excavation revealed a further six Romano-British graves (Bradford and Goodchild 1939). This small number appeared to indicate that the northern extent of the cemetery had been reached. As in 1920, the alignment of the graves was generally west-north-west to east-south-east with heads towards the west. The location of the excavations in 1920 and 1937 in relationship to the quarry is shown in figure 4.3 and a summary of the various excavations in the cemetery is given in Appendix 1.

[1] Evans (1897, 341) also lists these three classes of Anglo-Saxon graves.
[2] Buxton's (1921) orientations are incorrect and were corrected by Bradford and Goodchild (1939).

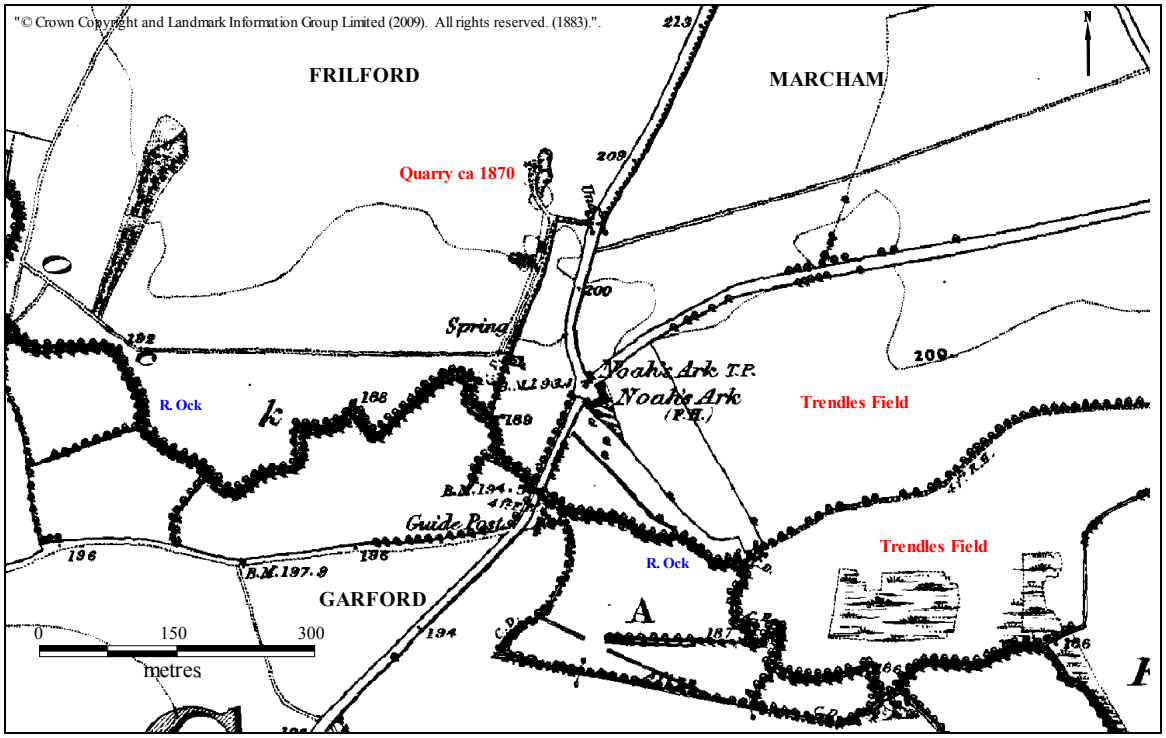


Figure 4.2 –Marcham, Frilford, and Garford in the late nineteenth century (Ordnance Survey First Edition)

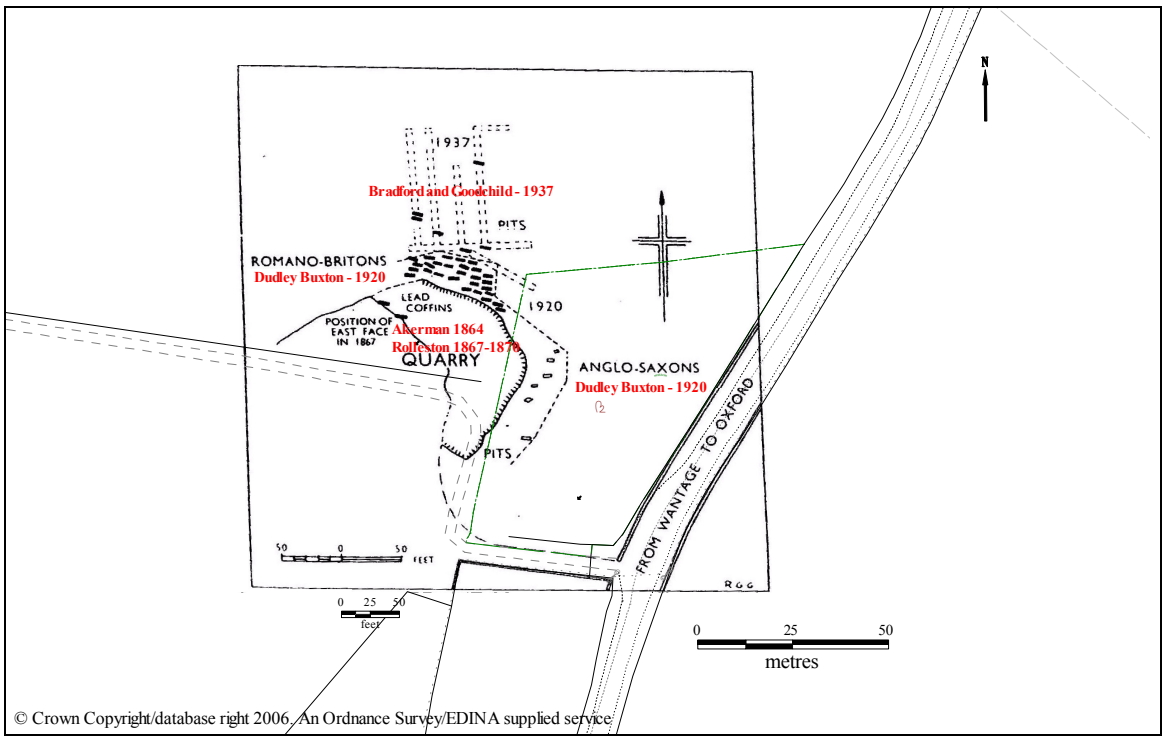


Figure 4.3 – The Cemetery (Part of figure reproduced from Bradford and Goodchild, Excavation at Frilford, Berks, 1937-8. *Oxoniensia*, 4, 1939, 55, Figure 12)

Two of these six graves contained stone linings (Bradford and Goodchild 1939, 56-7), a characteristic of Rolleston's third class of Anglo-Saxon burials. Burials with partial or complete rows of stones correspond to Philpott's (1991, 61-63) type 3 Roman period cist and stone lined graves. A recently excavated late Roman cemetery at Tubney also contained stone linings in two of its eight graves (Simmonds *et al.* 2011, 116). This suggests that some of Rolleston's third class of Anglo-Saxon burials may have been Romano-British[3].

Rolleston's excavations were not limited to the quarry and its immediate environs; two sites were excavated several hundred metres away where it had been observed the crops grew to a greater height. Two large pits, excavated to a depth of ten feet, were felt by Rolleston to be initially the quarry and later the rubbish dumps of an unlocated great house (1869, 418-419)[4]. Clearly, Rolleston was unaware of the presence of a nearby temple so while these pits may be for an undetected great house, they may alternatively relate to the temple. Romano-British occupational material was also detected by Dudley Buxton, mainly in the area of the Saxon burials. Five pits, including a rubbish pit, were discovered by Bradford and Goodchild (1939, 58) in the Romano-British zone as indicated in figure 4.3. They suggest settlement areas existed in the neighbourhood of the cemetery from its inception and were subsequently incorporated into it.

Figure 4.4 – Surviving inhumations in the Romano-British Cemetery at Frilford. (Cass and Ford 2008, Plate 2)

[3] See also Dudley Buxton (1921, 95).
[4] The locations of these excavations are not known. Evans (1897, 342) suggests they were in the direction of Frilford village, while Dudley Buxton's figure 1 suggests two possible locations (1921, 88).

In 1941 the quarry was extended eastwards to the road removing any further Anglo-Saxon graves and also northwards into the Romano-British area (Bradford and Morris, 1941, 87). Nevertheless, recent evaluation trenching north and east of the 1937 excavations has revealed that the northern limit of the cemetery had not been reached and that there are still surviving inhumations as illustrated in figure 4.4 (Cass and Ford 2008).

This cemetery evidence can be considered in the wider context of cultural change in late Iron Age and Romano-British burial practice and then in the more regional context of other nearby Romano-British cemeteries, with particular regard to location and continuity of early Anglo-Saxon use. Crouched inhumations are the principal feature of burials in the middle and late Iron Age and are found in locations such as hillfort ramparts, ditches and storage pits (Whimster 1981). Occasionally such burials contain incomplete bodies or disarticulated bones and this together with finds of isolated bones suggests the use of excarnation (Lambrick and Robinson, 2009, 313-315). Only in the south-east of England did cremation become widely adopted in the late Iron Age: a development most plausibly linked to Continental influences as cremation was the main burial rite in Italy and the north-west provinces at this time (Philpott 1991, 8 and 217). Although cremation became more widespread in Britain after AD 43 it was generally restricted to areas in and near towns and military centres. Exceptions to this general statement include two recently discovered cremation burials dated to the late second century AD at Tubney which may form part of a larger cremation cemetery (Simmonds *et al.* 2011, 116). Away from such Roman centres crouched inhumation remained common throughout much of the Roman period and Roman influence may have been limited to the burial of complete bodies instead of bone dispersal and burial of partial skeletons (Philpott 1991, 222).

Inhumation began to replace cremation as the main burial rite in towns and military areas by the later third century AD and from the early fourth century AD had become the usual burial rite in much of Roman Britain. This trend reflected changes in the wider Empire and had begun as early as the second century AD in Rome (Philpott 1991, 12). Roman inhumations differed from earlier Iron Age crouched burials by the placement of the body in an extended position, normally face-up, and with the occasional use of coffins. Although Iron Age style crouched inhumation burials remained in widespread use throughout much of Roman Britain in the first and second centuries AD extended burials became more usual by the third and fourth centuries AD.

This suggests that Roman cremation practices of the first and second centuries AD had little impact on rural societies outside south-east England. The change in Roman treatment of the dead from cremation to inhumation from the later third century AD significantly reduced the differences between British and Roman funerary practice and may have assisted in producing a more uniform mode of burial in town and countryside. This practice is characterised by extended inhumation, the use of coffins and a reduced range and number of grave accompaniments. These changes in burial practice are summarised in table 4.1 below.

	Iron Age			Romano-British	
	Early	Middle	Late	Early	Late
Crouched Inhumation	R	R	R	R	O
Cremation Burial	O	?	R	R	O
Flat Cemeteries		rare	O	O	R

Table 4.1 - Burial Practice in the Iron Age and Romano-British Periods
(Based on Lambrick and Robinson 2009, 326)
R = Recurrent, normative rite, O = Occasional, not normative rite.

The context for studying late Roman cemeteries in Oxfordshire has been provided by Booth (2002) who analysed nineteen cemeteries defined on the basis of at least ten burials located closely together. Table 4.2 lists these cemeteries and includes also the recently excavated cemetery at Tubney, which while not meeting Booth's criteria is included because of its proximity to Frilford. Eight of the cemeteries are associated with small towns: two each near Alchester, Asthall and Dorchester-on-Thames, together with Frilford and Wantage. However, both the date of the cemetery at Wantage, and its status as a small town are uncertain. Booth suggests there would have been additional, larger cemeteries near Alchester and it is likely that cemeteries would have been associated with Abingdon and possibly also Bowling Green Farm, Stanford-in-the-Vale. The discovery of burials with lead coffins within Abingdon (Allen 1990, 74) may indicate that burial did not always take place outside towns, or alternatively, that fourth century Abingdon was more rural than urban (Henig and Booth 2000, 71).

The dating of the cemeteries listed in table 4.2 is based largely on grave goods such as pottery and coins. The less precise pottery evidence provides dates covering the third and fourth centuries AD. In contrast, the coin evidence is almost exclusively fourth century suggesting that inhumation burial in Oxfordshire, or the practice of including coins, may have developed either towards the end of the third century or more probably during the

fourth century (Booth 2002, 34). One of the six Frilford graves excavated in 1937 contained a coin hoard about a foot above the skull and, based on the wear on the coins, a date of AD 440 or later was suggested for the deposition of the hoard (Bradford and Goodchild 1939, 65). Bradford and Goodchild argue (1939, 56) that the coin hoard and burial are contemporaneous and suggest Romano-British use of the cemetery continued well into the fifth century AD. Six inhumation burials in a Romano-British tradition have been radiocarbon dated to the fifth or early sixth century AD nearby at Tubney (Simmonds *et al.* 2011, 117).

A new feature of the fourth century AD is the 'managed cemetery' characterised by regular rows of graves, usually aligned west-east and with few or no grave goods. Management, or at least the marking of graves, is also suggested as earlier graves are rarely disturbed by later burials. Philpott (1991, 226-228) sees managed cemeteries as an urban innovation, possibly as a solution to finding space outside the town to bury the dead and a number of such sites have been identified at both large and small towns. Such managed cemeteries provide an indication of local administrative capabilities in these communities. Although Booth (2002, 19) suggests that within Oxfordshire only the Dorchester cemeteries appear to be late Roman managed cemeteries with organised layouts of graves in lines or rows, this may also be the case at Frilford where the apparently organised rows of graves, as shown in figures 4.3 and 4.4, hint at some form of organisation.

Booth (2002, 21-22) has observed that cemeteries adjacent to small towns appear to have a greater tendency towards west-east orientations whereas a north-south alignment is more common in rural cemeteries, a trend seen in table 4.2. This, together with the number of burials and the potential evidence of management may link the Frilford cemetery more closely to urban than rural cemeteries and hence provide evidence of continuing administration and control of the temple complex during the fourth and early fifth centuries AD. It can also be seen from table 4.2 that while some other cemeteries have nearby Anglo-Saxon settlement or burials, Frilford appears to be unique in having been used in the fifth century AD and possibly later for both Romano-British and Anglo-Saxon burials. This may indicate the continuing importance of the site, or continuing administration and control, throughout the fifth and into the sixth century AD.

Site Name	Parish	Context	Burials	Excavation	Comments	Anglo-Saxon burials
Alchester North	Chesterton	Small Town	30	Almost Complete	West-north-west to east-north-east	Post-Roman cemetery of 10 inhumations
Alchester South	Wendlebury	Small Town	28	Probably Incomplete	West-east	No
Ashville	Abingdon	Rural	11	Incomplete	Eight west-east, three north-south	No
Asthall West	Asthall	Small Town	15	Probably Incomplete	Not specified	No
Asthall (Site B)	Asthall	Small Town	11	Probably Incomplete	Also three cremations in cemetery. Four isolated burials. Change in orientation from north-south (8) to west-east (3).	No
Barton Court Farm	Radley	Rural	26	Complete	Infant burials	Four Saxon inhumations unrelated to cemetery.
Bloxham	Bloxham	Rural	30	Probably Incomplete	Mostly aligned north-north-east to south-south-west.	No
Cassington	Cassington	Rural	>110	Possibly Incomplete	Tendency towards west-south-west to east north-east.	No
Church Piece	Warborough	Small Town	6	Incomplete	West-east alignment	No
Crowmarsh	Crowmarsh Gifford	Rural	22?	Almost Complete	Majority north-south aligned. One lead coffin.	No
Curbridge	Curbridge	Rural	19	Probably Incomplete	Mostly north-south aligned	
Frilford	Frilford	Small Town ?	>135?	Incomplete	West-north-west to east-south-east alignment	Yes
Queenford Mill	Dorchester	Small Town	164	Incomplete	West-east alignment. Possibly over 2000 burials. May have continued into sixth century AD.	No
Radley I	Radley	Rural	35	Complete	North-south burials in reasonably ordered rows	No
Radley II	Radley	Rural	57	Complete	Fifty-seven mostly north-south aligned inhumations plus twelve cremations.	No. Later surrounded by early Anglo-Saxon settlement
Stanton Harcourt	Stanton Harcourt	Rural	35	Almost Complete	North-south burials aligned with adjacent north-south trackway	No
Tubney	Tubney	Rural	8+6	Complete	Eight late Roman plus six Post-Roman in Roman tradition	No
White Horse Hill	Uffington	Rural	49	Almost Complete	In long barrow. Mostly west-east aligned with barrow. Also nine cremations	Saxon burials nearby (6^{th} / 7^{th} century?)
Wantage	Wantage	Small Town ?	14	Incomplete	Aligned south-south-west to north-north-west. Cemetery undated but assumed to be Roman. No artefacts	No
Roden Down	Compton (Berkshire)	Rural	10	Complete	Mostly aligned south-west to north-east. Early Romano-British cremating place (not cemetery) nearby.	No

Table 4.2 - Romano-British Cemeteries in Oxfordshire
(Based on Booth 2002, 16-17, Table 1. Tubney from Simmonds *et al.* 2011)

4.3 The Romano-British Temple at the Noah's Ark Inn

Two classes of Roman temple can be distinguished in Roman Britain, the purely classical and the Romano-Celtic. This latter type is largely restricted to Gaul and Britain and Lewis (1966, 9) suggests it arose through "the application of Roman architectural style and building methods to Celtic open-air religion". The standard form of such a temple is of two concentric squares or rectangles, although circles and polygons are also known. The inner square is termed the cella, the outer the portico and the space between the ambulatory. The term Romano-British is used here although there are clear similarities between such temples in Britain and Gaul.

The former Noah's Ark Inn lies to the east of the A338 just to the north of the river Ock and is about 250 metres south-east of the cemetery as illustrated in figure 4.2. Three limited areas behind the Inn were excavated in 1938 and are referred to as sites A, B and C (Bradford and Goodchild 1939). The excavations are visible in two aerial photographs reproduced as figures 4.5 and 4.6 below: figure 4.5 shows the excavations with Trendles Field in the background while the locations of sites A, B and C are illustrated in figure 4.6.

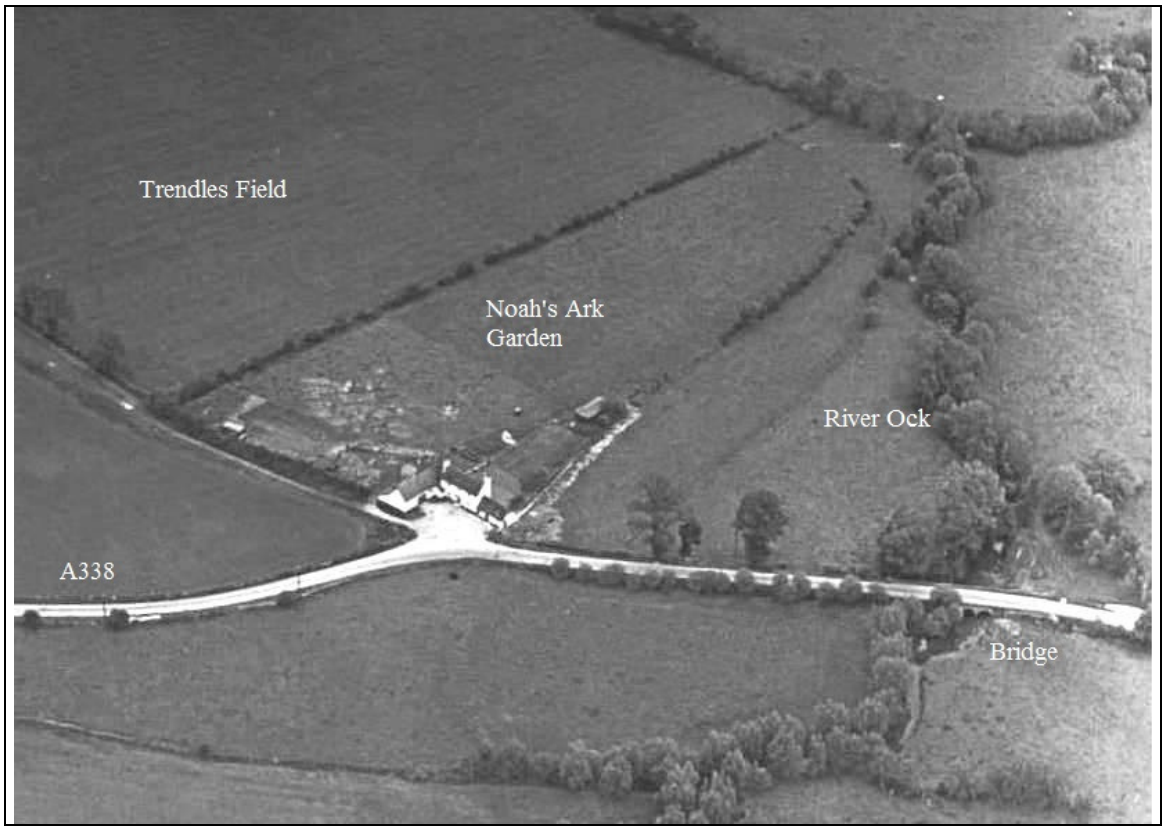


Figure 4.5 – The Noah's Ark Inn and Excavations (NMR SU 4396/2)
(AA1201 Major G.W.G. Allen, Frilford, Noah's Ark (Berkshire), 12th June 1938
© Ashmolean Museum, University of Oxford.)

Site A contained a Romano-British temple overlying an Iron Age hut which the excavators believed had burnt down immediately prior to the construction of the temple. Site B, just to the south, contained a range of Iron Age pits and an Anglo-Saxon burial which had disturbed a late Roman coin hoard. Bradford and Goodchild interpreted site B as the main area of the Iron Age settlement as it contained about half of the more than forty drainage and storage pits excavated. A circular, Roman structure 36 feet in diameter was found at site C, eighty feet south of the temple. Bradford and Goodchild termed this the 'Rotunda' and on the basis of votive finds argued that it had a ritual function. The rotunda overlay an Iron Age penannular ditch, which they believed also had a ritual function and was the rotunda's precursor. Thus at both the temple and rotunda Bradford and Goodchild argued for continuity of ritual activity from the Iron Age into the Romano-British period.

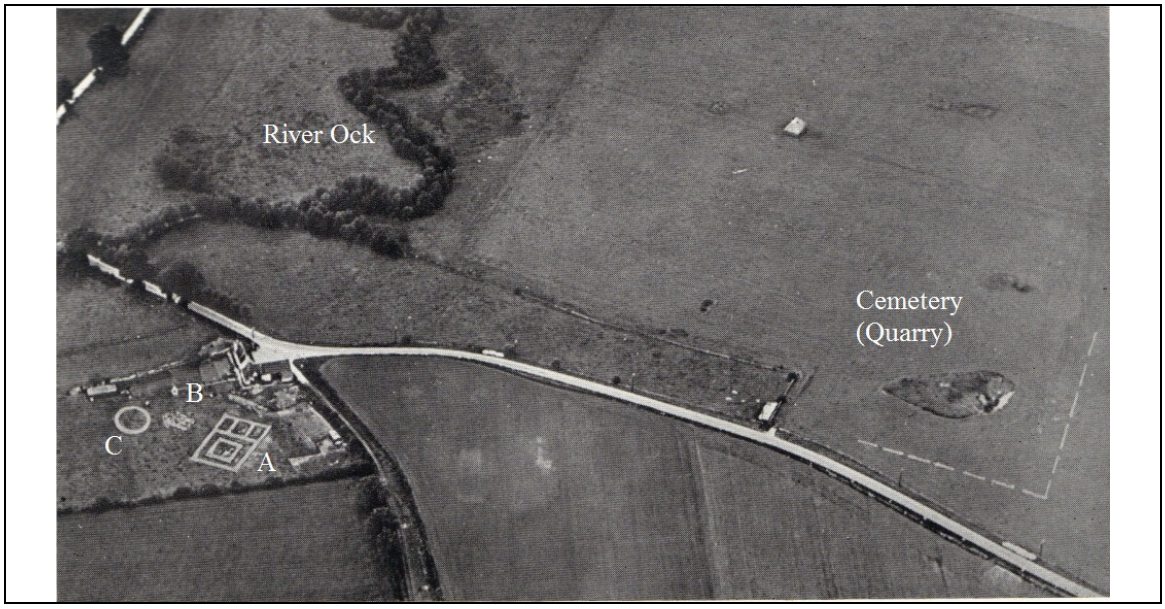


Figure 4.6 – The Noah's Ark Inn with archaeological features sketched in
(Reproduced with additions from Bradford and Goodchild,
Excavation at Frilford, Berks, 1937-8. *Oxoniensia*, 4, 1939, Plate 1, Photograph A.)
(AA1202 Major G.W.G. Allen, Frilford, Noah's Ark (Berkshire), 17th June 1938
© Ashmolean Museum, University of Oxford.)

In 1964 Harding (1987) re-excavated part of site A over the western section of the temple. He interpreted Bradford and Goodchild's hut as a large stake circle, which because of its size, he felt was more likely to have been a small stock compound than a roundhouse. Moreover, he argued (1987, 13) that the temple was not built before the middle or second half of the second century AD and that there was no functional continuity or chronological relationship between the stake circle and subsequent temple.

Although site C was not re-excavated, he believed that the ditch is better interpreted as being domestic, relatively early and unrelated to the later rotunda. By breaking the structural continuity at both sites A and C, Harding undermined Bradford and Goodchild's arguments for religious continuity.

Bradford and Goodchild limited their work to the upper (northern) end of the field as they considered the southern and south-western areas as unsuitable for occupation (1939, 3). However, the aerial photographic evidence illustrated in figure 4.7 shows an enclosure further south. The most complete interpretation of the aerial photographic evidence for the Noah's Ark Inn has been provided by Hingley (1985) and his figure 4 is reproduced as figure 4.8. It shows the temple surrounded by a holy precinct or temenos defined by a wall, part of which is visible as a parch mark in figure 4.7. South of the temenos is a further sub-rectangular feature defined by a deep ditch within which are a further series of ditches and circular enclosures. This southern enclosure is an Iron Age feature and demonstrates that Iron Age activity on the site was much more extensive than Bradford and Goodchild realised[5].

To the east of both these features is the eastern part of a third enclosure on a different alignment and defined by two deep ditches. It is likely that this predates the southern enclosure[6].

Recent geophysical surveys, shown in figure 4.9, confirmed the main elements of Hingley's interpretation and provided a much clearer indication of the southern enclosure. In particular, its western limit has now been defined. Although its northern ditch is straight, its eastern and western ditches are convex. Within the eastern and northern ditches is a smaller ditch, possibly a palisade trench. There is however no clear evidence for such an internal ditch on the west. As suggested by the aerial photographs the main enclosure also contains a range of smaller enclosures some of which are circular. In addition there is evidence for rubbish or storage pits. An entrance to the main enclosure is located in the east but there may have been other entrances.

[5] This enclosure is discussed in section 6.2.3 and its excavation by Kamash *et al.* (2009; 2010a)
[6] A Bronze Age date is suggested by Kamash *et al.* (2010b, 98 and 100) for these two ditches.

Figure 4.7 – The Noah's Ark Inn: Cropmarks
NMR 823/80 – 1st July 1975 © Crown Copyright. EH)

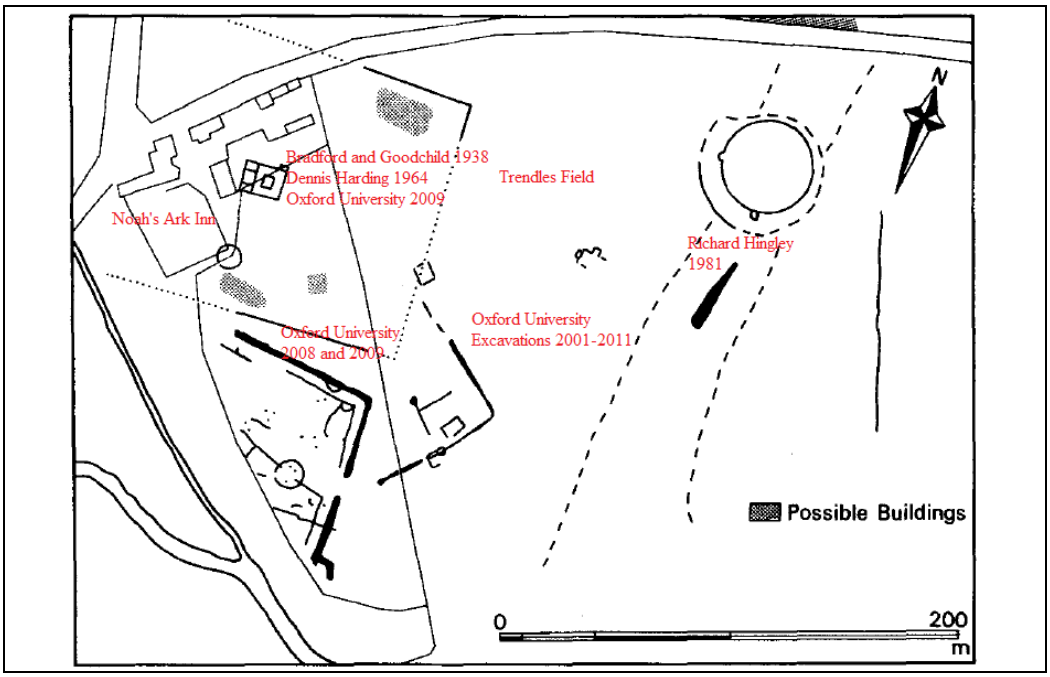


Figure 4.8 – The Noah's Ark Inn: Temple, Amphitheatre and Cropmarks
(Hingley 1985, 206, Figure 4)
(Reproduced with permission from the Journal of Oxford Archaeology)

To the north of this enclosure is the southern section of the temenos wall whose line is lost in the west. North of the wall, and within the temple temenos, is an area of considerable magnetic disturbance, on the east of which is a large, irregular circular feature, while to the west is Bradford and Goodchild's site C. It is unclear whether this magnetic disturbance is a reflection of underlying *in situ* archaeology or more modern ground disturbance such as spoil heaps or backfill. In the extreme west of this area, the geophysical image of site C is distorted by old fence posts and the decaying remains of an external toilet block.

Visible in the extreme north is the outline of the eastern part of the temple portico and cella. This northern area was further investigated by a resistive survey shown on figure 4.10 which confirmed the main elements of Bradford and Goodchild's plan of the Romano-British temple: an outer portico and inner cella. For the portico, the foundation trench of part of the southern wall, all of the eastern wall and much of the northern wall are clearly visible. In addition, the foundation trench of the inner cella wall is also visible in all its eastern and some of its southern and northern parts. Bradford and Goodchild (1939, 29) give the external dimensions of the portico at 55 feet (16.75 metres) and of the cella at 25 feet (7.6 metres). This agrees very well with the resistivity survey which suggests 16.4 metres and 8 metres respectively. The area of high resistance beyond the north wall is probably explained by the northern annexe (at the north-east) and by the exterior pathway, 11 feet wide, which survived only on the northern side.

Bradford and Goodchild claimed that the main entrance to the temple lay to the east and uncovered a substantial entrance pathway, 22 feet wide and extending 30 feet eastwards (1939, 31-32). This is not apparent in the geophysical survey and it is possible that the excavators have removed most of it. There is a line of lower resistance heading east from the portico and this may correspond to the excavation trench into this pathway (1939, 28, figure 9). To the south of the temple are a number of isolated areas of high resistance. Bradford and Goodchild suggest that the exterior pathway found to the north of the temple also existed on the east and south but had been disturbed and largely removed by later stone robbing (1939, 29). It is therefore probable these are destruction and disturbance deposits rather than structural remains.

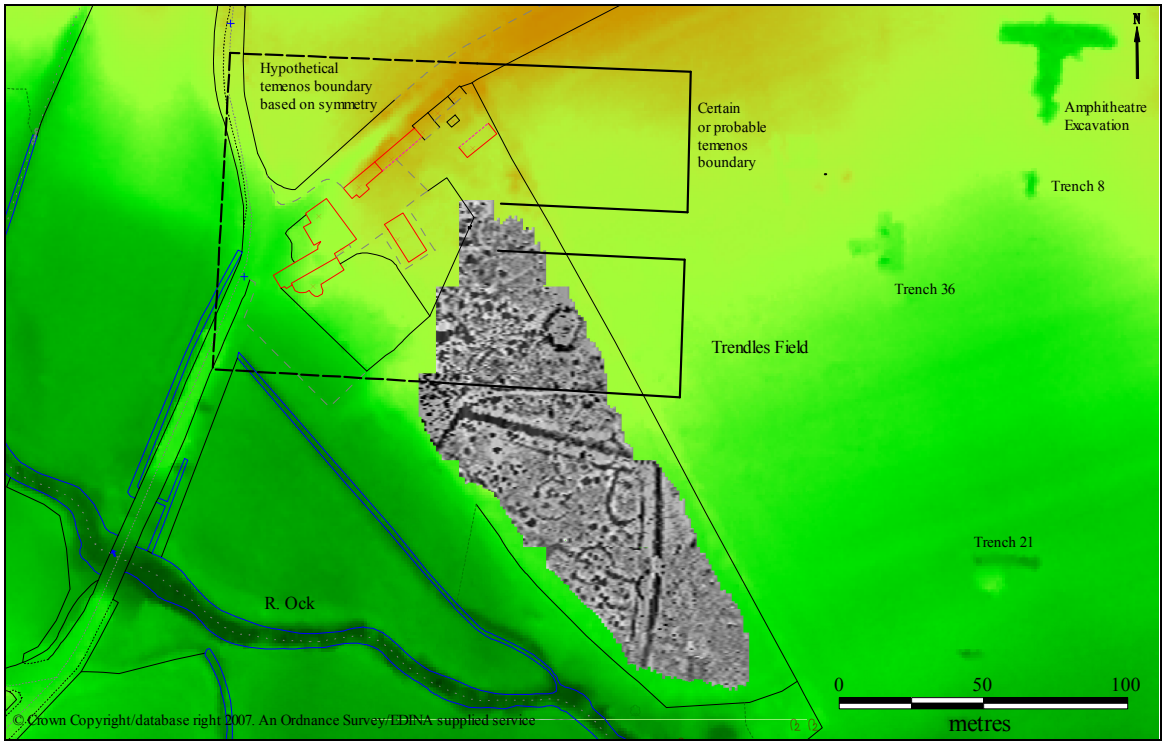


Figure 4.9 – Geophysical Survey 2007 with Lidar Digital Elevation Model

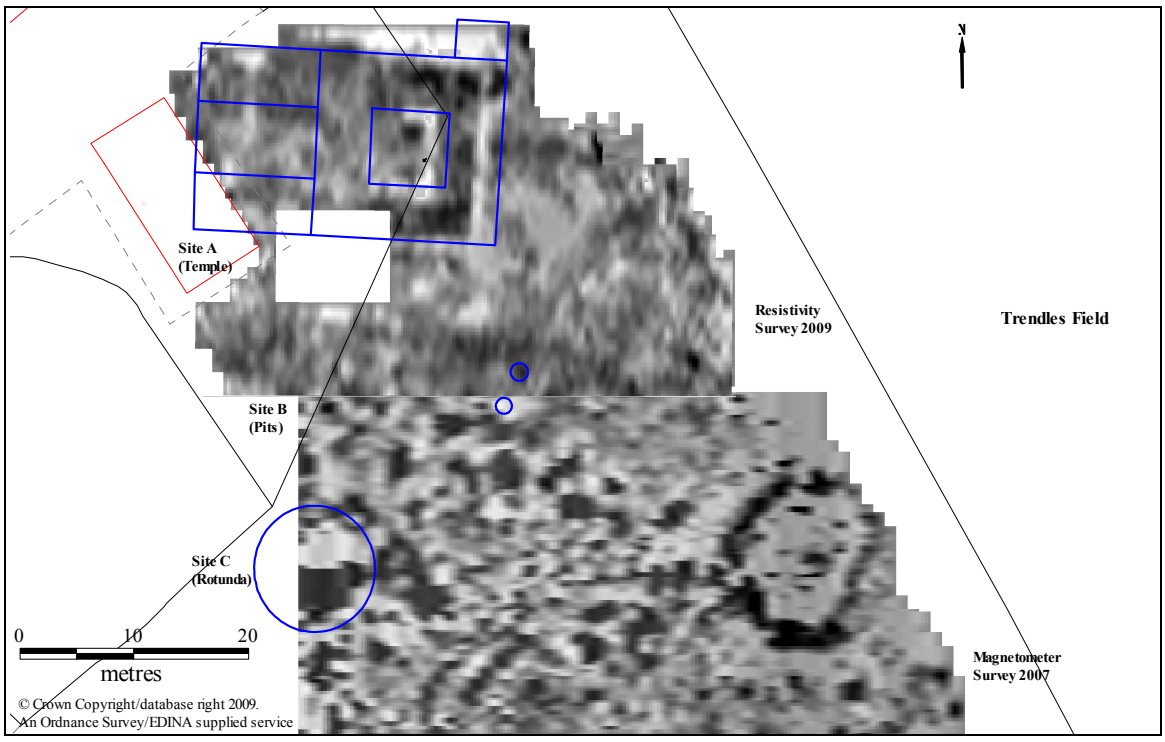


Figure 4.10 – Geophysical Survey in the area of the 1938/1939 Excavations

The geophysical survey does not provide any evidence for the western portico wall or for the three rooms of the western annexe. It is in this area that Bradford and Goodchild located the stake holes of an Iron Age hut (1939, 8–10) which was re-excavated by Harding in 1964. It is therefore possible that the material in the foundation trenches has been removed and/or that the disturbed nature of the backfill masks any archaeological response. There is a suggestion of a western wall some 21 metres to the west of the eastern wall but this does not agree with Bradford and Goodchild's plan. This high resistance feature may correspond to a baulk Harding left between his main trench and two smaller trenches to the west (1987, 4–5, figures 2 and 3).

4.3.1 Discussion

The association of temples with cemeteries, while not unknown in Gaul, is unusual in Britain (Philpott 1991, 235). Philpott identifies Lancing, Sussex, as another site with temple and cemetery. But at Lancing the small number of burials appear randomly distributed around the temple and do not appear to form an organised cemetery (Frere 1940). Apart from this there appears to be little or no association of shrines and temples with burials in Britain[7]. Philpott argues that before Christianity, burial and religious practices were largely unrelated. The ritual or religious activities performed at temples are associated with festival days or with individuals making offerings and seeking assistance with health, justice, revenge or financial gain (Dark and Dark 1997, 2).

This almost unique association of temple and cemetery at Frilford dates only from the fourth century AD with the beginning of the cemetery. The temple itself dates from the first or second century AD and may have continued into the fourth century AD. Harding (1987, 14) has suggested the western annexes may date to the early fourth century. However, it is not possible to link this alteration to the temple with the establishment of the cemetery to the north-west. In any case, the dating of these annexes remains speculative.

The main entrance of the temple lay to the east, a feature shared with the majority of Romano-British temples.

[7] Bradford and Goodchild (1939, 69) suggested Lancing (Sussex) and Waltham St Lawrence (Berkshire) and Wilson (1973, 35) suggested Jordan Hill (Dorset), Weycock Hill (Berkshire) and Worth (Kent).

4.4 The Roman Amphitheatre in Trendles Field

An extensive survey of the Frilford area between 1978 and 1984 by Hingley yielded two important discoveries. The ritual significance of the temple was confirmed through the identification of a surrounding temenos wall as a parch mark in aerial photographs and more unexpectedly, an amphitheatre was found in Trendles Field[8]. These discoveries led Hingley to suggest that the temple and rotunda at the Noah's Ark Inn, rather than representing a rural wayside shrine, formed instead part of an extensive Roman religious complex containing the temple, other 'monumental' buildings, an amphitheatre and a cemetery (Hingley 1985, 202).

Figure 4.11 – Geophysical Survey in Trendles Field
(Tony Johnson, Oxford Archaeotechnics 2001. William Wintle 2007, 2008)

Geophysical survey of Trendles Field, illustrated in figure 4.11, was undertaken both before and during the University of Oxford excavations from 2001 to 2011. The amphitheatre, about 200 metres to the east of the temple, is situated in a slight depression leading south to the river Ock. The inner arena is about 40 metres in diameter but, including the outer seating banks, the complete amphitheatre has a diameter of approximately 65 metres. Other features are also apparent. Clearly visible to the south-west of the amphitheatre is the outline of a building represented by stone foundations

[8] First observed and photographed by the landowner, Will Cumber, from the air.

(Trench 2 building) while to the east and south-east are a number of circular and semi-rectangular features – often intercutting - and numerous pits, particularly to the east and south-east of an electricity pylon. The features in the extreme east of the field represent modern, agricultural usage and include a metal water pipe.

The actual area of the Romano-British religious complex appears bounded by the temple in the west and amphitheatre in the east. Apart from the fourth century trench 2 building, additional, earlier buildings have been detected at the temple entrance on the eastern temenos wall and a small shine further east. The 'monumental' buildings postulated by Hingley (1985) appear limited and there is no evidence for a bath house. Additional buildings may have existed further south towards the river Ock where gravel and cobbled surfaces and a well have been detected (Kamash *et al.* 2010b, 118). Iron Age activity appears more extensive, and generally to the south of the Roman features.

The location, status and function of the religious complex were discussed by Hingley (1985) and more recently the theme of continuity has been addressed by Kamash *et al.* (2010b)[9]. These aspects are discussed in section 4.8. Before proceeding to such a discussion, consideration is first given to the wider landscape with evidence obtained from recent geophysical survey, fieldwalking and commercial excavations. In 2004 and 2005 an archaeological evaluation of area to the north and east of Trendles Field was undertaken for a proposed A415 Marcham Bypass (Bunn 2004; Cockin 2005) whose route is shown in figure 4.12. The construction of a water main by Thames Water from Cleve, Oxfordshire to Fyfield between 2006 and 2008 provided the opportunity for evaluation and excavation at three sites close to Trendles Field: Sites 50, 53 and 54 whose locations are also shown in figure 4.12 (Hart *et al.* 2012). Thirdly, over one hundred evaluation trenches were opened in advance of planned sand extraction to the north and west of the Romano-British cemetery (Cass and Ford 2008). The discussion begins in the west with the geophysical survey and excavations adjacent to the cemetery and continues with the results in the north-west and east from the Marcham bypass survey.

[9] See also Smith (2006).

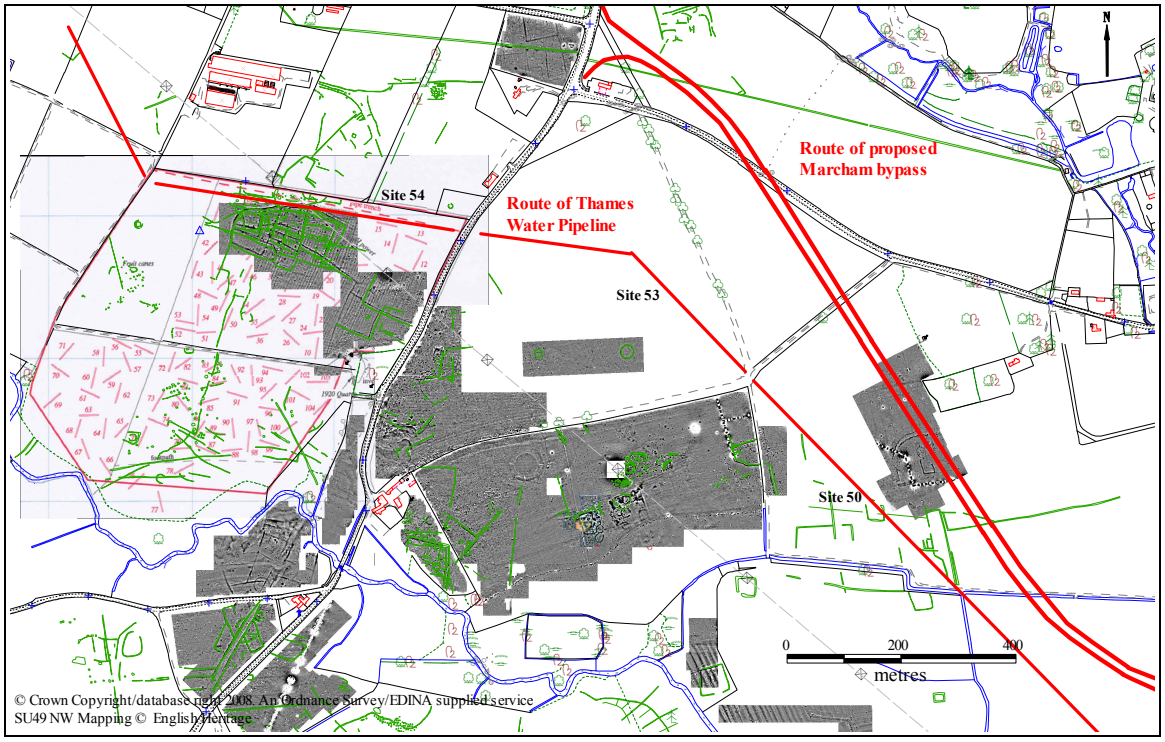


Figure 4.12 – Cropmarks, Geophysical Survey and Commercial Excavations (Cass and Ford 2008; Bunn 2004; Cockin 2005; Hart *et al.* 2012) (Tony Johnson, Oxford Archaeotechnics 2001. William Wintle 2007-2011)

4.5 Survey and Excavation to the north-west of the Cemetery

In early 2008 fields to the north and west of the Romano-British cemetery at Millets Farm were examined in two independent archaeological investigations. As part of this study a geophysical survey was conducted over known cropmarks to the north-west of the cemetery. Subsequently, a more extensive area was subjected to commercial trial trenching. Of the 104 trenches excavated 37 contained archaeological features which ranged in date from the Iron Age to the medieval period (Cass and Ford 2008).

4.5.1 Geophysical Survey

The survey investigated a range of cropmarks indicating an enclosure to the north-west of the cemetery and included part of the area excavated in 1937 (Bradford and Goodchild 1939). An unexpected feature was the ditch leading south-east from the enclosure which was followed to reveal a series of rectangular enclosures, possibly small fields, lying to the north of the cemetery, as shown in figure 4.13. There is no obvious relationship between the archaeological features detected in this survey to features detected in an earlier geophysical survey to the east of the A338.

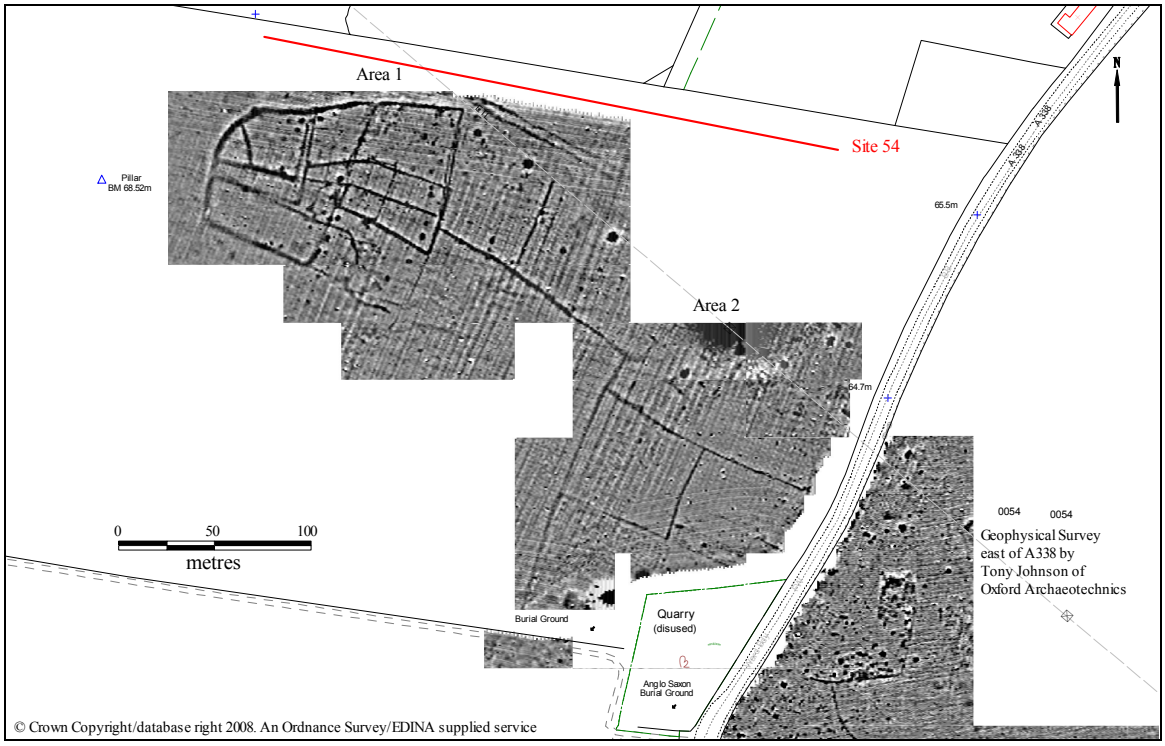


Figure 4.13 – Geophysical Survey of Millets Farm, 2008
(Tony Johnson, Oxford Archaeotechnics 2001. William Wintle 2008)

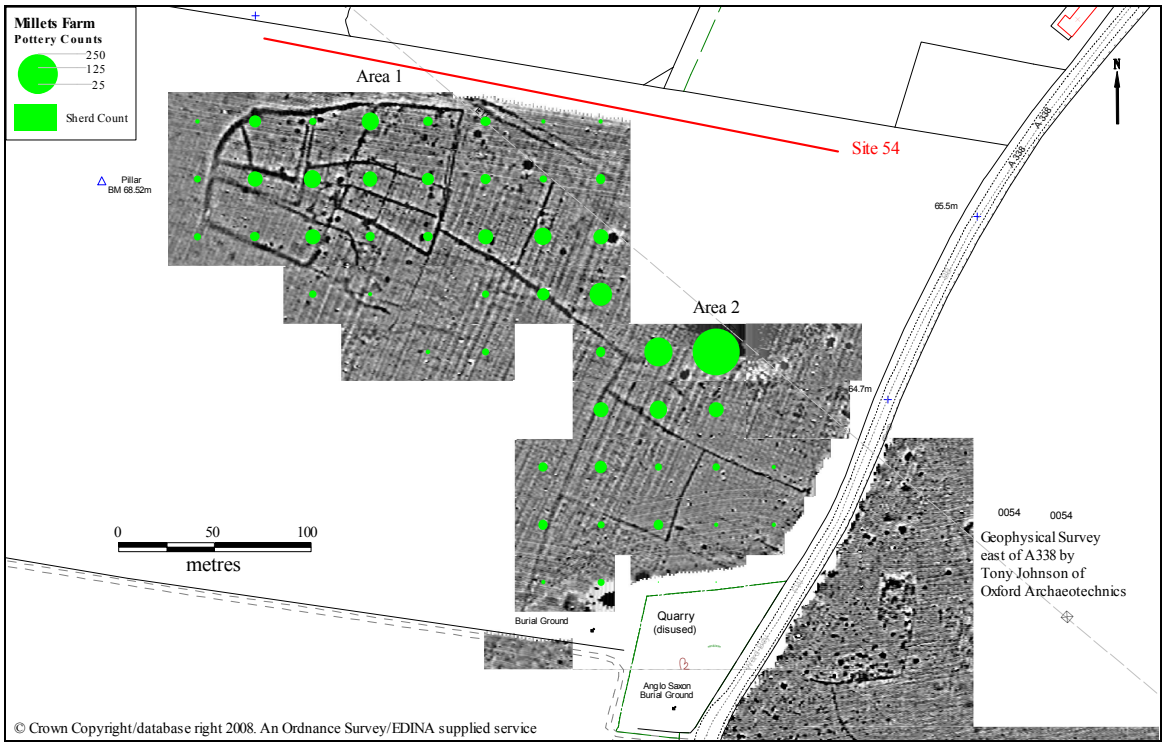


Figure 4.14 – Pottery Distribution and Geophysical Survey of Millets Farm, 2008
(Tony Johnson, Oxford Archaeotechnics 2001. William Wintle 2008)

Systematic fieldwalking was not undertaken but pottery was collected during the geophysical survey and bagged according to survey grid. In addition, pottery sherds were collected without recording their position. A total of 1815 sherds was collected and the analysis is summarised in table 4.3 while figure 4.14 shows the distribution per survey grid. In table 4.3, Area 1 corresponds to the ditched enclosure and Area 2 to the ditch and fields leading to the cemetery. Similar numbers of sherds were collected in each area: Area 1 had a reasonably even distribution but in Area 2 a small number of grids dominated the distribution. Indeed one grid in this area contributed over 17% of the total assemblage.

Area	Sherd Count	Roman		Post Roman		% of Total
		Total	Percentage	Total	Percentage	
Area 1	884	811	92%	73	8%	49%
Area 2	805	748	93%	57	7%	44%
Other	126	120	95%	6	5%	7%
Total Sum	1815	1679	93%	136	7%	100%

Table 4.3 – Pottery Statistics from Millets Farm

Over 90% of the pottery dates to the Roman period but most sherds are very abraded and provide little diagnostic information. The assemblage is dominated by 725 sherds of reduced ware, most probably from local Oxfordshire kilns. Of the 238 sherds of Oxford colour-coat ware 42 are fragments of red colour-coat mortaria and these suggest a date range of AD 240 to 400. Three examples of half-rosette stamps on red colour-coat appear to correspond to Young's type C84 and may therefore date to AD 350-400 (Young 1977, 169-171). Samian was limited to eleven small sherds. Very little ceramic building material was found.[10] Overall, the assemblage suggests a third and fourth century date and the enclosure and small fields therefore appear contemporary with the cemetery.

4.5.2 Excavation

The first investigation north of the cemetery were some limited excavations undertaken in 2007 during the construction of a water pipeline at site 54 as indicated on figure 4.13. This produced evidence for late Iron Age and early and late Roman features defined by ditches, pits and postholes (Hart *et al.* 2012, 222-224). Much more extensive excavation was undertaken by Thames Valley Archaeological Services Ltd in March 2008 as an archaeological field evaluation in advance of planned sand extraction (Cass

[10] Pottery and CBM analysis by John Hawes.

and Ford 2008). The trench locations and their relationship to the geophysical survey are shown in figures 4.15 to 4.18.

The excavation of 104 trenches across two fields yielded 727 sherds of pottery weighing 9.14 kg (Cass and Ford 2008, 12-13), which is less than half the number of sherds collected during the geophysical survey. This pottery was found in 22 trenches from 45 contexts and the period statistics are summarised in table 4.4[11]. As with the pottery collected by fieldwalking, the excavated assemblage is dominated by Roman material, with the majority dating from the later Roman period. Most of the Roman pottery is from the local Oxfordshire industries with a small contribution from regional and continental imports (Cass and Ford 2008, 12-13). Only two fragments of ceramic building material were found: a tegula from trench 2 and a fragment of tile from trench 1, and this low number is consistent with the fieldwalking evidence. Trenches 1 and 2 are adjacent to the high density area of pottery detected in the fieldwalking as shown in figure 4.17.

Period	Sherd Count	Percentage
Prehistoric	19	2.7%
Roman	606	84.9%
Saxon	88	12.3%
Medieval	1	0.1%
Total	714	100.0%

Table 4.4 – Pottery Statistics from Millets Farm (Timby in Cass and Ford 2008, 12-13 and 22)

Thirteen of the nineteen sherds of prehistoric pottery[12] were found in trench 45 with the remainder distributed across trenches 31, 33, 49 and 85. The prehistoric pottery is largely restricted to the area of geophysical survey: trenches 31, 33 and 45 lie within it and trench 49 is nearby (see figures 4.15 to 4.17). An important difference between the excavated and fieldwalked pottery is the presence of 88 sherds of Saxon pottery in the former and none in the latter. This Saxon material is broadly dated from the sixth to the ninth century AD and was found in the ten trenches 30, 31, 33, 49, 61, 64, 74, 76, 86 and 97 illustrated in figure 4.18 which indicates the majority of the Saxon material lies to the south and west of the geophysical survey. Most of the Anglo-Saxon material, 63 sherds, came from pits and ditches in trenches 64 and 74. Trench 64 also contained a possible sunken-floored building. This Anglo-Saxon occupation may be related to the Anglo-Saxon cremations and inhumations a short distance to the east.

[11] Thirteen sherds are undated.
[12] The prehistoric pottery is not separated into Iron Age and Bronze Age.

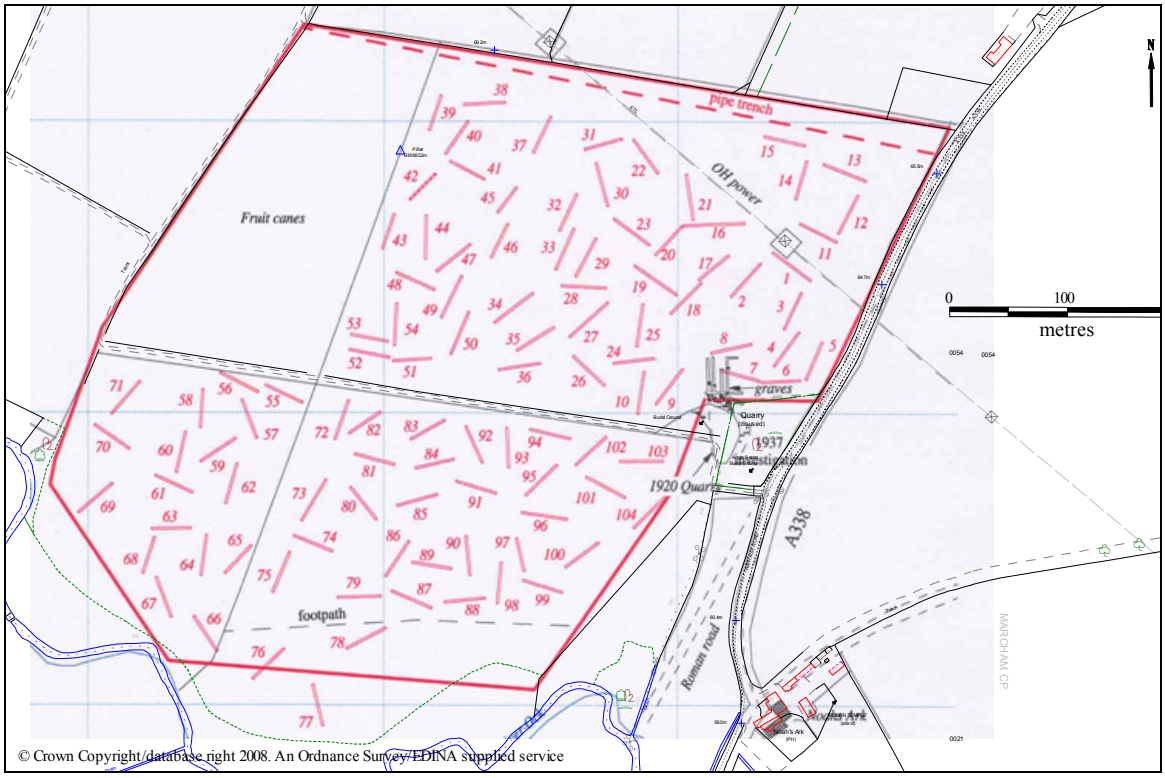


Figure 4.15 – Excavation Trenches (Cass and Ford 2008, Figure 2).

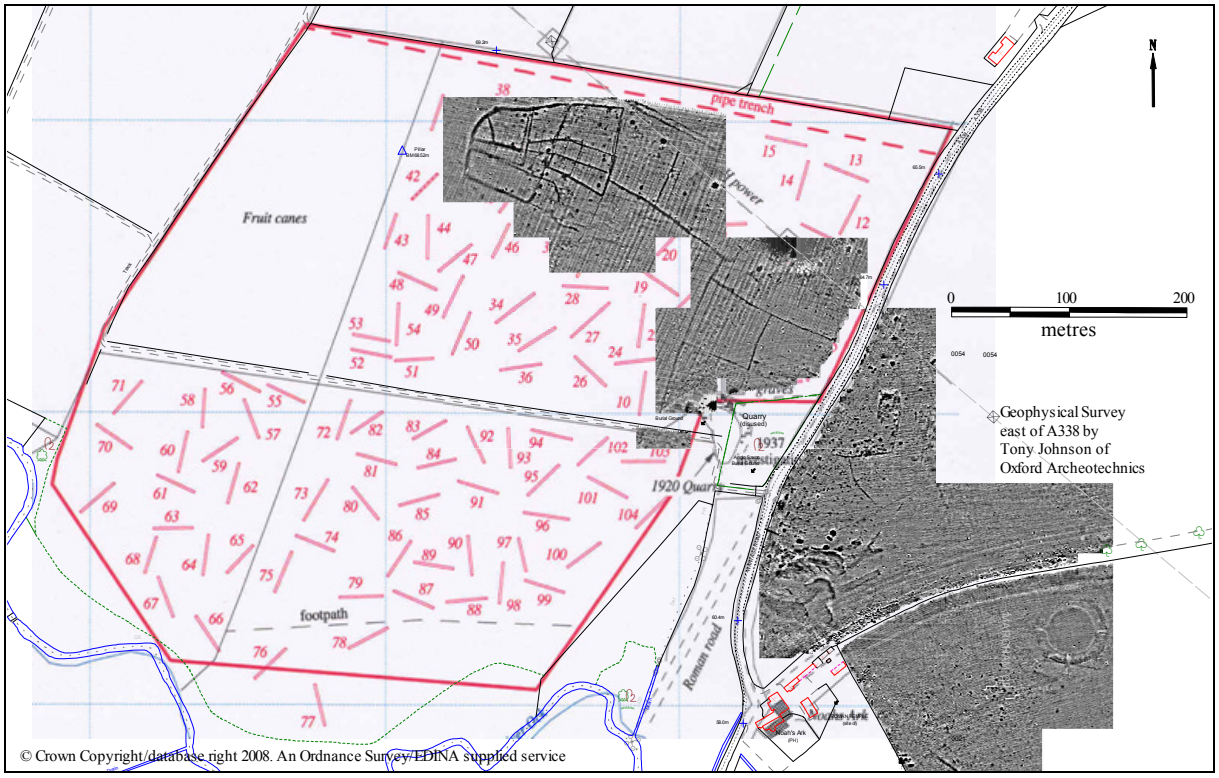


Figure 4.16 – Excavation Trenches and Geophysical Surveys (Cass and Ford 2008, Figure 2)

Figure 4.17 – Excavation Trenches over and near the Geophysical Surveys (Cass and Ford 2008, Figure 2)

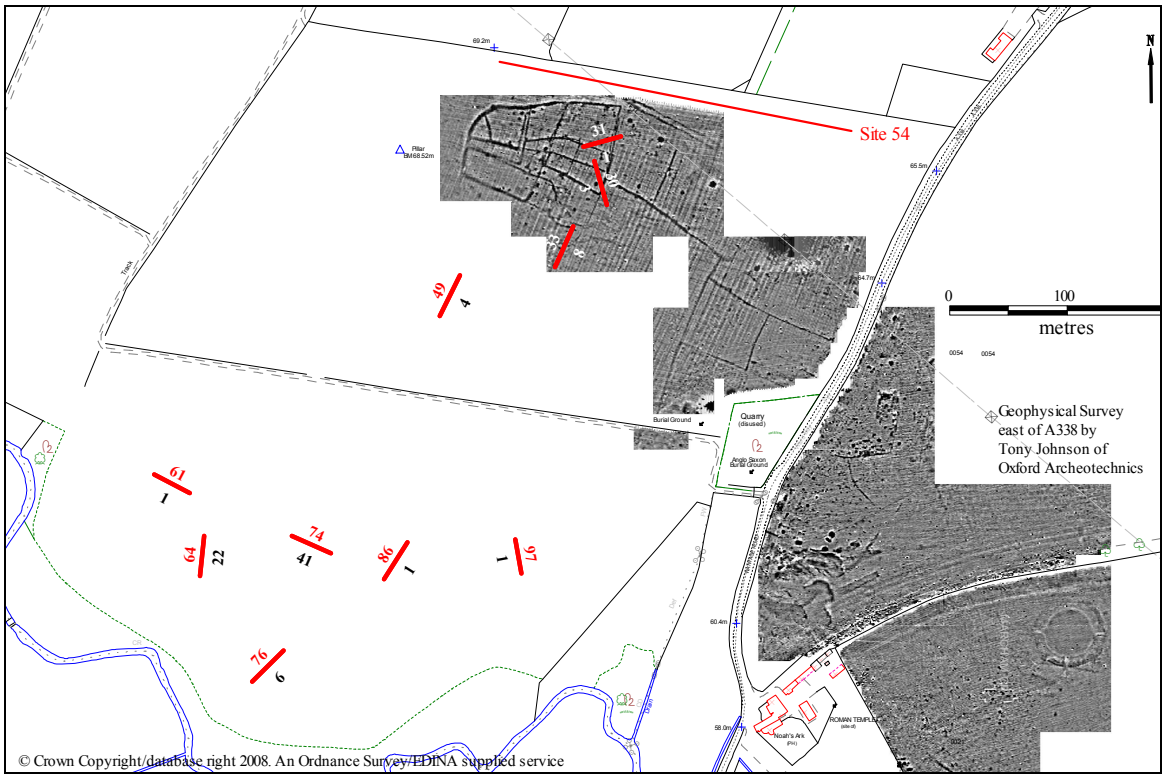


Figure 4.18 – Trenches Containing Saxon Pottery (Cass and Ford 2008, Figure 2 and Appendix 3) Trench numbers in red (white) and Saxon sherd count in black (white).

4.5.3 Discussion

The existence of an enclosure to the north-west of the cemetery was known through aerial photographic evidence while Hingley had detected pottery and other material indicating Roman period occupation (Hingley 1985, 204; Henig and Booth 2000, 71). It is useful to consider if and how this enclosure and occupation relate to the temple complex and cemetery.

The evidence from the TVAS excavation suggests the main body of the enclosure is late Roman, although constructed in an area which may have been in use since the Iron Age, as indicated by pits, postholes and pottery. The outer ditches survived long enough to incorporate late Roman and Saxon pottery into their fills. The geophysical survey suggests much of the enclosure is of one phase as there is an inherent cohesion and order in the plan. Similarly, the small field system defined by the south-eastern ditches also appears to date from the third or fourth century AD. The enclosure and fields appear contemporary with the late Roman cemetery to the south.

Hingley (1985, 207) distinguished between two areas surrounding the temple. His fieldwalking had located building stone, mortar, tile and tesserae to its north and east which he proposed represented structures such as shrines and a bath building directly related to the temple's religious functions. Areas south and west of the temple, where pottery and animal bone were abundant but there was almost no stone or tile, were interpreted as containing domestic dwellings, probably of timber and thatch construction. Both the excavation and the fieldwalking recovered significant amounts of pottery but only small quantities of ceramic building material. Applying Hingley's reasoning to the above enclosure would suggest timber and thatch construction and probable domestic and agricultural activity.

One survey grid, located just to the south of an electricity pylon, contained 17 % of the pottery collected during the geophysical survey (see figures 4.14 and 4.17). This marked concentration of pottery strongly suggested the presence of a building in the near vicinity. Although the survey did record an area of strong magnetic anomalies to the south-east of the pylon there was no clear indication of a building and it is possible both the pottery concentration and anomalies could be the result either of disturbance during the construction of the pylon or from Rolleston's excavations of two pits. Usefully, trench 1 of the excavation passed directly through this area of magnetic disturbance and three

archaeological features were detected: two spreads and the foundations of a wall (see figure 4.19). These spreads appear to represent midden or occupation deposits and contained a range of artefacts including 294 sherds of fourth century Roman pottery and a fragment of tile. These 294 sherds represent 40% of the excavated assemblage; an even greater concentration than the pottery collected during the geophysical survey. The wall foundations were about a metre wide and consisted of unmortared limestone blocks (Cass and Ford 2008, 3).

The presence of a probable fourth century AD building north of the Romano-British cemetery may possibly indicate a religious function as a chapel or small church. Alternatively, its separation from the cemetery by two small fields may suggest a secular, domestic building. The building would appear to be contemporary with the large fourth century building in Trendles Field (trench 2 building) which also had foundations about a metre wide formed of limestone blocks (Lock and Gosden 2004, 88). The location of the trench 2 building between the temple and amphitheatre suggests a ritual or religious function and it has been suggested it may have been a Christian church (Lock and Gosden 2004, 91). Difference in function and status may be indicated by the probable thatched roof of the building near the cemetery and the more likely tiled roof of the early phase of the trench 2 building. The cemetery, building and enclosure at Millets farm and the trench 2 building in Trendles Field appear to be largely contemporary and to form an element of the late Roman landscape in the vicinity of the Romano-British temple.

Figure 4.19 – Possible building in Trench 1 (Cass and Ford 2008, Plate 1)

The southern extent of the geophysical survey covered parts of the areas excavated in 1920 (Dudley Buxton 1921) and in 1937 (Bradford and Goodchild 1939). Figure 4.20

relates Bradford and Goodchild's plan of these two excavations with the geophysical survey and the adjacent excavation trenches from 2008 (trenches 4 to 9). The geophysical survey had already provided some evidence for the presence of inhumation burials through small magnetic anomalies and this was confirmed by the excavation when a probable grave was detected in trench 6 and sixteen probable graves in trench 7 (see figure 4.4). One of these was partially excavated to reveal a human foot (Cass and Ford 2008, 4).

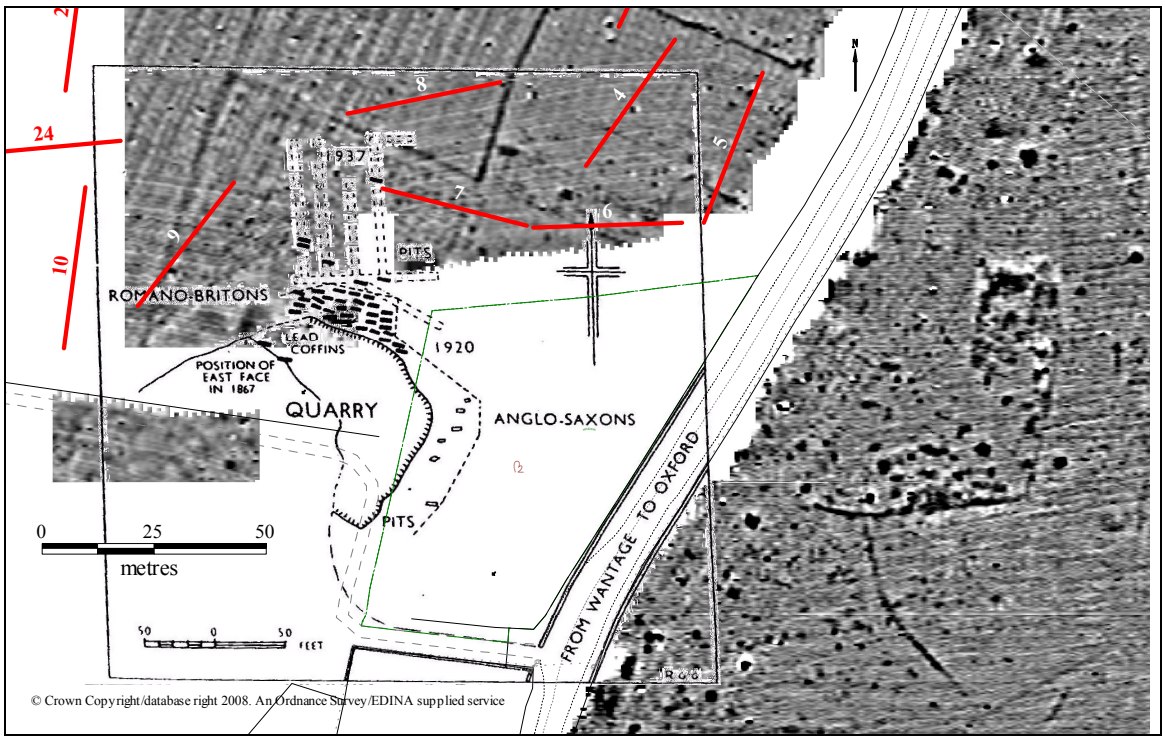


Figure 4.20 – The Cemetery Area - Geophysical Survey and Excavation Trenches (Part of figure reproduced from Bradford and Goodchild Excavation at Frilford, Berks, 1937-8. *Oxoniensia*, 4, 1939, 55, Figure 12.)

The Romano-British graves excavated in 1920 and 1937 were oriented west-north-west to east-south-east with the heads at the west in agreement with Rolleston's observations (Bradford and Goodchild 1939, 56). The graves in trenches 6 and 7 also share this orientation and appear to correspond most closely to Rolleston's second class of Romano-British burials, suggesting they are more likely to be Romano-British than Anglo-Saxon. This west-north-west to east-north-east direction is approximately parallel with the ditch to the north and this ditch may therefore denote the maximum extent of the cemetery. If the ditch to the north of trench 7 is a boundary separating the cemetery from the settlement area to the north, such a clear demarcation may provide further evidence for the management and organisation of the cemetery. In addition, the ditch may serve as a boundary between the temple complex and the surrounding agricultural lands.

4.6 The Marcham Bypass Survey

Oxfordshire County Council has proposed to construct a three kilometre bypass of the A415 to the south of Marcham. Figure 4.21 shows the geophysical survey along the proposed route of this bypass together with the Oxfordshire HER references in the vicinity of the University's excavations in Trendles Field. Important Iron Age and Romano-British archaeological features to the east of the A338 are the Romano-British temple at the Noah's Ark Inn (7119) and the amphitheatre (13319) in Trendles Field. Further north, and close to the bypass route, are two possible Bronze Age references (12144 and 12261). Two extensive field systems lie further to the east and to the south of the bypass route. The first (12145[13]) extends for approximately 60 hectares and consists of an ordered set of ditched boundaries while the second (15277) covers about 40 hectares and is a discontinuous set of linear features defined by ditches.

The archaeological potential of the proposed bypass route was investigated in two separate but related evaluations. Firstly, in 2004 a geophysical survey by Pre-Construct Geophysics (Bunn 2004) was undertaken with a survey twenty metres wide of the entire route, but with more extensive surveys in areas of planned flood alleviation or landscaping as illustrated in figure 4.21. Secondly, in 2005, twenty evaluation trenches were excavated by Oxford Archaeology. Fifteen contained archaeological features and deposits ranging in date from the Bronze Age to the medieval period, of which nine contained pottery. The trench locations and an overview of the pottery distribution are illustrated in figure 4.22.

The nine trenches containing pottery yielded 201 sherds with a total weight of 874g. The bulk of this was prehistoric: 133 sherds weighing 448g were found in three trenches (14, 15, and 21) as summarised in table 4.5. Of these, 103 sherds date from the late Bronze Age to the early Iron Age (800 BC to 500 BC). Ten sherds of Roman pottery weighing 135g were obtained from four contexts in four trenches (1, 10, 12, and 14) as listed in table 4.6. Finally, the post-Roman assemblage consisted of 58 sherds weighing 291g found in trenches 1, 2, 3, 15 and 24. This contained material of Romano-British, early to middle Saxon and early medieval date as listed in table 4.7[14].

[13] Cockin (2005, 2) refers to HER 12415 but this is assumed to be a typographical error for 12145. The grid references for 12145 and 15277 differ between the HER and Cockin (2005, 2). The HER co-ordinates are shown on figures 4.21, 4.22 and 4.27 as black circles and Cockin's co-ordinates as green stars.

[14] It is unclear why Roman and Romano-British pottery have been separated and the Romano-British material added to the post-Roman assemblage.

Field	Trench	Sherd Count	Sherd Weight	Date
6	14	99	364	Late Bronze Age to early Iron Age
		1	10	Iron Age
		5	3	Undated
	14 Total	*105*	*377*	
6	15	11	39	Early Iron Age
		3	8	Late Bronze Age to early Iron Age
	15 Total	*14*	*47*	
10	21	14	24	Undated
	Total	**133**	**448**	

Table 4.5 – Prehistoric Pottery (Cockin 2005, Table 2, 16-17)

Field	Trench	Sherd Count	Sherd Weight
1	1	5	95
6	10	1	5
6	12	3	8
6	14	1	27
	Total	**10**	**135**

Table 4.6 – Roman Pottery (Cockin 2005, Table 3, 18)

Field	Trench	Romano-British		Early to Middle Saxon		Early Medieval		Date
		Count	Weight	Count	Weight	Count	Weight	
1	1	1	5	11	60			
1	2	1	9	14	74			
2	3	8	37	1	2	12	40	Late 11th ?
6	15			4	22			
11	24					1	2	Late 13th?
	Total	**10 (15)**	**51 (91[15])**	**30**	**158**	**13**	**42**	

Table 4.7 – Post-Roman Pottery (Cockin 2005, Table 4, 19)

From figure 4.22 and tables 4.5 to 4.7 three concentrations of pottery can be identified. In the north-west, trenches 1 to 3 contained small quantities of Roman and post-Roman pottery, more substantial amounts of prehistoric pottery were found in trenches 14 and 15 to the east of Trendles Field, with small amounts in trench 21 further east. Perhaps surprisingly there is little evidence of Romano-British pottery in fields 5 and 6 which lie closest to the temple and amphitheatre. Additional geophysical surveys were undertaken for this study in fields 1 and 6 and are included in the discussion below.

[15] A total of 5 Romano-British sherds weighing 40g are missing from Cockin's table 4 and Appendix 1.

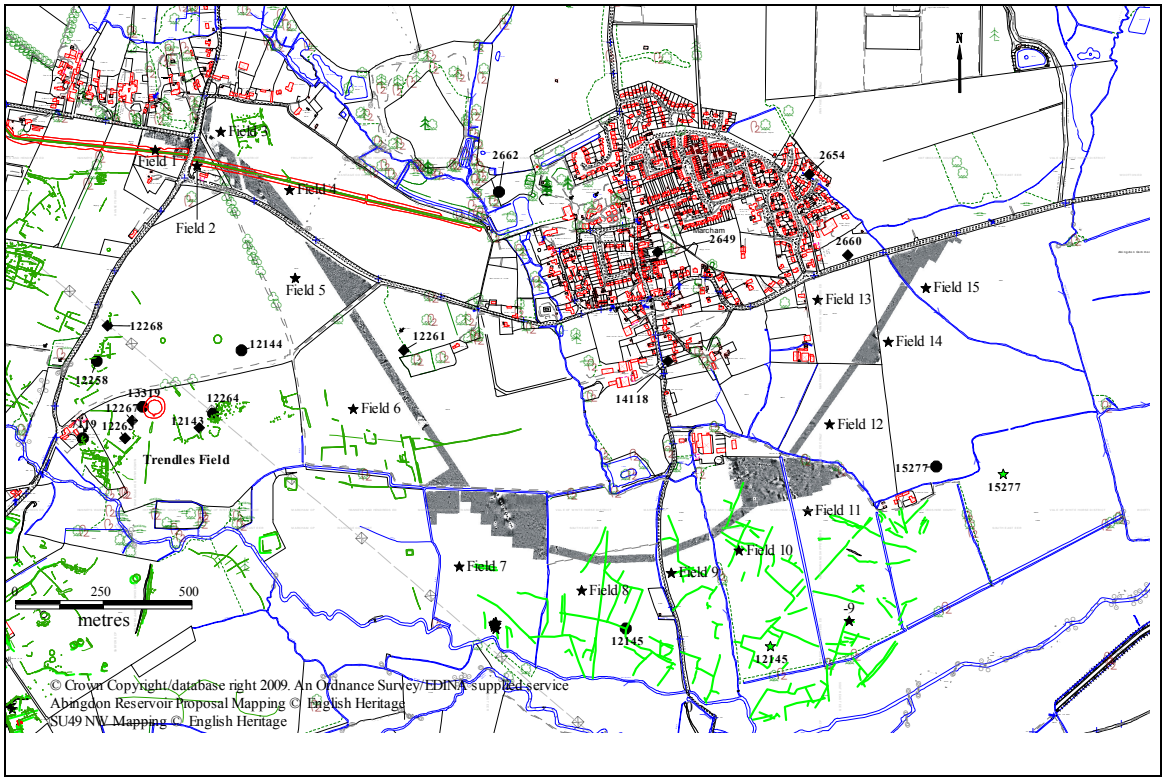


Figure 4.21 - Geophysical Survey of Marcham Bypass Route (Geophysical survey reproduced from Bunn 2004)

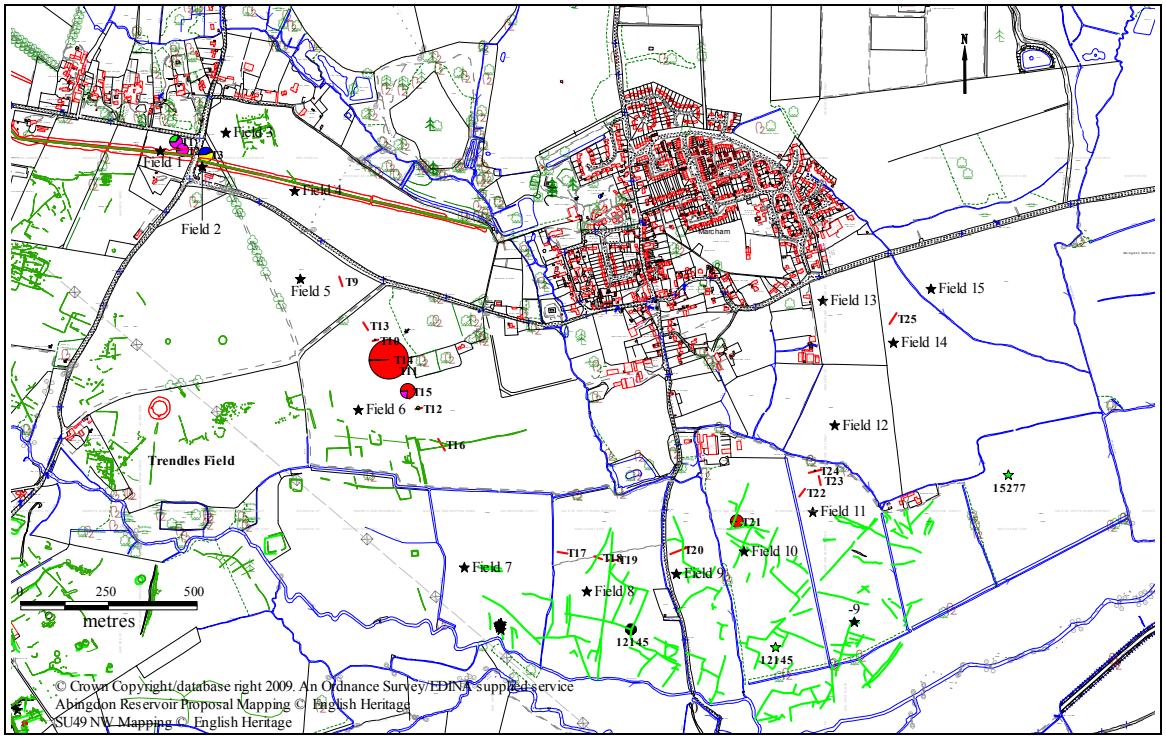


Figure 4.22 – Pottery and Excavation Trenches[16] (Cockin 2005, Figure 2).

[16] The grid references for 12145 and 15277 differ between the HER and Cockin (2005, 2). The HER co-ordinates are shown on figures 4.21 and 4.22 as black circles and Cockin's co-ordinates as green stars.

4.6.1 Fields 1 and 2

Figure 4.23 illustrates the new geophysical survey of field 1 together with the original survey results for fields 2 and 3. Also shown are the locations of trenches 1 to 3 which contained small amounts of Romano-British and Saxon pottery. A modern feature crossing these fields is a Second World War tank trap whose path can be seen in figure 4.25. Barbed wire found in trench 2 is probably the cause of the high magnetic signals near this trench and further to the east. Bradford and Morris (1941, 87) comment that a ditch section and pottery recovered just to the west of the Frilford crossroads indicate a small Roman site and the context for this is clearly the construction of the tank trap through this field[17].

Field 1 contains a set of small rectangular enclosures defined by ditches. Bunn (2004, 4) believed these ditches were not aligned on any modern features and therefore suggested a pre-medieval date. This may not be the case. The ditches are oriented to the west of north and this alignment can be detected in some boundaries to the north of the A415 road. In the Frilford enclosure map of 1861, shown in figure 4.24, where field 1 corresponds to allotment 88, this west of north alignment is present in allotments 85 and 86 and also further north. Furthermore, this west of north alignment can be seen extending further northwards in figure 4.25.

The two trenches excavated in field 1 contained small amounts of Roman and early to middle Saxon pottery. A ditch located at the eastern end of trench 1 is almost certainly the feature identified in the geophysical survey. The fill of this ditch contained five sherds of Romano-British pottery suggesting a second century date (see table 4.6). The primary fill of a further ditch at the western end of trench 1 contained three sherds of early to middle Saxon pottery. This fill was overlain by topsoil which contained one sherd of Romano-British and eight sherds of early to middle Saxon pottery (see table 4.7). Two ditches and a possible posthole were identified in trench 2. The fill of one ditch contained one sherd of Romano-British and five sherds of early to middle Saxon material. In addition, the fill of a tree throw at the southern end of the trench contained nine sherds of early to middle Saxon material.

[17] HER 9629 refers to Bradford and Morris (1941, 87) but with a location in Marcham. This is almost certainly erroneous and the correct location for HER 9629 would appear to be field 1 and the tank trap.

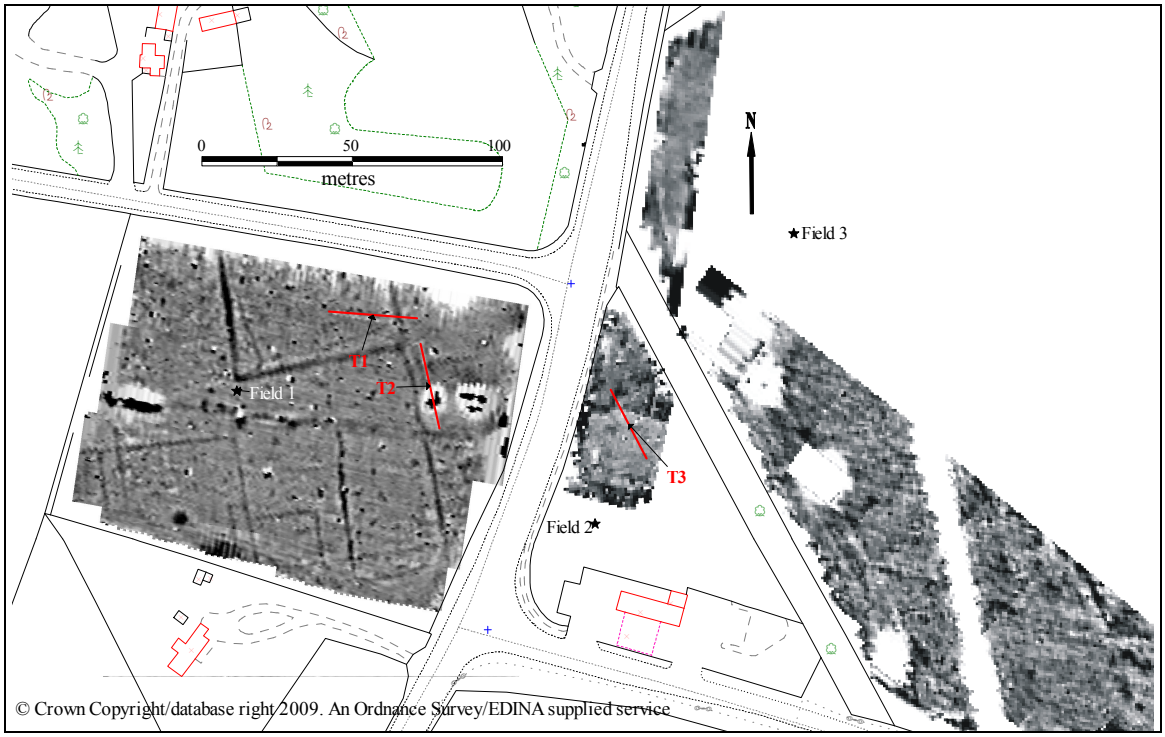


Figure 4.23 – Fields 1 to 4
Field 1 Resurveyed. Survey data for fields 2, 3 and 4 from Bunn (2004). Trenches from Cockin (2005)

Figure 4.24 – Field 1 as recorded in the Frilford Enclosure Map 1861
(BRO Q/RDc/47D © Berkshire Record Office)

The small amounts of pottery recovered from the two trenches do not suggest intense human activity in the immediate vicinity and only provide a suggestion of the date of the ditches rather than conclusive proof. It is possible that the ditches are of early medieval date and incorporate residual Roman pottery. If the ditches are Roman this would suggest some boundary alignments of this part of Frilford may date from this period. More analysis would need to be done before it can be confidently asserted that the ditches date to this time.

Figure 4.25 – Frilford 8th March 1944
(US/7PH/GP/LOC208 Frame 5006 - 8th March 1944. English Heritage (USAAF Photography))

4.6.2 Field 6

A focus of late Bronze Age and Iron Age activity was identified in field 6, in particular in trenches 14 and 15. These trenches, and the others in field 6, were sited over linear anomalies detected in the initial geophysical survey. The excavation indicated the anomaly in trench 14 was a Bronze Age ditch possibly recut in the Iron Age while trench 15 also contained prehistoric pottery, and a ditch possibly containing postholes of Saxon date. A more extensive geophysical survey over the areas of trenches 14 and 15 performed for this study is illustrated in figure 4.26.

Trench 14 targetted the large linear anomaly running north-east to south-west and revealed nine gullies, two ditches, four pits and two postholes. Many of these features contained pottery dated to the late Bronze Age or early Iron Age as recorded in table 4.5. Fourteen metres from the southern end of the trench was a west-north-west to east-south-east oriented linear feature whose fill contained 24 sherds of late Bronze Age to early Iron Age pottery. A second linear feature lay parallel to the south and may be later as it

contained one sherd of Iron Age pottery. These two parallel ditches are almost certainly the linear anomaly detected by the geophysical survey[18].

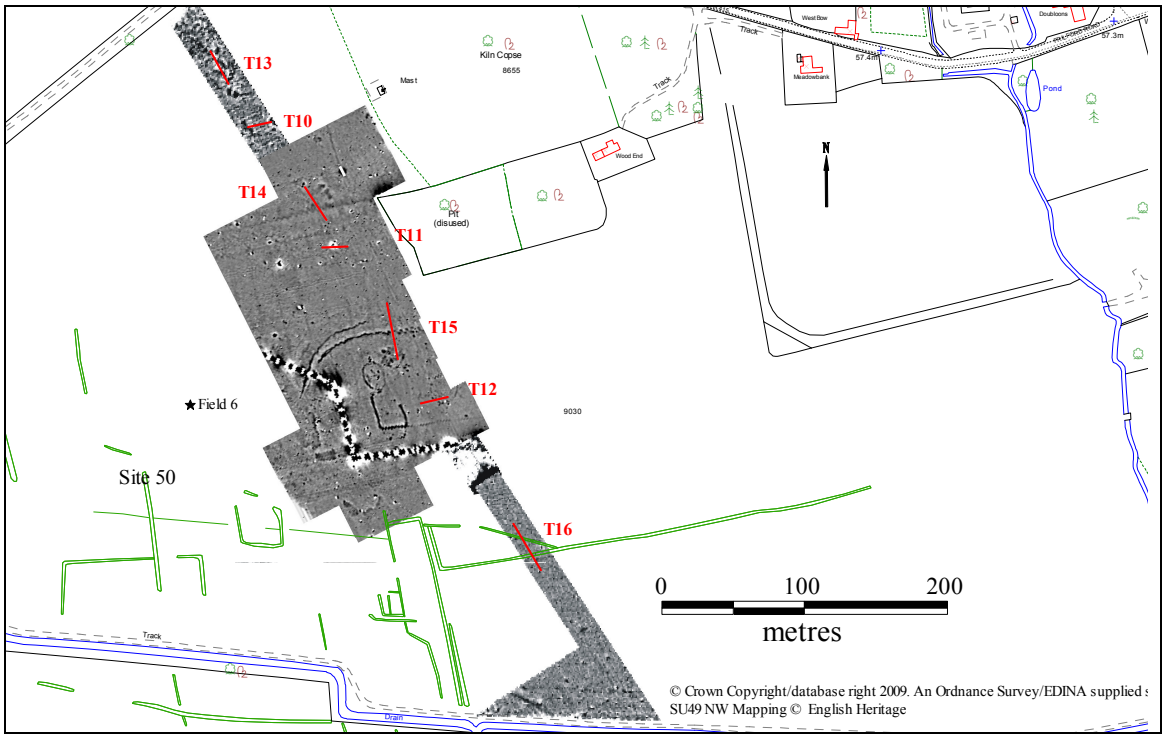


Figure 4.26 – Field 6 - Trenches 10 to 16
Middle of Field 6 Resurveyed. Geophysical Survey to north and south (T13, T10, T16) from Bunn (2004). Trenches from Cockin (2005)

Trench 15 contained a ditch, gully, three pits and a post hole. These features contained eleven sherds of early Iron Age pottery, three sherds of late Bronze Age to early Iron Age pottery and four sherds of early to middle Saxon pottery. The ditch is almost certainly the linear anomaly detected by the geophysical survey and figure 4.26 shows it continuing further west before curving to the south. A second, smaller ditch lies to its north. To the south of trench 15 and to the west of trench 12 the recent geophysical survey has identified a number of irregular features, probably of prehistoric date. This area would appear to have been in use in the late Bronze Age and early Iron Age and subsequently reused in the early Anglo-Saxon period. Roman pottery was found in very small quantities in trenches 10, 12 and 14.

Five ditches were found in trench 16 which may relate to the cropmarks shown on figure 4.26. Unfortunately there were no datable finds. To the west of trenches 12, 15 and

[18] Cockin (2005, 11) states west-north-west to east-south-east for these two ditches, although figure 4.26 would suggest the correct orientation is west-south-west to east-north-east.

16, an area was subsequently examined in 2007 during the construction of a water pipeline, Site 50, which revealed pits and postholes containing early and middle Iron Age pottery together with a crouched inhumation burial. One pit and a linear feature were dated to the Roman period (Hart *et al.* 2012, 219-221).

This work in field 6 indicates intermittent but not necessarily intense activity throughout much of the first millennium BC and may well be contemporary with late Bronze Age and early Iron Age activity further west in Trendles Field. There is no indication of major use in the Roman period.

4.6.3 Field Systems east of Trendles Field

The Thames Valley National Mapping Programme (Fenner 1994) and the Thames Water Abingdon Reservoir proposal (Winton 1999) mapped a range of cropmarks indicating one or more field systems between Marcham village and Marcham mill as illustrated in figure 4.27. These cropmarks are recorded by the Oxfordshire HER under entries 12145 and 15277 as listed in table 4.8. The NMR entry SU49 NE 110 appears to cover both sets of cropmarks and is listed in table 4.9. These cropmarks correspond to Winton's site 645 (1999, 55) from the Thames Water Abingdon Reservoir proposal. The geophysical survey and excavations of the Marcham Bypass survey only enter the northern fringe of these cropmarks.

PRN	Site Name	Monument Types
12145	Undated Cropmark Complex	Linear features, rectangular enclosures, field system and settlement
15277	Prehistoric-Roman Field System	Field system

Table 4.8 – HER References for Cropmarks south of Marcham
(Source: Oxfordshire County Council Historic Environment Record)

NMR Number	Description
SU 49 NE 110	Extensive fragmented cropmark remains of numerous enclosures and ditches from a number of phases, probably part of a field system of unknown date, mapped from air photographs.

Table 4.9 – NMR References for Cropmarks south of Marcham
(Source: www.pastscape.org – © Copyright and database rights Historic England)

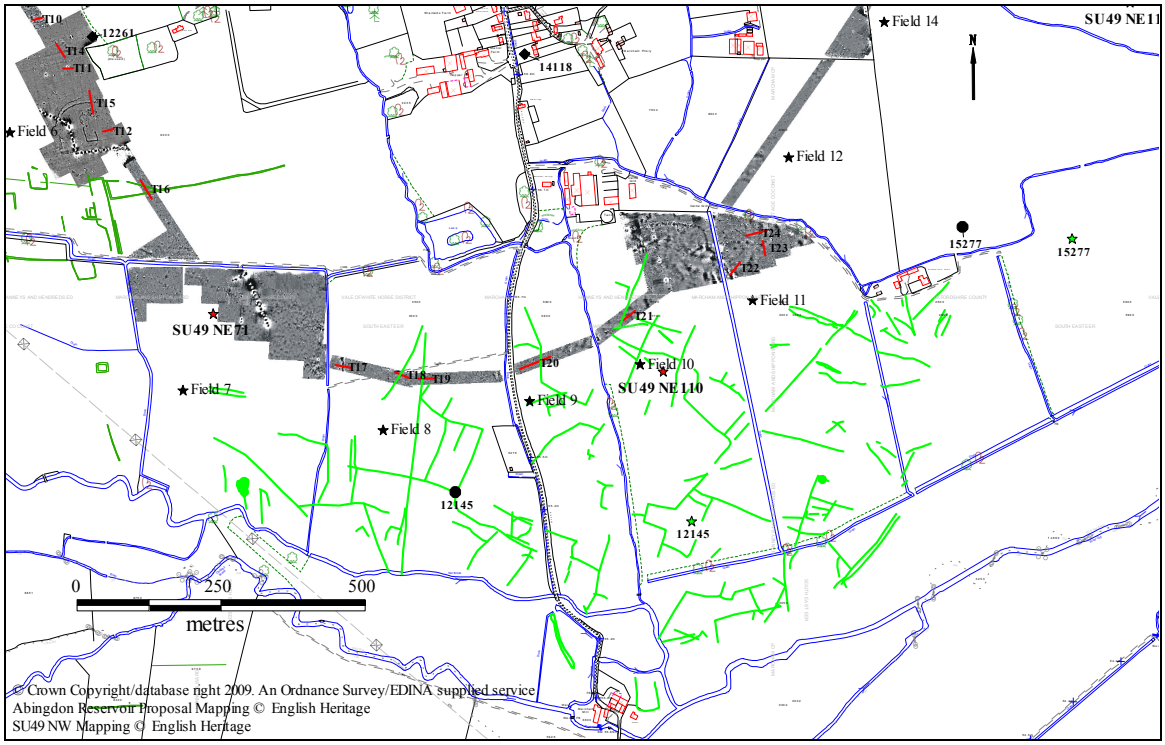


Figure 4.27 – Fields 6 to 14[19]
Middle of Field 6 Resurveyed. Rest of geophysical survey from Bunn (2004).
Trenches from Cockin (2005)

Fields 7 to 11 lie on the alluvial soils of the river Ock's floodplain and any archaeological deposits may therefore be too deeply buried to be detected by geophysical survey. The trenches in these fields were positioned to target recorded cropmarks as listed below in table 4.10.

Field	Trench	Location	Comment
8	17	Geophysics	Ditch found in excavation. Possibly modern drainage.
8	18	Cropmark	Ditch found in excavation. No dateable finds.
8	19	Cropmark	Two ditches found in excavation. No dateable finds.
9	20	Cropmark	Ditch found in excavation. Possible furrow.
10	21	Cropmark	Two ditches found in excavation.
11	22	Geophysics	Two curvi-linear ditches and two gullies.
11	23		No archaeological features or artefacts.
11	24	Cropmark	Two ditches and a pit.

Table 4.10 – Trenches in Fields 8 to 11

Winton (1999, 55) describes site 645 as "fragmented cropmark remains of an extensive field system of unknown date seen centred at SU457 957. It is possible that some of the ditches recorded are not archaeological but geological or modern agricultural." Although the Marcham Bypass survey failed to provide any dating evidence for the ditches it has confirmed the aerial survey evidence. Some of the ditches do appear to have archaeological origins but others may be natural or modern agricultural disturbances.

[19] The grid references for 12145 and 15277 differ between the HER and Cockin (2005, 2). The HER co-ordinates are shown on figure 4.27 as black circles and Cockin's co-ordinates as green stars.

4.6.4 Discussion

The Marcham Bypass evaluation excavations have not provided evidence for Romano-British settlement north and east of the temple complex. Roman artefacts were limited to a small number of sherds in fields 1, 2 and 6. The ditches in fields 1 and 2 may be of Roman date, although the small number of finds suggests the area was not intensively occupied. Late Bronze Age and Iron Age features and pottery were found in field 6. The evaluations provided little additional information on the potential field systems south of Marcham village.

4.7 A Roman Road at Frilford

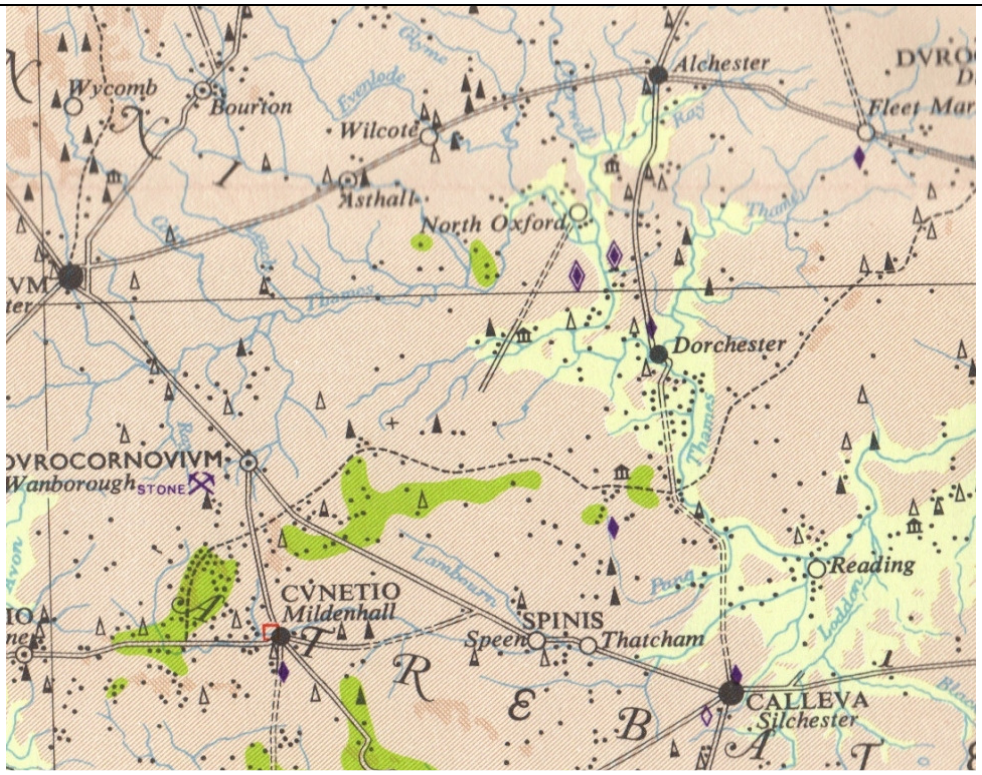
A possible element of the Roman landscape associated with the temple and amphitheatre is a Roman road crossing the river Ock to the west of the temple. The first discussion of the roads around Frilford was given by Arthur Evans who described the road adjacent to the Romano-British and Anglo-Saxon cemetery thus:

> "*There can be no doubt of the Roman character of the road line which runs from Besselsleigh through Frilford and passing the neighbourhood of the ancient cemetery, proceeds, with arrow-like directness, to Wantage, a Romano-British site on the Port and Ickleton Ways*" (Evans 1897, 352).

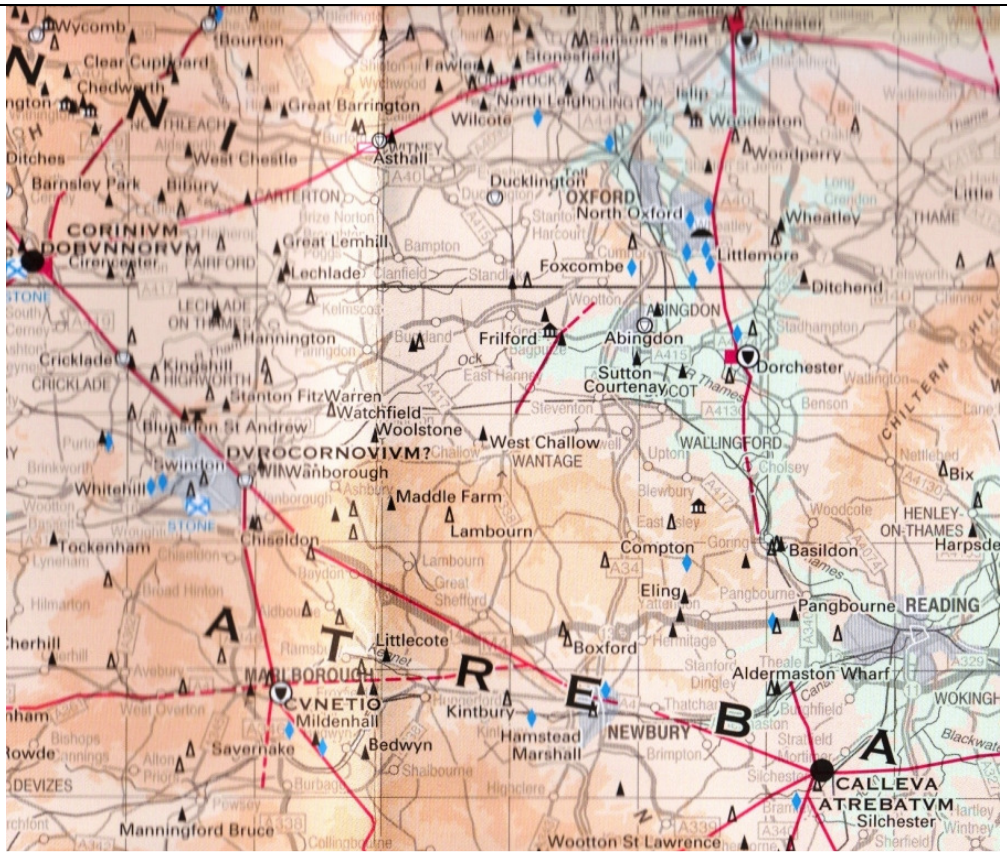
In addition, he suggested this road continued south from Wantage over the Berkshire Downs to Silchester. However, Evans conceded that the line of the road could not be followed northwards from Besselsleigh. Instead, he described a possible route to the river Thames on a line running from the north-eastern corner of Frilford Heath, past Cothill, over Boar's Hill by the Fox Inn to South Hinksey (1897, 352). He argued that this route, should it date to the Roman period, could only have been a local route from Frilford to the Thames, as he believed the main road ran north to Besselsleigh. By the 1930's he was able to propose a route onwards from Besselsleigh by his observation of a series of footpaths and field boundaries running in a straight line from Besselsleigh to North Hinksey (Evans 1933, 33).

Although Dudley Buxton (1921, 89) expressed some reservation, this view was endorsed by Bradford and Goodchild (1939, 26) who suggested two reasons for the importance of the Frilford area during the Roman period: its Iron Age history and its location on a Roman road crossing the Vale. They argued that the straightness of the road between Grove and Frilford, and its alignment towards Alchester, provided a strong indication in favour of its Roman date. They were less confident of its route north of the river Ock and suggested it may have followed the current road as far as Besselsleigh and from there followed Evan's 1930s route to the river Thames via Henwood Farm, between Cumnor Hurst and Boar's Hill, and thence to North Hinksey[20].

[20] Bradford and Goodchild (1939, 27) actually state South Hinksey but this seems to be an error. Certainly in the next paragraph they are discussing North Hinksey as the location of the Roman road.



Ordnance Survey Map of Roman Britain, Third Edition (© Crown Copyright 1956)



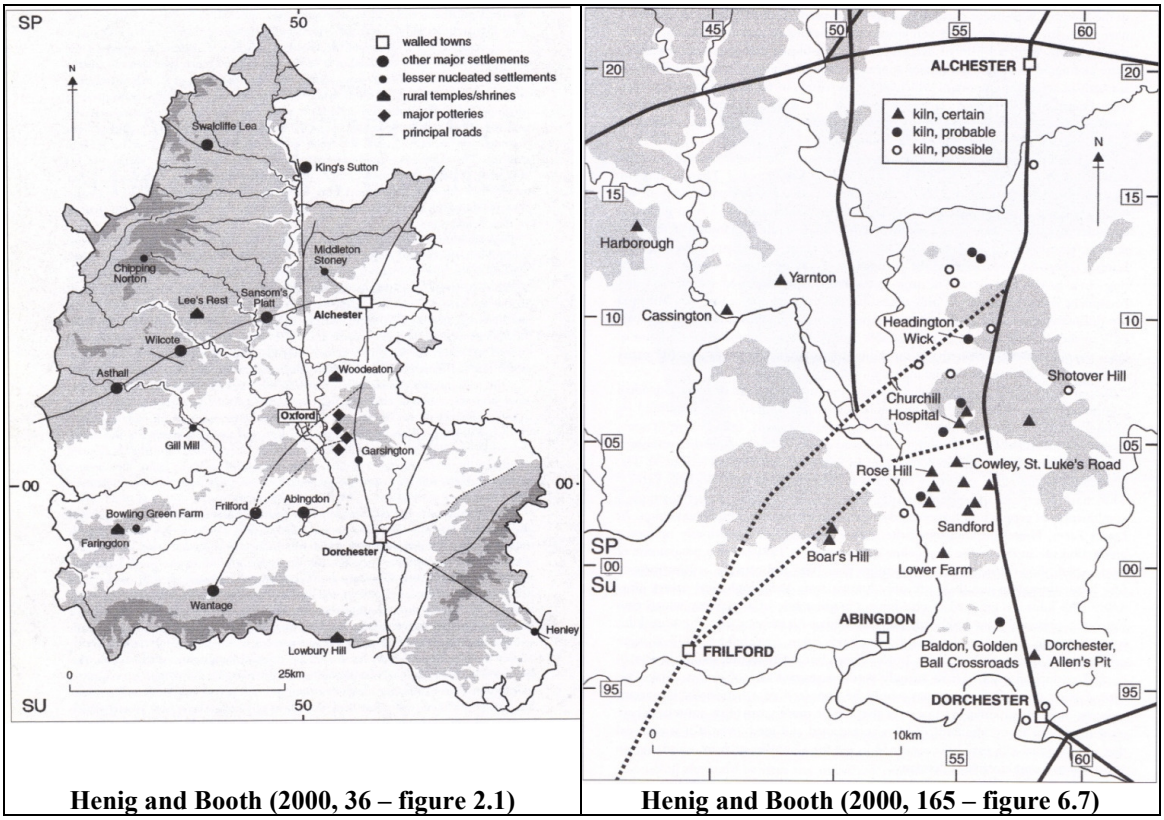
Ordnance Survey Map of Roman Britain, Fifth Edition
(© Crown Copyright Ordnance Survey 2001. All Rights Reserved)

Figure 4.28 – Roman Roads near the Vale of the White Horse

This postulated Roman road through the Vale of the White Horse was first included on the third edition (1956) of the Ordnance Survey map of Roman Britain where it is represented as a definite road south of the river Ock towards Wantage, and as a probable road north of the river Ock on an alignment towards Alchester. The most recent edition (fifth edition, 2001) retains the definite road from Frilford south towards Wantage but its projected course north of the river Ock bends slightly to the east towards Cothill and Foxcombe Hill, as shown in figure 4.28. The first edition of *Roman Roads in Britain* (Margary 1955) makes no reference to such a road and it first appears in the second edition (Margary 1967, 170) as road 164 from North Hinksey to Wantage. The description is closely based on Bradford and Goodchild (1939, 26-27) and is repeated in the third edition (I Margary 1973, 170).

More recently, Henig and Booth (2000, 50) have added a further elaboration as illustrated in figure 4.29. They propose a road may have run northwards towards Wantage from a junction on the Silchester to Cirencester road, possibly at Baydon, and assert this road can be more confidently identified as it nears Wantage and continues to Frilford. Two independent roads are proposed north of the river Ock. The southern proceeded over Boar's Hill to Redbridge, crossed the Thames near Donnington bridge and then connected with the road from Dorchester to Alchester. The northern route ran from Besselsleigh to cross the river Thames near west Oxford and may have connected with a Roman road leading north from Oxford to join Akeman Street. These two routes are clearly related to Evans' earlier suggestions and also to the debate as to whether the route into medieval Oxford was from the west (Salter 1928) or the south (Lambrick 1970; Davis 1973).

The existence of a Roman road running northwards from Wantage to Frilford and then to Besselsleigh is deeply embedded in the archaeological literature where it is used as a reference point for other settlement features (Holbrook and Thomas 1997, 173; Barber and Holbrook 2002, 334; Simmonds *et al.* 2011, 115). Yet the archaeological evidence for such a road remains limited and some historians of the road network within the Vale have doubted its existence over some or part of its length (Lambrick 1970, 89; Rosevear 1993a, 5-8). It is therefore important to examine the evidence for such a Roman road and its relationship with the temple, amphitheatre and cemetery.



Henig and Booth (2000, 36 – figure 2.1) Henig and Booth (2000, 165 – figure 6.7)

Figure 4.29 – Roman Roads in Oxfordshire

4.7.1 The Besselsleigh to Wantage Turnpike

During the eighteenth century the rural English landscape was substantially altered by enclosure. As well as removing common fields and common rights, enclosure could also remove, relocate or create roads. In addition, the eighteenth century witnessed the creation and expansion of the turnpike road system. By 1770 Wantage lay on the Wallingford, Wantage and Faringdon turnpike (now the A417) and Besselsleigh lay on the Botley to Fyfield turnpike, which was part of a new route between Oxford and Faringdon (now the A420). An act establishing a turnpike trust to construct and maintain a turnpike road from Besselsleigh to Wantage and beyond was passed in 1771 (Rosevear 1993b, 2). Turnpike acts relating to road development in the Vale of the White Horse are summarised in table 4.11 below.

Year	Place	Act
1733	Lechlade to Fyfield	6 George II c16
1752	Wallingford-Wantage-Faringdon	25 George II c21
1767	Oxford to Fyfield	7 George III c66
1771	Besselsleigh to Wantage	11 George III c70
1771	Wantage to Marlborough	11 George III c97

Table 4.11 – Turnpike Acts relating to the Vale of the White Horse (Albert 1972; Rosevear 1993b)

From the end of the eighteenth century the main route westwards from Oxford to Faringdon used the new Oxford to Fyfield turnpike route via Botley and Cumnor Hill to reach Besselsleigh and Fyfield. This replaced an earlier route which left Oxford from the south, passing south Hinksey and over Hinksey Hill, Foxcombe Hill to Cothill, Tubney and Fyfield. This earlier route continued to Faringdon either via Kingston Bagpuize or via Longworth and Buckland (Lambrick 1970, 79) while from Cothill a branch ran south-west to Frilford and Wantage. In addition, there was a further earlier route, which leaving Oxford in the west, ran via North Hinksey to reach Besselsleigh. Lambrick (1970, 81) suggests this second route was largely restricted to foot and light traffic, while wheeled and heavy traffic took the southern route. These two routes are clearly related to Evans' earlier suggestions and to Henig and Booth's roads. The topography of the two routes is illustrated in figure 4.30 and shows that the southern route follows a ridgeway over Boar's Hill while the northern passes between Hurst Hill and Boar's Hill. Adjacent to the southern route are Roman kilns at Sunningwell and a possible villa at Chilswell Farm.

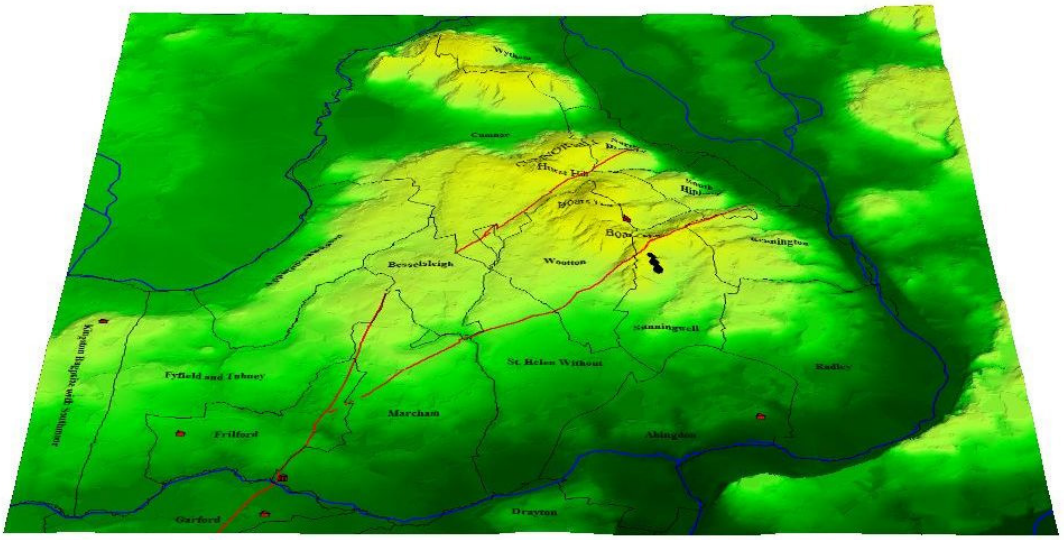


Figure 4.30
Topography of the area between Frilford and Oxford.
(Shown are the Besselsleigh to Wantage Turnpike and two routes from this to the river Thames)

Any attempt to identify a Roman road through an examination of the modern road system needs to consider landscape changes, especially any eighteenth century enclosure and turnpike roads. In particular, it is necessary to consider to what extent the current A338 road (the Besselsleigh to Wantage turnpike) may be a Roman road and how much is a creation of the late eighteenth century. The evidence for road creation and alteration

undertaken by the Besselsleigh to Wantage Turnpike Trust is considered using aerial photographs, geophysical survey and a selection of maps. The analysis starts at the crossing of the river Ock adjacent to the temple complex and then proceeds both southwards to Wantage and northwards to Besselsleigh.

4.7.2 Crossing the river Ock

Any Roman road running north-south across the Vale must cross the river Ock. Although the Ock is not a wide river, a crossing is likely to become a focal point and encourage settlement. The location of the Roman temple, amphitheatre and cemetery close to the Ock strongly suggests a river crossing in the immediate vicinity. As discussed in Chapter 2, throughout much of the Vale the river Ock flows close to the boundary between the Corallian limestone and the Kimmeridge Clay. This is not the case at the Noah's Ark Inn at Marcham/Frilford where there is Corallian limestone on both sides of the river Ock and this has important local environmental consequences. In particular, the land on both sides of the river drains quickly and is therefore suitable for a river crossing either as a ford or bridge.

The aerial photographic and geophysical evidence for an earlier river crossing just to the west of the current bridge is shown below in figures 4.31 and 4.32. The aerial photograph shows the modern A338 running northwards towards the river Ock. Visible to the west of the modern road is the line of a former road heading directly for the Ock. The existence and precise location of this earlier road has been confirmed by geophysical survey. In the field closest to the river Ock, the road passes through a small field system or series of enclosures. Neither the aerial photograph nor the geophysical survey provide direct evidence that this is a Roman road. Indeed, the geophysical survey illustrated in figure 4.32 suggests the early and later roads may cut early ridge-and-furrow.

Rocque's map of Berkshire, published in 1761, can be used to demonstrate that the present road alignment at the river Ock also existed in the mid-eighteenth century.

Figure 4.31 – Crossing the river Ock
(NMR 716/143 – 18th June 1974 © Crown Copyright.EH)

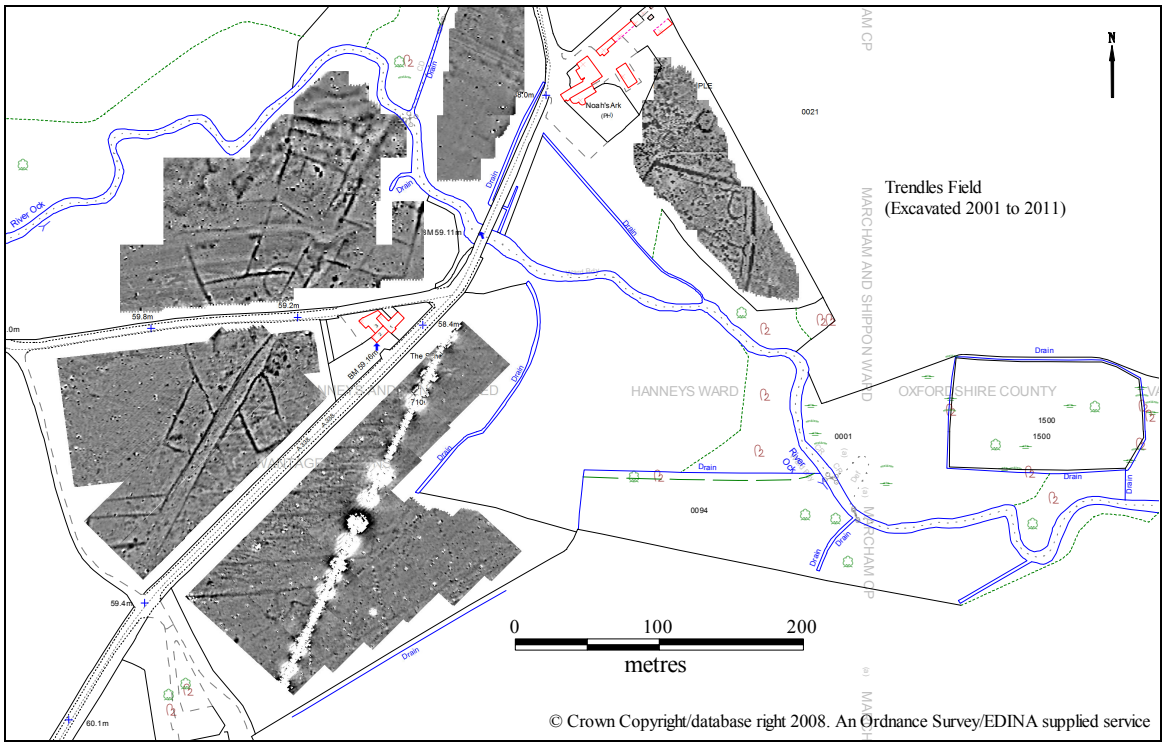


Figure 4.32 – Crossing the river Ock - Geophysical Survey 2007 and 2008

The left side of figure 4.33 below illustrates the route from East Hanney northwards to the crossing of the river Ock at the Noah's Ark Inn. The road north from East Hanney crosses the Childrey Brook at Venn Mill and then the river Ock, via a bridge, at the Noah's Ark Inn. The road is largely straight with the only noticeable deviation just before the river Ock where it swings east to approach the bridge. The road as mapped by Rocque in the mid-eighteenth century is essentially identical to today's A338 and its alignment does not appear to have been significantly modified by the turnpike trust.

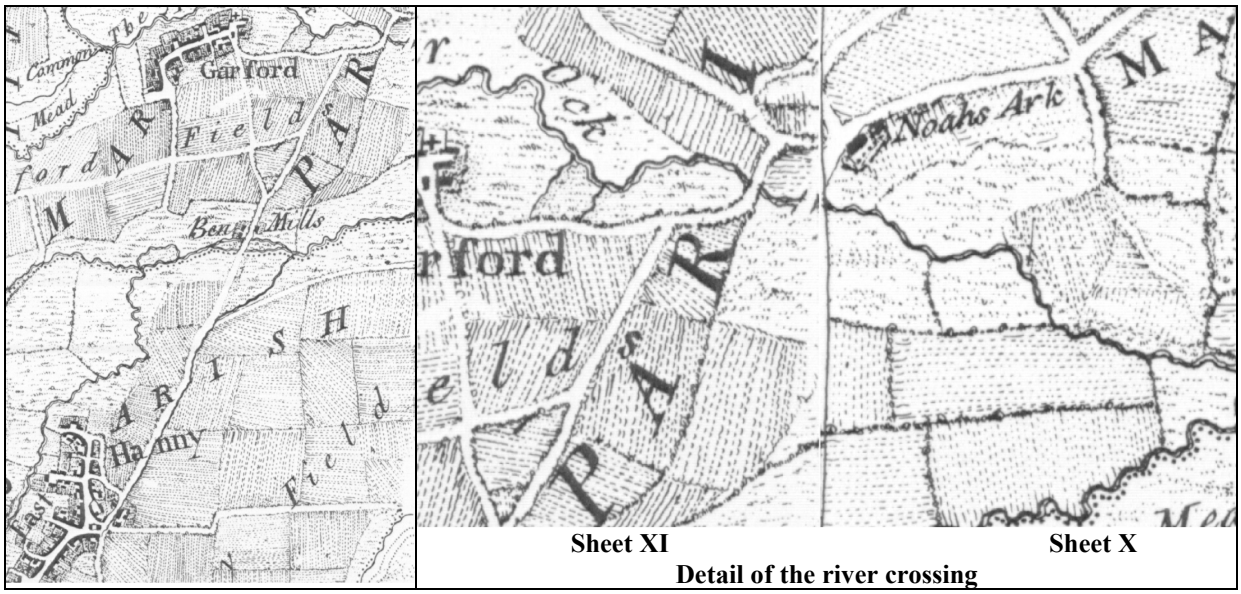
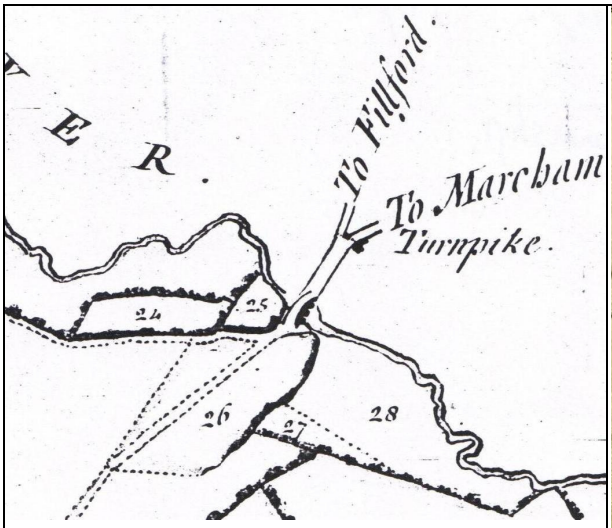


Figure 4.33 – The Road from East Hanney to Frilford (Rocque's Map of 1761)
(H Margary 1973 © Harry Margary)

Nevertheless, the crossing of the Ock at the Noah's Ark Inn is worth considering in detail. Inconveniently, this location is at the join between sheets X and XI of Rocque's map and is shown in more detail in the right hand part of figure 4.33. Although the join of the river and of the nearby field boundaries across the two sheets is reasonable, the join of the roads at the crossing of the river Ock is not. In particular, the left sheet (sheet XI) shows two bridges: an eastern bridge which joins correctly with the adjacent sheet to the east (sheet X) by connecting to the Noah's Ark Inn, but which in the south leads into an empty field; and a western bridge on the road from East Hanney which then connects poorly to the road network on the east. The join between the two sheets is generally very good and it is only at this point that such uncertainty arises. One possible hypothesis is that the road and bridge were under construction during the 1750's and the engraver has been confused by different survey drafts. But this is only speculation and it remains unfortunate the map at this important location contains such difficulties.

In spite of these difficulties it is clear there was a straight road from East Hanney to the river Ock, and a bridge over the river, before the formation of the turnpike trust in 1771. The current bridge over the river Ock, illustrated in figure 4.34, appears to date from the late eighteenth century and it is unclear whether it is the one depicted by Rocque or whether a new bridge was constructed by the turnpike. Certainly the tolls for crossing the bridge were important for the turnpike trust as a toll house just north of the Noah's Ark Inn is shown on later maps. One possibility is that the road deviation, bridge and Noah's Ark Inn were built in the 1750s, some years before the official act for the turnpike trust. The bridge and road may have been improved subsequently.

Figure 4.34 – Crossing the river Ock



South of the river Ock
Garford Township 1775
(BRO D/EC E11/2 Map 7 © Berkshire Record Office)

North of the river Ock
Marcham Enclosure Map 1818
(BRO MR1/51 © The National Archives)

Figure 4.35 – The Crossing at the Noah's Ark Inn

The line of the abandoned part of the road appears to be preserved in two features of the modern landscape. Parallel to the abandoned section of road are a small hedge and ditch just south of the river Ock and a short length of ditch and boundary to the north of the river (see figures 4.31 and 4.32). The small hedge appears to be a remnant of a 1775 field division between fields 24 and 25 and the boundary to the north of the river demarks land held by Thomas Floyd in 1818 as illustrated in figure 4.35. These observations might suggest that this earlier river crossing may have gone out of use only shortly before 1760.

4.7.3 Roads south of the river Ock

Figure 4.36 illustrates a map of Garford from 1775 which probably represents the parish and its roads before the Besselsleigh turnpike trust began their improvements. At this time western Garford still retained its common field system, probably largely unchanged from the late medieval period. These field and furlong boundaries are primarily aligned north-south and east-west and do not appear to have a relationship with the line of the A338 road. The eastern part of Garford has been enclosed as Garford Farm and the earlier furlong boundaries are not mapped. Nevertheless, the furlong boundaries can be recovered using Lidar data as illustrated in figure 4.37. In the west of the parish these correspond well with the map in figure 4.36 while in the east they align with the newly enclosed fields. It can be seen that the road serves as a dividing line between two sets of furlong systems on different alignments. This would suggest that the road predates the establishment of the furlongs even though it does not form the basis of their alignment.

Figure 4.38 shows a stretch of the modern A338 road to the south of the area shown in figure 4.31 (the buildings of Field Barn Farm can be seen in both). This aerial photograph shows the road cutting across an earlier field system. Although this field system is undated it may be associated with the small villa in the north-east corner of the field. If this is the case, the modern road cuts across a Roman field system which may suggest the road is post-Roman. Alternatively, if we accept a Roman date for the road, it suggests the boundary ditches of the field system date to the prehistoric period.

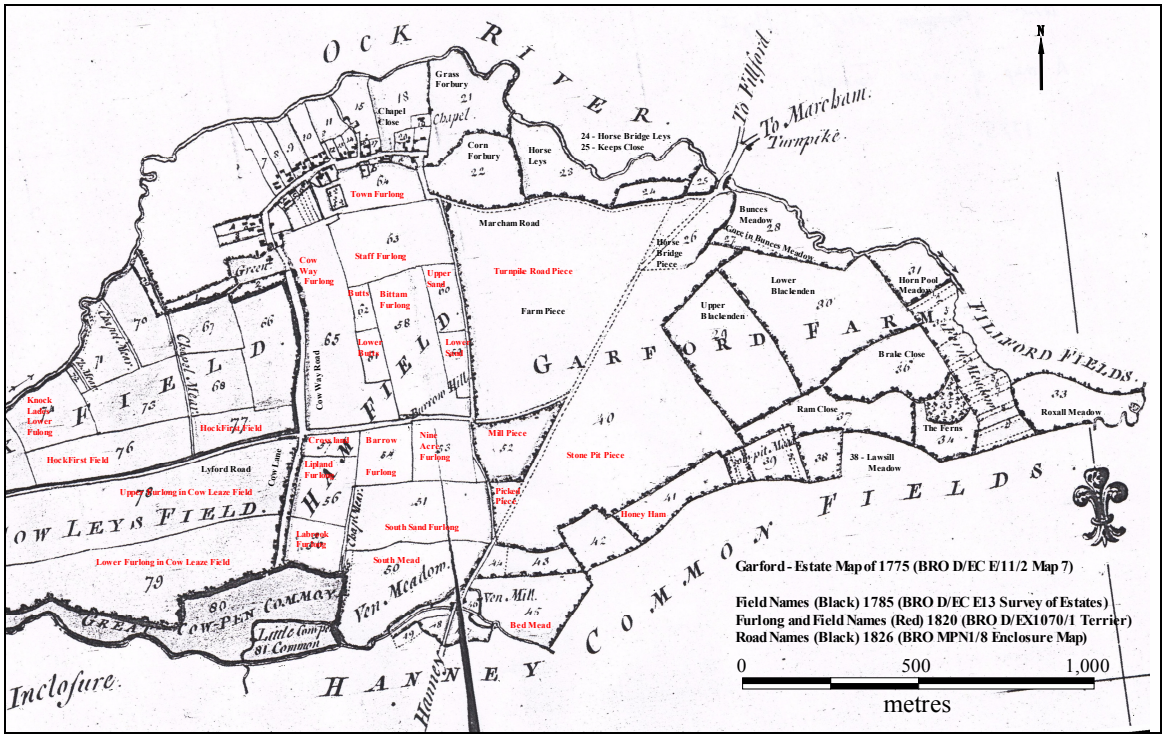


Figure 4.36 – The Crossing at the Noah's Ark Inn
Garford Township 1775
(BRO D/EC E11/2 Map 7 © Berkshire Record Office)

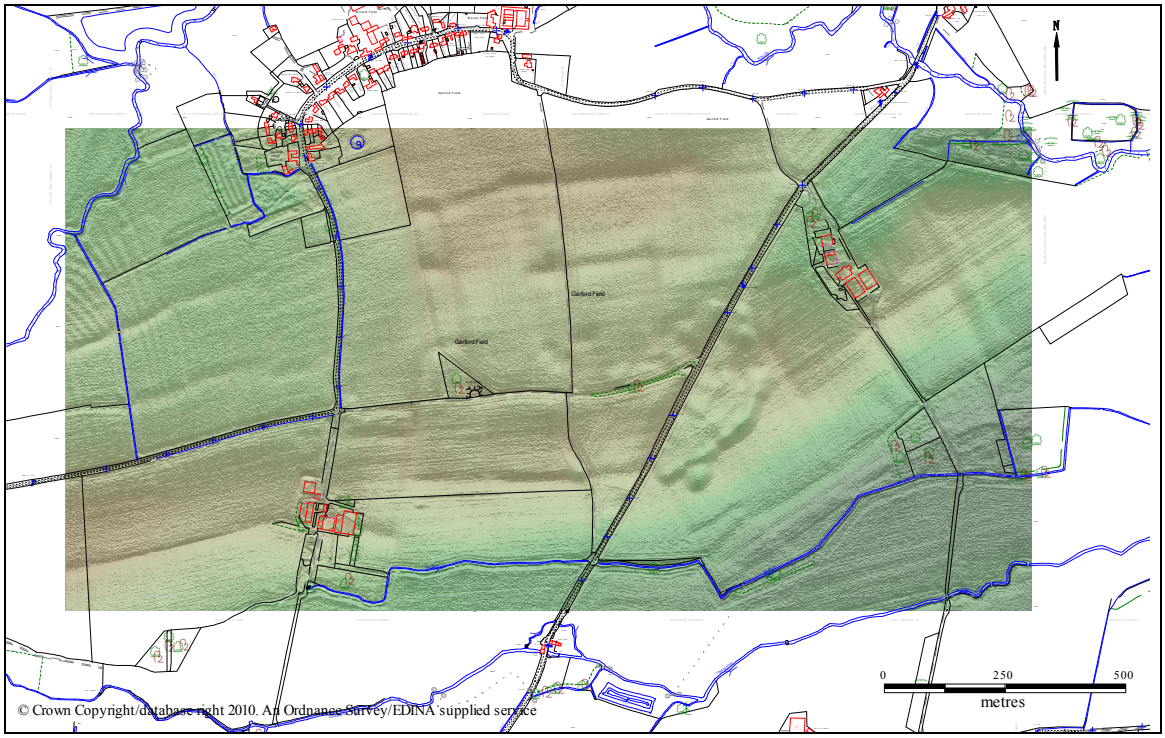


Figure 4.37 – The Crossing at the Noah's Ark Inn
Lidar Digital Elevation Model of Garford
© Environment Agency copyright 2013. All rights reserved.

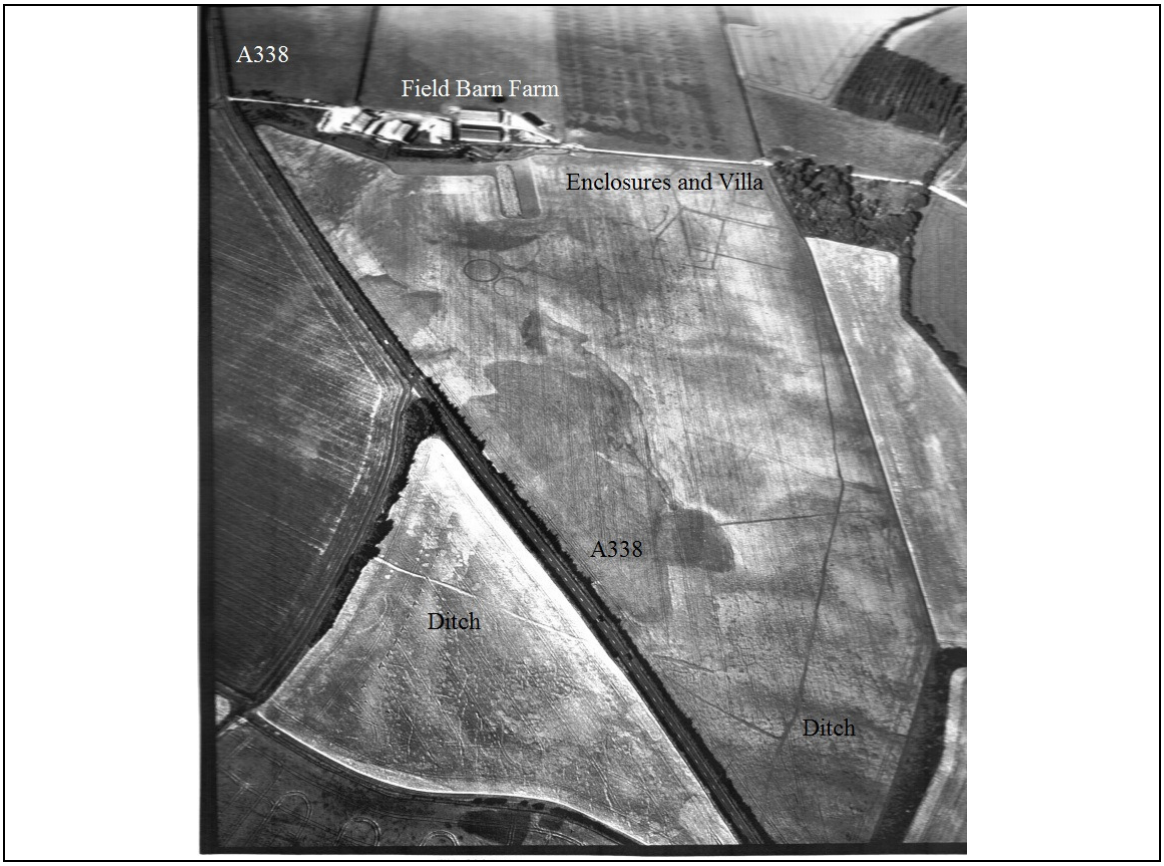


Figure 4.38 – The A338 and Field Systems south of Field Barn Farm, Garford (NMR 4694/71 – 3rd July 1990 © Crown Copyright. EH)

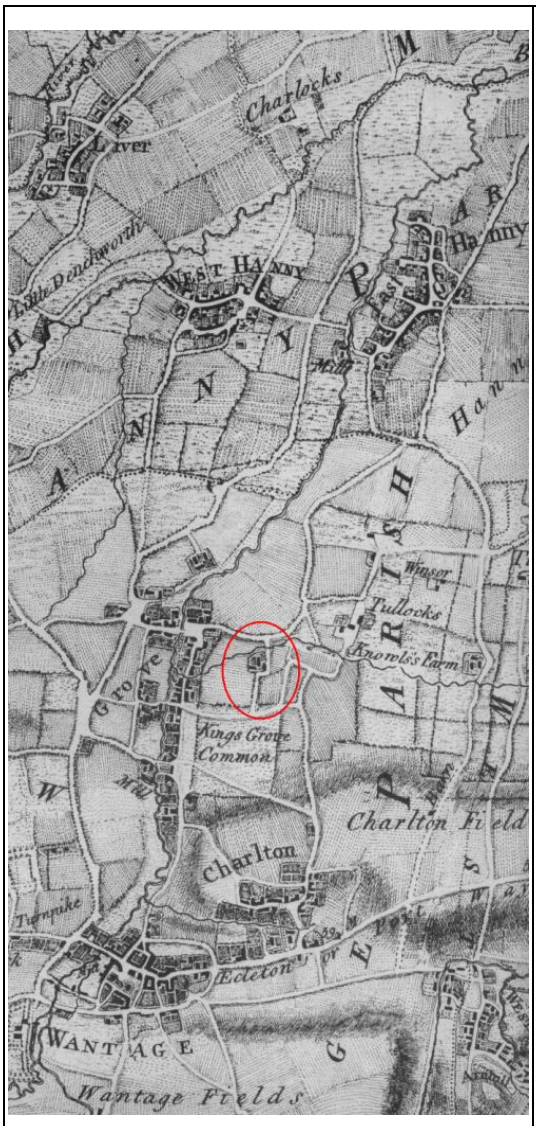
4.7.4 Wantage to East Hanney

The route from Wantage northwards to East Hanney before and after the turnpike act of 1771 is illustrated in the two maps of figure 4.39. On the left, Rocque's map predates the turnpike and shows the road running north from Wantage passing to the west of Grove. North of Grove this road divides with its western branch leading to West Hanney, while the eastern branch passes between East and West Hanney. Although there is a road running from the north-east of Grove to East Hanney it is not straight. Within this figure a section of road to the east of Grove and to the north of King's Grove Common has been highlighted with a red circle.

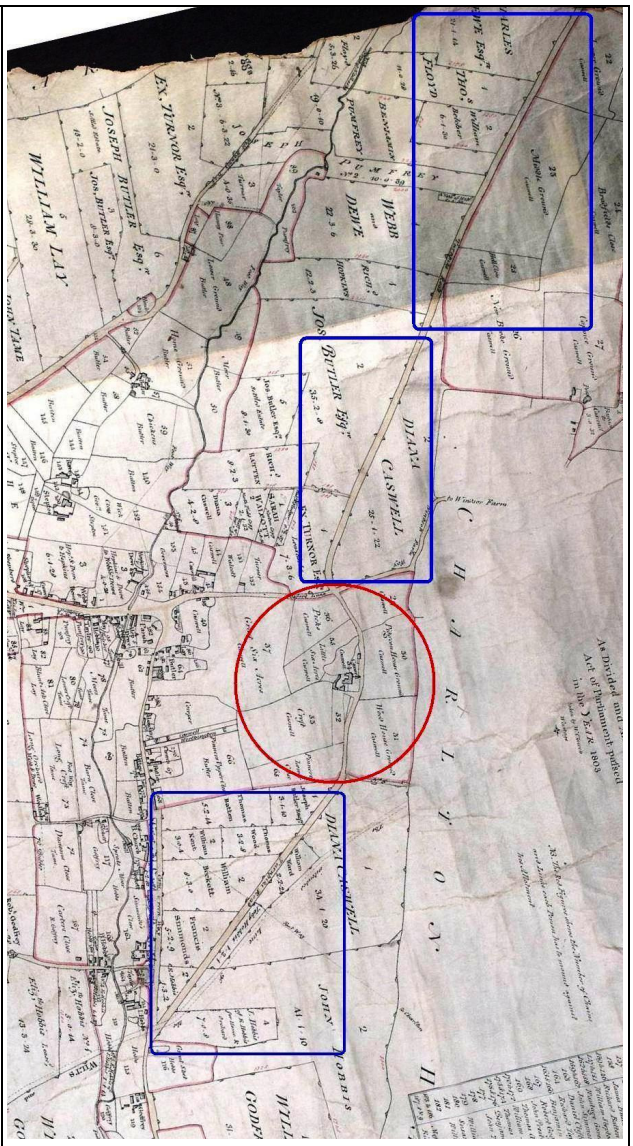
On the right of figure 4.39 is an extract of the Grove enclosure map of 1806. It appears that the section of road circled in red is the only portion of existing road re-used by the turnpike trust in their construction of a new straight road between Wantage and East Hanney. Just south of Grove this new road branches north-east from the old road to reach

the existing section of road. North of this, a further new section of road was constructed to take the turnpike to the east of East Hanney, on an alignment which allowed it to connect to the existing road from East Hanney to the river Ock. These new straight sections of turnpike road are marked in figure 4.39 within blue rectangles.

These maps strongly suggest the turnpike (and modern) road from Wantage to East Hanney is not a Roman Road. However, should the road from East Hanney to the river Ock be a Roman road, then the northern segment of this new turnpike road between East Hanney and Grove could well follow, or be close to, a Roman road.



Rocque's Map of 1761
(H Margary 1973 © Harry Margary)



Grove Enclosure Map 1806
(BRO D/P143/26C © Berkshire Record Office)

Figure 4.39 - The Road from Wantage to East Hanney

4.7.5 Roads north of the river Ock

Early maps all portray an east-west route north of the river Ock running west from Abingdon via Marcham to Kingston Bagpuize. Rocque's map of Berkshire from 1761 shows three routes northwards from the crossing of the river Ock to join this road. As illustrated in figure 4.40 these branches lead east to Marcham, north to Frilford village and west to join the road towards Kingston Bagpuize. These three roads are also present in the Ordnance Survey drawing of 1811, shown in figure 4.41, which suggests the western route was the least important. If, as suggested above, the original north-south road over the river Ock had originally passed to the west of Thomas Floyd's land (see figure 4.35) then these road junctions would also have been slightly further west. The western branch towards Kingston Bagpuize survives only as a footpath while the eastern route remains as the greenway north of the Noah's Ark and Trendles field.

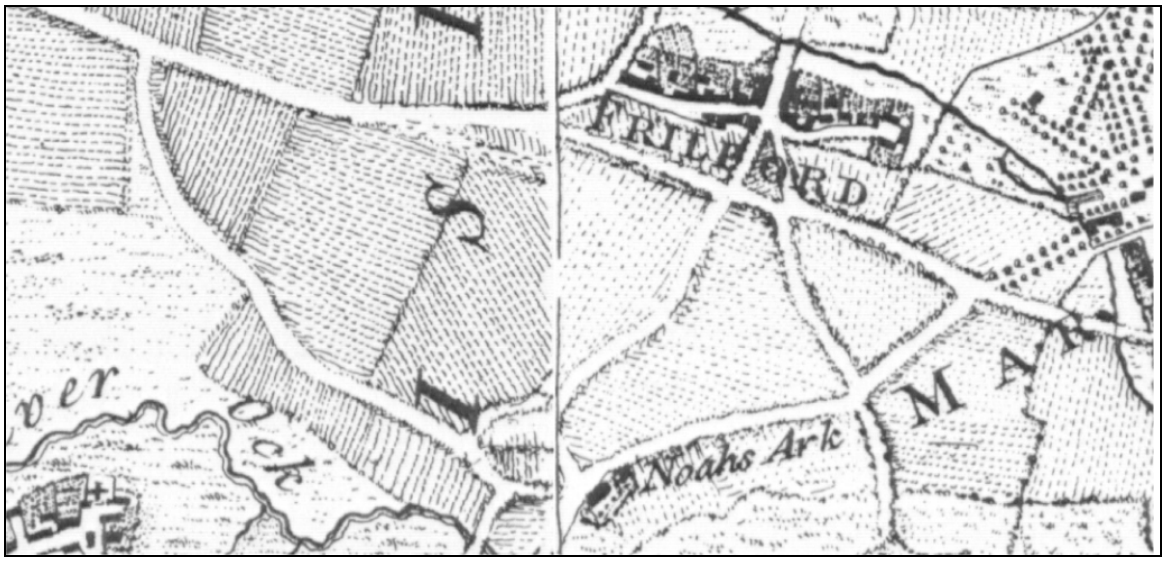


Figure 4.40 – The Crossing at the Noah's Ark Inn
Rocque's Map of Berkshire 1761 (H Margary 1973 © Harry Margary)

If the original road north towards Frilford had continued on the same alignment as the road in figure 4.32, south of the river Ock, it would pass just to the west of the current A338 and through the cemetery as shown in figure 4.42. Such a projected route would pass through field 1 discussed in section 4.6.1 and illustrated in figure 4.23. The recent geophysical surveys illustrated in figures 4.13, 4.23 and 4.42, east and west of the A338, have failed to detect a road similar in dimensions and magnetic response to that detected south of the river. If such a road existed, it must lie under the modern road or its surrounding ditches and hedges. Some slight support for the existence of a road in figure

4.42 is suggested by the lack of any common feature on both sides of the road. In addition, the ditches north of the cemetery, which run north-west to south-east, would meet the suggested road at very close to a right-angle, aligning the small block of fields on the road.

Figure 4.41 – Extract from Ordnance Survey Drawing of 1811 (Wantage)
Venn Mill to Frilford
© British Library Board
http://www.bl.uk/onlinegallery/onlineex/ordsurvdraw/w/zoomify82308.html

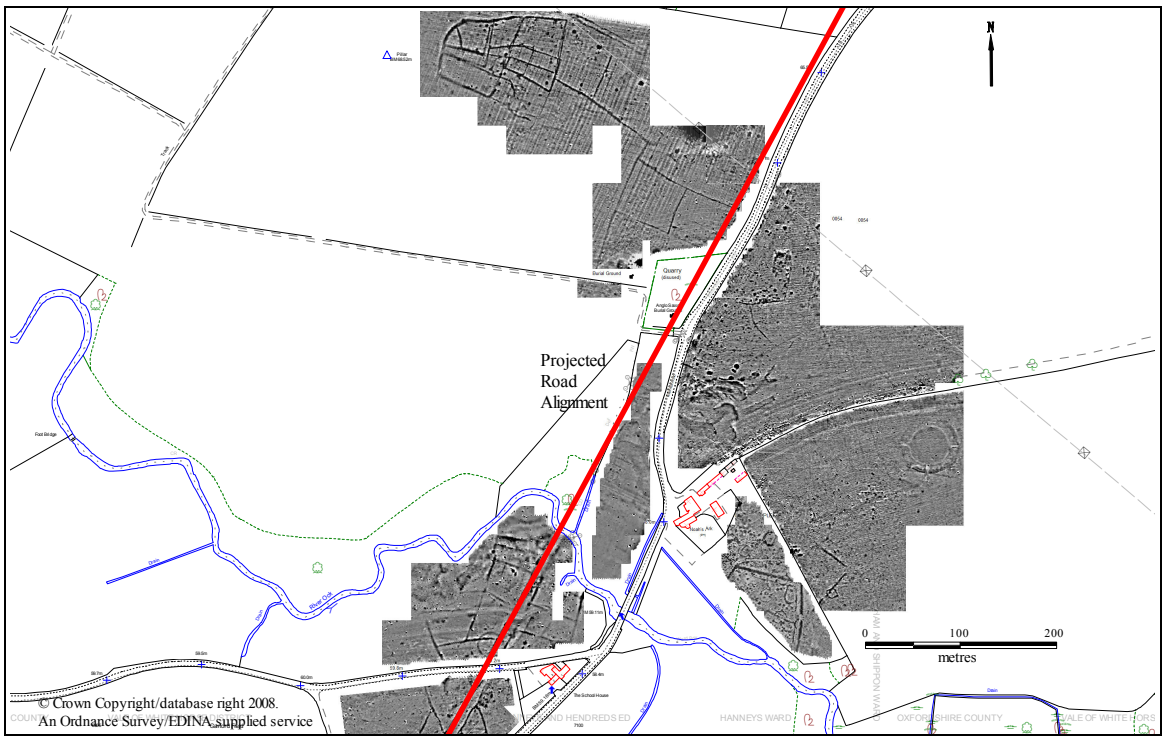


Figure 4.42 – Roads North of the river Ock

4.7.6 Frilford to Besselsleigh

Figure 4.43 illustrates the route northwards from Frilford before and after the turnpike act. Rocque's map on the left shows the road crossing the river Ock at the Noah's Ark Inn and continuing north through Frilford, across Frilford Heath to pass close to the Dog House Inn, before curving west on its way to Besselsleigh. On the right is the Frilford enclosure map of 1861. The section of road from the Noah's Ark Inn to and through Frilford corresponds to Rocque's map. North of Frilford, particularly across Frilford Heath, it appears as if a newer road has been developed further west, with the line of the original road marked out as a property boundary line to the east. This new alignment could be the consequence of enclosure, turnpiking or both. This new route passes to the west of the Dog House Inn (Lambrick 1970, 89; Rosevear 1993b, 6).

Rocque's Map of 1761
(H Margary 1973 © Harry Margary)

Frilford Enclosure Map 1861
(BRO Q/RDc/47D © Berkshire Record Office)

Figure 4.43 – The Road from Frilford to Besselsleigh

It is therefore probable that the road between Frilford village and Besselsleigh dates from the late eighteenth or early nineteenth century and replaces an earlier, less direct road further to the east. Although it is unlikely that either is originally Roman, the general alignment may follow a Roman route.

4.7.7 Discussion

The previous sections have demonstrated that much of the modern straight road beween Wantage and Besselsleigh is a creation of the late eighteenth century. Only the element from East Hanney northwards to the river Ock and Frilford existed prior to 1761. This part, with its earlier western river crossing, is crucial in understanding a possible Roman road alignment through the Vale of the White Horse. It has been suggested that the current eastern alignment, bridge and Inn were constructed in the early eighteenth century to replace the earlier crossing, possibly a ford as in the place name Garford.

It seems very probable that the temple, amphitheatre and cemetery (and earlier Iron Age settlement) were associated with a river crossing. At this location the land on both sides of the river drains quickly and is therefore suitable for a river crossing. However, the evidence for a major Roman road crossing the Vale from Wantage to Besselsleigh remains weak. Although there is evidence of an earlier road south of the river Ock which would pass to the west of the Noah's Ark Inn, no road with similar side ditches has been detected north of the river Ock. Any discussion of a Roman road in association with the temple, amphitheatre and cemetery must therefore remain conjecture.

4.8. The Landscape of a Romano-British Temple

The buildings and layout of the temple complex existed to fulfil a set of religious functions. These included an annual cycle of religious events and festivals which could involve processions, sacrifices and entertainment. Large crowds might attend for specific festivals and the presence of an amphitheatre at Marcham / Frilford suggests considerable numbers of people were expected on certain occasions, either to be entertained, or to take part in specific rituals and ceremonies. The temple served to house the deities and stood within a sacred area or temenos delimited by a wall. Other elements of the temple environment might include an altar in front of the temple for sacrifices, other secondary altars, screens, arches, free-standing columns, sacred bushes and trees (Henig 1984, 38).

A temple also needed people. Central were the priests or *sacerdotes* who, depending on the size and wealth of the temple, may have been full-time or part-time (Henig 1984, 135-136). In addition, a range of religious and secular staff might be employed and Henig identifies assistants for processions and ceremonies, guides to look after visitors, gatekeepers, clerks, interpreters and cleaners. This requires houses and offices while further buildings such as guesthouses and bath houses would be needed for visitor accommodation.

On festival days it is likely that people visited the temple from a wide area of the Vale and possibly beyond. It is within reasonably easy reach of the possible Roman settlement at Wantage and other similar settlements along the foot of the Berkshire downs. To the east lay the small Roman settlement of Abingdon, the successor of an Iron Age oppidum, while to the north and west lay extensively settled areas of the Corallian ridge.

The red-tiled roof of the temple may have been visible from a wide area, particularly if the cella rose as a tower above the roof line of the portico to provide clerestory windows. Using the Lidar digital elevation model illustrated in figure 4.44, the visibility of the temple to approaching visitors can be analysed through a GIS viewshed as shown in figure 4.45. It is assumed that the visitor's eyes are at a height of 1.5 metres, and the distance from which the temple can be seen is assessed by assuming a roof height of two, four, six and eight metres. The first and last heights are most likely underestimates and overestimates respectively with the most likely range between four and six metres. The black areas indicate where such a temple roof could not be seen.

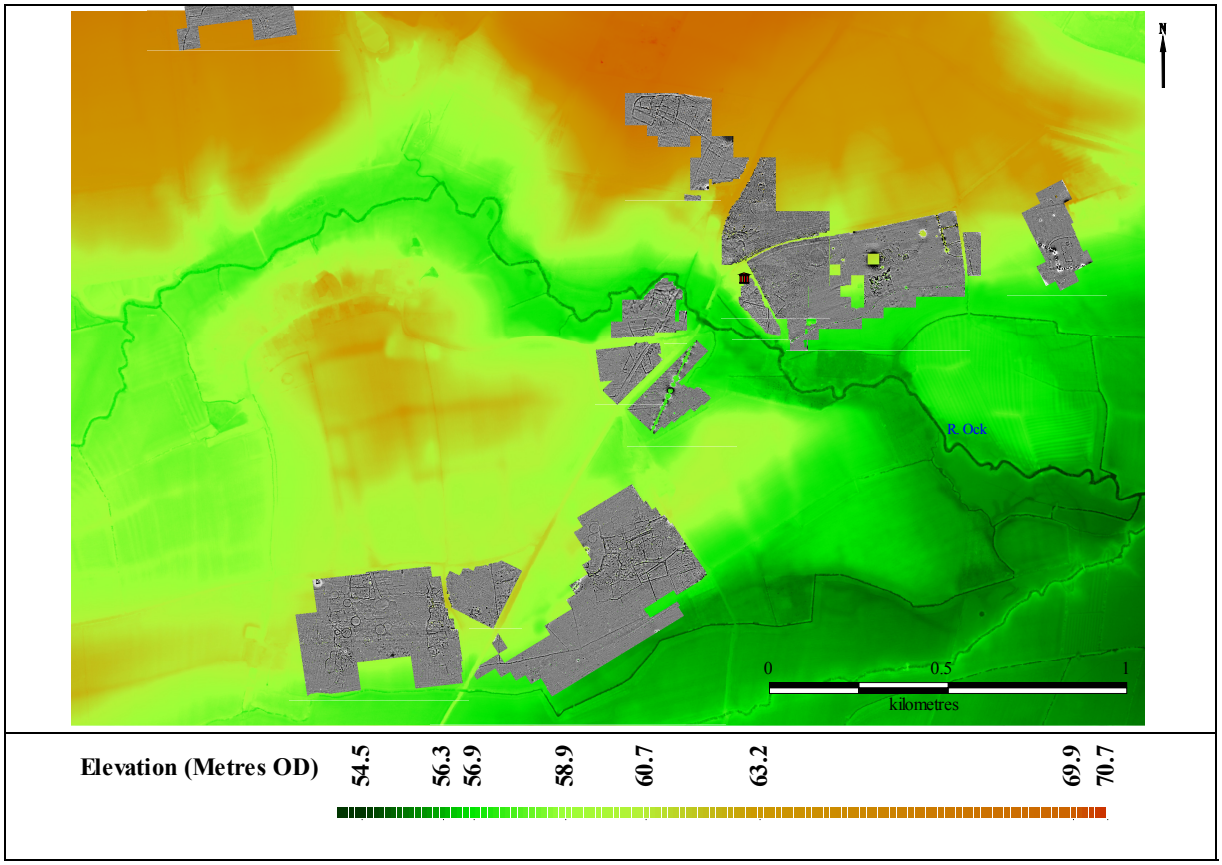


Figure 4.44 – Geophysical Surveys with Lidar Digital Elevation Model Temple

The temple sits on a slight incline dipping towards the river Ock and while generally visible within a kilometre, is not particularly visible from a long distance. Trees and hedges would also restrict the temple's visibility. A better location to maximise visibility would be found a few hundred metres to the north. This suggests the location of the temple was strongly influenced by the earlier Iron Age enclosure and proximity to the river Ock.

The late Roman landscape contained several other buildings with tiled roofs. The nearest of these lay 300 metres away to the south-west, to the south of the river Ock, where fieldwalking in 2007 and 2008 produced significant amounts of pottery and small amounts of ceramic building material[21]. Also south of the river Ock, and 800 metres south of the temple, is a small villa located amongst an array of ditches. Here again, large amounts of Roman pottery and small amounts of ceramic building material were found[22]. Unless the view was blocked by trees or hedges the temple would have been clearly

[21] The 2007 fieldwaking was analysed by K. Boyer and the 2008 by J. Hawes.
[22] Pottery and ceramic building material analysed by J.Hawes.

visible from both these buildings. These two buildings south of the river may also have been intervisible although the villa sits on the lower slopes of a slight ridge. Further south, nearly three kilometres away in East Hanney, was another small villa, marked by significant quantities of pottery and ceramic building material (Boyer *et al.* 2007). Finally, nearly two kilometres to the north-west of the temple, was a third small villa where fieldwalking has recovered Roman pottery and ceramic building material (Boyer *et al.* 2008; Evans 1897). The temple is therefore located in a well settled environment.

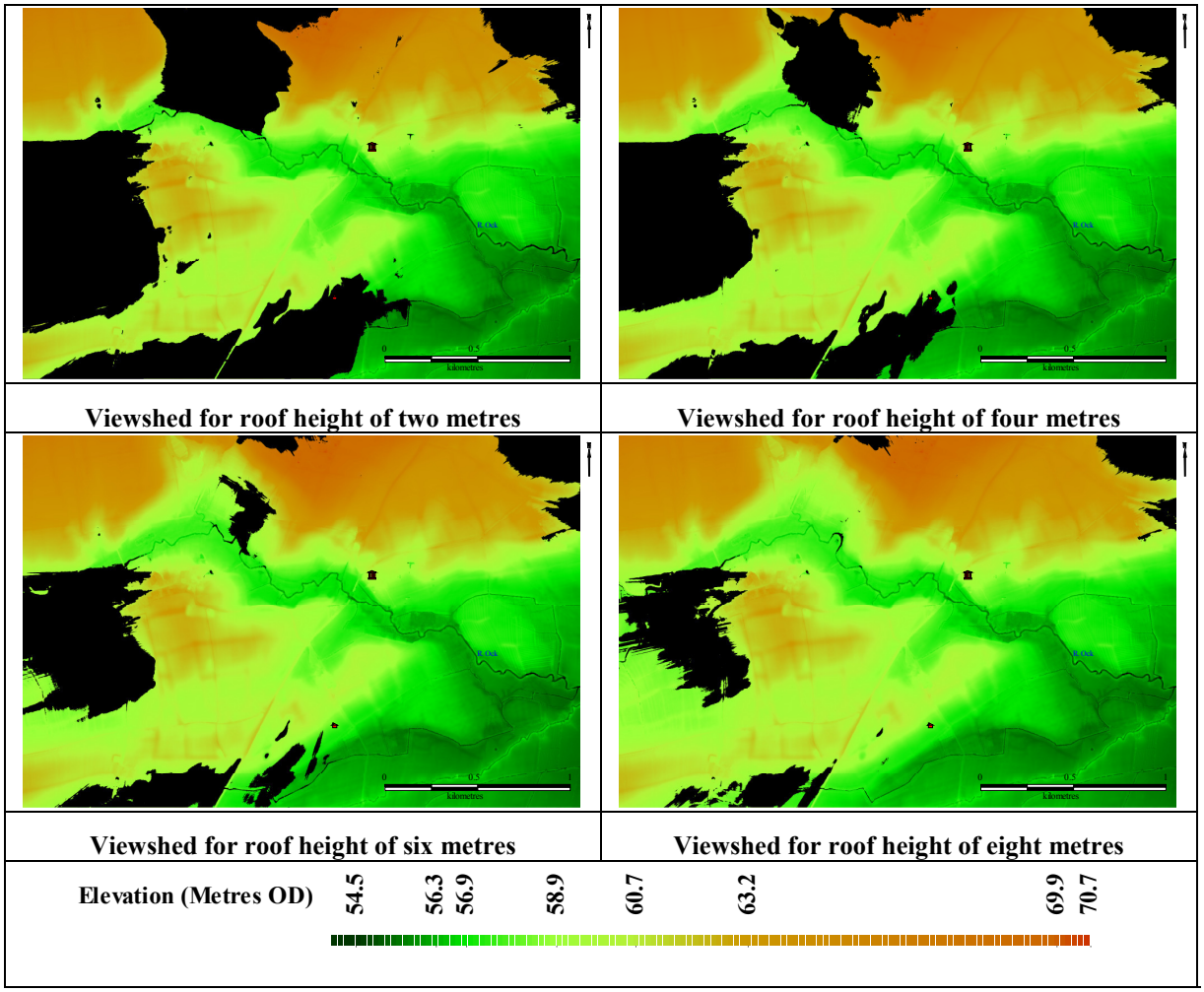


Figure 4.45 – Visibility of the Romano-British Temple at Marcham / Frilford
(For observer at height of 1.5 metres).
(Black indicates the areas from which the temple is not visible.)

Blagg (1986, 20-21) discussed the temples at Gosbecks, Titsey and Frilford as examples of rural Romano-British temples. All three lie close to Roman roads and Titsey, like Frilford, is assumed to be located on a tribal boundary. The temples and their precincts at Gosbecks and Titsey lie to the west of the Roman road, the natural location

for an eastward facing temple. In contrast, the temple and temenos at Frilford lie to the east of the postulated road, presenting their rear aspect to the road traveller. The temple may have been constructed before the road, or the location at Frilford may have been sufficiently important that the road could be ignored. The western annexes may have been added later to improve the appearance of the temple from the road. A further possibility is that there was no Roman road, or at least not in the location of the current road to the west of the temple.

A significant problem with discussing the fine details of the Frilford location is that only the eastern, south-eastern and north-eastern temenos wall survives. It is not clear whether a western wall or boundary ever existed, or whether its remains have been subsequently destroyed. If there was no western entrance, visitors to the temple from the west would have needed to follow the temenos wall around to the east.

The amphitheatre differed from the temple in having its main entrance in the west. This entrance is aligned to the north of the northern temenos wall and would have had direct access to any Roman road in the west. There is, however, no evidence for a trackway or path leading from the amphitheatre entrance to a western road. Indeed, the geophysical surveys illustrated in figures 4.11 and 4.12 show no indication of a road or trackway within Trendles field so the route or routes used by visitors to the site is unclear. Excavation has revealed a path leading eastwards from the temenos entrance (Kamash *et al.* 2010b, 117). The fourth century trench 2 building appears to be parallel with and to the north of this path.

Hingley (1985) discussed the location, function and status of the temple site and these are now considered in turn. He (1985, 209) felt that the clay Vale may have been a largely unpopulated zone representing the tribal boundary between the Atrebates and Dubonni on the more intensively settled Berkshire Downs and Corallian ridge respectively. However, the boundary between the Atrebates and Dubonni is both unknown and long and this argument provides little explanation for the specific location of the temple. Instead, more local reasons should be sought for settlement and activity in this area. In chapter 2 and section 4.7.2 environmental reasons have been proposed for the significance of the location. Surrounding the Noah's Ark Inn there is Corallian limestone on both sides of the river Ock and, as figure 4.44 demonstrates, there is high ground on

both sides of the river Ock. In consequence the land on both sides of the river drains quickly and is therefore suitable for a river crossing either as a ford or bridge.

Recent geophysical survey and fieldwalking has demonstrated early Bronze Age and Iron Age activity to the south of the river Ock. In particular, an early Bronze Age barrow cemetery hints at this area having ritual significance long before the Iron Age. Although the temple may have been deliberately located on or close to a boundary between two Iron Age tribes, the specific location on that boundary was probably determined by the underlying geology and topography selecting it for domestic and ritual activity long before it became an Iron Age tribal or possible Roman civitas boundary. It is therefore argued that the location of the temple and preceding Iron Age enclosure is determined by the ability to cross the river Ock at this point. The visibility analysis has suggested the location of the temple was more strongly influenced by the earlier Iron Age enclosure and proximity to the river Ock than to maximise visibility.

The primary function of the temple is religious: to provide a focus for the ritual and religious activities of a rural, agricultural community. It is probable that an annual cycle of ceremonies and festivals were held to promote and protect the fertility and production of the fields and livestock while the assistance of the gods was sought for justice, revenge, protection or health. The size of the temple complex together with the capacity of the amphitheatre suggests more than just local significance, but its reach is not easy to determine.

Hingley (1985, 211) suggested the extensive settlement associated with the temple could be interpreted as a vicus which performed various social and economic functions in addition to the religious functions provided by the temple. This extensive settlement consists of the enclosure and field systems to the north-west, suggested to be late Roman, at least one building and possible enclosures to the south-west, south of the river Ock, illustrated in figure 4.32, and possibly the villa site at Garford. This occupation near the temple has led Henig and Booth (2000, 68) to describe Frilford as a “major settlement” and to question its perceived specialised religious function. Although there is no evidence for urbanism in terms of densely packed buildings or a rectilinear street system, some slight support for urban functions, or at least management and control, is provided by the cemetery, with it organised rows of graves and general west-east burial alignment.

The marketing role suggested by Hingley is possible and festivals may have been associated with the trade and exchange of local, regional and imported products. A possible interpretation of the enclosure and fields to the north-west of the cemetery could be to manage stock on market days. The location is remote from any large towns and it is not clear what trading or market functions settlements such as Wantage or Abingdon may have performed. Further west at Stanford-in-the-Vale, the Bowling Green Farm site appears to be a small market settlement in the fourth century AD (Chambers 1988).

Turning thirdly to the status of the site: as temples are more usually associated with theatres, Hingley (1985, 210-211) was concerned with the presence of the amphitheatre. Blagg (1986, 20) was less concerned and observes that in Gaul both theatres and amphitheatres served the same functions, "in accommodating crowds assembled to watch a festival celebration". He notes that amphitheatres at Avenche and Sanxay in Gaul were later rebuilt as theatres with stage buildings. More recently, Kamash *et al.* (2010b, 115) have interpreted the amphitheatre as a semi-amphitheatre incorporating some elements of a theatre but retaining the full arena rather than a stage.

Apart from the small number of buildings clustered around the temenos entrance and a possible monumental entrance, the evidence for 'monumental' buildings is limited, an exception being the fourth century trench 2 building. The apparent lack of a bath house may indicate a limit of the status and wealth of the site. However, further buildings may lie undetected in the south towards the river Ock.

A fourth aspect requiring analysis is chronology as the function and status of the site may not have stayed the same throughout the period. Here the new archaeological evidence from Millets Farm plays an important role. Bradford and Goodchild (1939, 34) suggested the temple was constructed about AD 80 to 90 and continued in use until the late fourth or early fifth century. The construction date was revised to the middle or late second century by Harding (1987, 13) and the western annexe to the early fourth century. But these dates are not derived from the temple stratigraphy or associated finds, but rather from the layers of the eastern path and entrance, to which Harding has associated the construction of the temple and annexe. The presence of the amphitheatre caused Hingley to question Harding's late date for the temple (1985, 209).

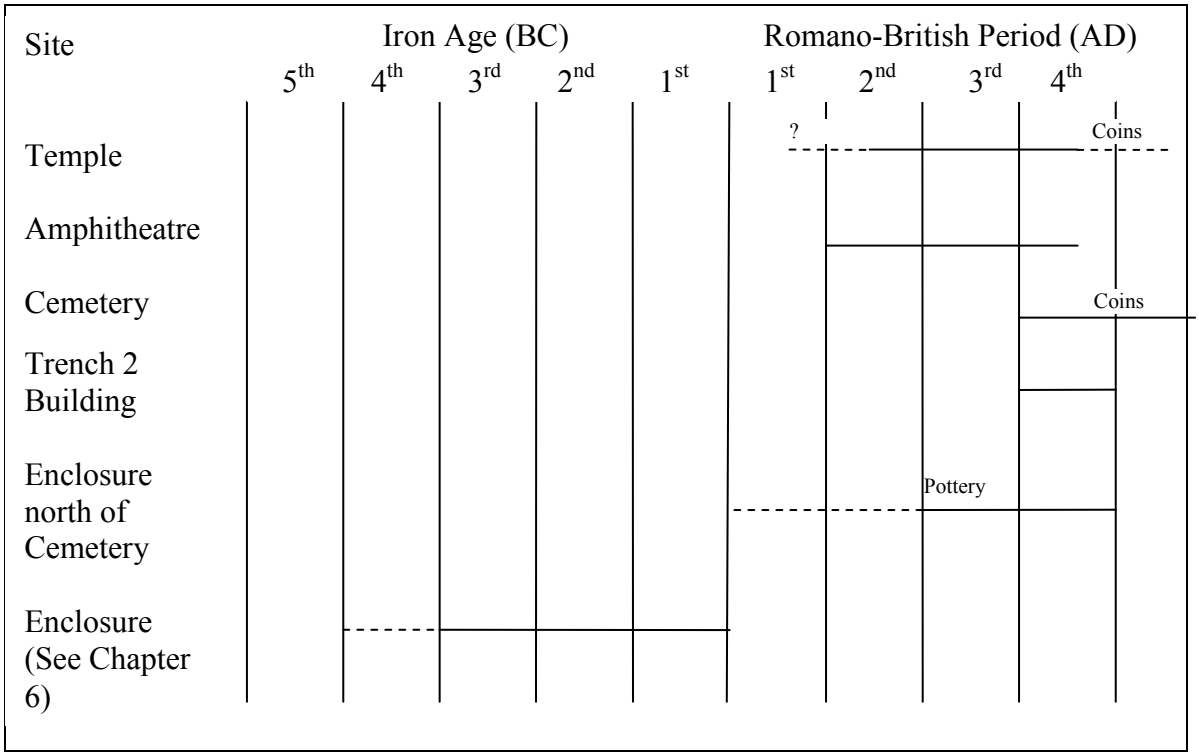


Figure 4.46 – Chronology of the Religious Complex at Marcham / Frilford

The cemetery appears to have commenced during the late third or early fourth century AD and continued at least into the fifth century. The majority of the Romano-British burials are aligned inhumations, oriented approximately west-east. Both Thomas (1981, 234) and Philpott (1991, 226-228) warn that such aligned or managed cemeteries are not necessarily Christian and are more likely to represent general trends in late Roman burial. Nevertheless, the temple complex seems to have acquired a new function: burial. As discussed in section 4.3.1, Romano-British temples are not normally associated with cemeteries. Conceivably a new building, and space, was required to accommodate those involved in the burial rites - the excavation within Trendles field suggests that in the fourth century AD a new building was laid out between the temple and the amphitheatre. The trench 2 building is over 30 metres long and up to 17 metres wide and could have held a substantial congregation (*ecclesia*) (Lock and Gosden 2004, 88-91). Further fourth century AD developments include a new settlement with an ordered enclosure and field systems to the north of the cemetery. Between the cemetery and the new enclosure a building with stone foundations was constructed. It is also possible that the western temple annexes date to the fourth century. All this demonstrates the continuing vitality of the temple complex in the late Roman period.

In addition to Romano-British burials, the cemetery also contained Anglo-Saxon cremations and inhumations. The trial trenching by TVAS produced limited amounts of Saxon pottery in the enclosure ditches and more substantial amounts of pottery further west, particularly in trenches 64 and 74. Trench 64 may have contained a sunken-floored building (Cass and Ford 2008, 9). Although the pottery is only broadly dateable from the sixth to the ninth centuries it may provide a context for the Saxon burial found by Bradford and Goodchild and dated by them to the eighth or ninth century (1939, 38).

This chapter has investigated and described the landscape of the religious complex at Marcham / Frilford. It has demonstrated the temple, amphitheatre and cemetery were located with a densely settled landscape containing, by the fourth century AD, nearby villas and other local centres. The next three chapters consider the nature and development of this wider landscape.

5 People in the Landscape

5.1 Introduction

The next three chapters consider the wider landscape of the Vale of the White Horse surrounding the religious complex. A number of important landscape themes are introduced and the relevant archaeological evidence is presented and discussed.

This chapter analyses the importance and impact of people on the landscape. It does this by considering the effect of population growth throughout the later prehistoric and Romano-British periods. Firstly, an attempt is made to estimate the fourth century AD population in an area of the Vale of the White Horse. The size of the population directly affects the number and size of settlements and is also strongly related to the intensity and nature of agricultural production. Secondly, two themes are introduced to assess the impact of this growing population. The first examines whether this growing population was housed through the expansion of existing settlements, or the formation of new ones, or both. The second analyses continuity of settlements and landscape organisation. Rapid and widespread modifications to the settlement structure may indicate underlying social and economic change. For instance, the development of open fields and nucleated villages from the ninth century and enclosure in the eighteenth century are often linked to population growth, pressure on resources, economic development and the exercise of power. Similar influences may lie behind settlement discontinuities observed in the prehistoric and Roman periods.

5.2 Population

Central to any discussion of the economic and social structure, together with the resulting pattern of land ownership and land holding, is an understanding of the total population and its change over time. Various estimates of the total population of Roman Britain at a specific point in time have been made in recent syntheses. For example, Salway (1981, 542) cites Collingwood's 1929 estimate of 0.5 to 1.0 million, Wheeler's 1930 estimate of 1.5 million, Frere's 1967 estimate of 2 million at the end of the second century and also Smith's 1976 estimate of 5 to 6 million. Salway compares these figures with an estimate of the English population derived from the Domesday Book of between 1.75 to 2.25 million. A more detailed breakdown is given by Frere (1987, 301) who estimated a total population of about 3 million at the end of the second century. A surprisingly limited discussion is given by Mattingly (2006, 356 and 368; 2011, 219) who estimated a total population of around 2 million for the mid-second century and 2.5 million in the fourth century AD.

Equally uncertain is when the maximum population was reached. In the wider empire the pressures of civil war, barbarian invasions, economic uncertainty and disease during the third century AD may have led to a fall in numbers with consequent manpower shortages in the army and agriculture (Sinnigen and Boak 1977, 401). There is, however, no direct evidence for population decline at this period in Roman Britain and Mattingly's figures suggest growth into the fourth century AD whereby increased numbers in the countryside more than compensated for falls in the army and urban population.

Possibly the best discussion of the Romano-British population is given by Millett (1990a) who considers the population in the first half of the fourth century, when the population was most probably at its peak even if the urban population was already in decline. Of most interest is his methodology for constructing an estimate of the rural population. Firstly, he used published surveys to construct an estimate of 0.8 ± 0.5 Romano-British sites per square kilometre. The total number of such sites in England and Wales was then calculated using an estimate of 116,000 square kilometres for the inhabitable area. Secondly, he proposed a lower bound of 20 and upper bound of 50 people per site as containing the likely average of occupants per site. This yields a lower estimate of 1.8 ± 1.2 million people and an upper estimate of 4.6 ± 2.9 million. Clearly

the range is very large but he argues for the plausibility of the mid-range value of 3.3 million rural inhabitants, which forms 90% of his total estimated population of 3.7 million (Millett 1990a, 181-185).

There are numerous weaknesses in this approach. These include the validity of the estimate for the number of sites per square kilometre, the lack of differentiation between sites, regional variation in visibility of sites, contemporaneity of sites and the upper and lower bounds chosen for the estimate of the average number of people per site. Nevertheless, the clear methodology allows its results to be compared with known archaeological data and thus conclusions can be drawn as to whether the methodology is incorrect or inappropriate, or whether the known archaeological data is likely to be incomplete.

But these population estimates tend to be for a specific date and largely ignore the rate and effect of population change throughout the late Iron Age and Roman periods. Perhaps the first to attempt a more dynamic view was Fowler (1978, 5-7) who, starting from an estimated population in the tens of thousands during the second millennium BC, argued for a probable range of two to three million in the second century AD based on Frere's 1967 estimate. To join these two estimates a substantial rise in population during the first millennium BC is required. He suggested the population may already have reached one million by the time of Caesar with rapid growth in the late Iron Age and Roman periods. Importantly, Fowler (1978, 7) drew attention to the effects such rapid population growth would have on the landscape with changes to settlement patterns and types, the management and demarcation of territorial boundaries, and in the scale and type of food production.

Fowler's population graph was reworked by Darvill (1987, 186) and part of Darvill's diagram is reproduced in figure 5.1. Both Fowler and Darvill emphasise the scale of the population increase throughout the first millennium BC – Fowler's graph includes more growth in the Roman period whereas Darvill places more of the population change into the Iron Age and less in the Roman period. Millett's estimate of 3.7 million in the fourth century AD lies within the possibility band, while Mattingly's figure of 2.5 million lies below it.

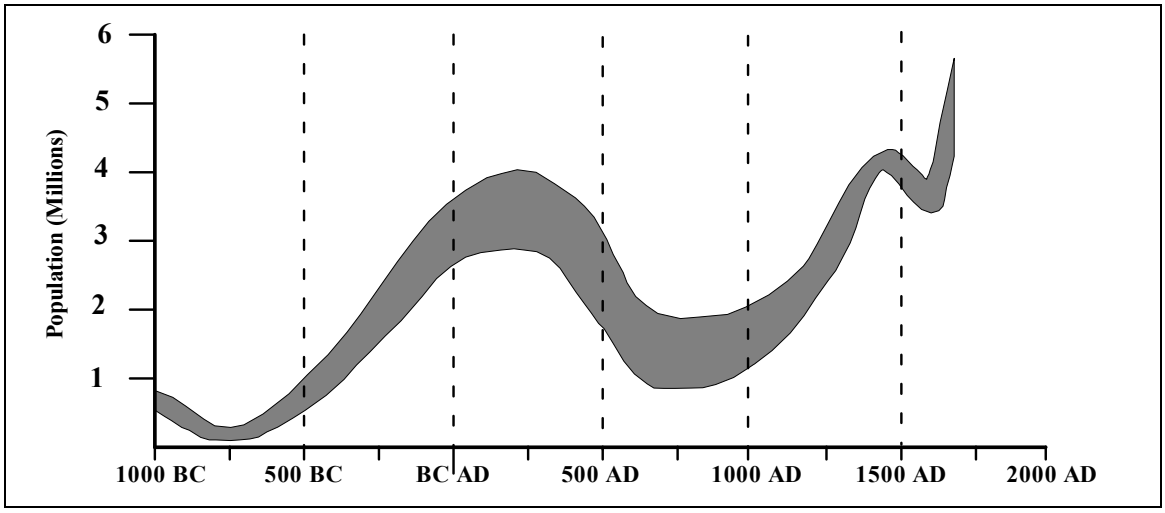


Figure 5.1 – A possible population curve for Britain since 1000 BC (band of possibility) (Based on Darvill 1987, Figure 109)[1]

Millett's methodology is used here to estimate the Romano-British population on the basis of the archaeological data in nineteen parishes in the Vale of the White Horse. These parishes, illustrated in figure 5.2 and listed in Catalogue 1, have been selected for a number of reasons. They surround the rural Romano-British temple site adjacent to the river Ock at Marcham/Frilford and follow the course of the river from Stanford-in-the-Vale in the west to Marcham in the east. The parishes are distributed across a range of soils and geology types which are likely to affect the economic potential for settlement and hence for population. The solid geology includes Oxford Clay beside the river Thames in the north, the sandstones and limestones of the Corallian ridge between the rivers Thames and Ock, and Kimmeridge Clay south of the river Ock. Drift gravel deposits are located in the south-east overlying Kimmeridge and Gault Clay. The available archaeological evidence includes the aerial photographic mapping of much of this area by English Heritage together with the information contained in HER and NMR records. The amount of such material differs substantially between parishes.

Confirmation that Millett's estimate of 0.8 ± 0.5 Romano-British sites per square kilometre is an appropriate starting point is provided by Miles (1982a) who observed that the density of Romano-British sites on the gravel terraces of the Thames Valley was between 0.7 and 1 per square kilometre, while fieldwalking surveys of Kingston Bagpuize, Frilford, Garford and Stanford-in-the-Vale obtained densities of about one Romano-British site per square kilometre (1982a, 63).

[1] For similar graphs see Cunliffe (1978, 16, figure 7) and Hingley (1989, 4, figure 1).

Although the great majority of the population of these nineteen parishes would primarily have been engaged in agriculture, it is probable some may have been employed either part-time or full-time in industries such as pottery, iron working and quarrying. Social variation is indicated in figure 5.2 by including the locations of known or probable villas within the Vale as recorded by Oxfordshire SMR data (red houses) and NMR Pastscape data (green houses). The fourth-century Romano-British rural population of these nineteen parishes would have included a small number of moderately wealthy people who could afford to build relatively substantial houses in a Roman style incorporating tiled roofs and heated rooms. A small priestly or religious element within this population is attested by the temple and amphitheatre site at Marcham/Frilford.

5.2.1 Reconstructing the Romano-British Population.

The first accurate attempt to measure the population of Britain occurred during the Napoleonic wars in the census of 1801. It is useful to consider the 1801 population of these nineteen parishes as a probable upper bound on the Romano-British population. As these parishes were still substantially rural in 1801 it is likely that the agricultural basis of life was not too dissimilar from Roman Britain, even though the social structure, land ownership and tenure patterns will have been very different. The results are presented in table 5.1 where it can be seen that the areas of most of the modern civil parishes are much the same as in 1801, although 40 hectares have been transferred from Frilford to Marcham. There is more significant variation in Drayton and Sutton Courtenay: in the latter, land has probably been transferred to the modern urban area of Abingdon, while Drayton appears to have incorporated detached elements of Wantage and Sutton Courtenay. In spite of these minor difficulties, it is clear that the 1801 population of these parishes is of the order of 7,100 and this provides a useful upper bound for the likely Romano-British population.

Domesday Book provides an estimate of the population in 1086. This is a much more difficult source to interpret as it is known that much was missed by the clerks sent to collect the data: any estimate of population is likely to be an under-estimate of the actual late eleventh-century population. Nevertheless, from figure 5.1, it may provide a lower bound for a likely Romano-British population and the results are illustrated in table 5.2.

The number of people given for each parish is the sum of the villeins, bordars and serfs listed for each manor within the parish and an estimate of the total population has been made by multiplying this by five as an estimate of household size (Darby 1977, 87-88). Table 5.2 suggests that Drayton has too little land and too small a population. A probable explanation is that its land and people have been included in another manor, most probably within the parishes of Sutton Courtenay or Steventon. If this is the case, then an overall total of about 3800 is plausible.

This preliminary work suggests we might expect the fourth-century Romano-British population of these nineteen parishes to lie between 3,800 and 7,000. If an analysis of the archaeological data was to suggest a figure of 2,000 or less we might conclude our archaeological data was incomplete. On the other hand, if a figure of 7,000 or more was suggested, we might conclude our methodology was defective.

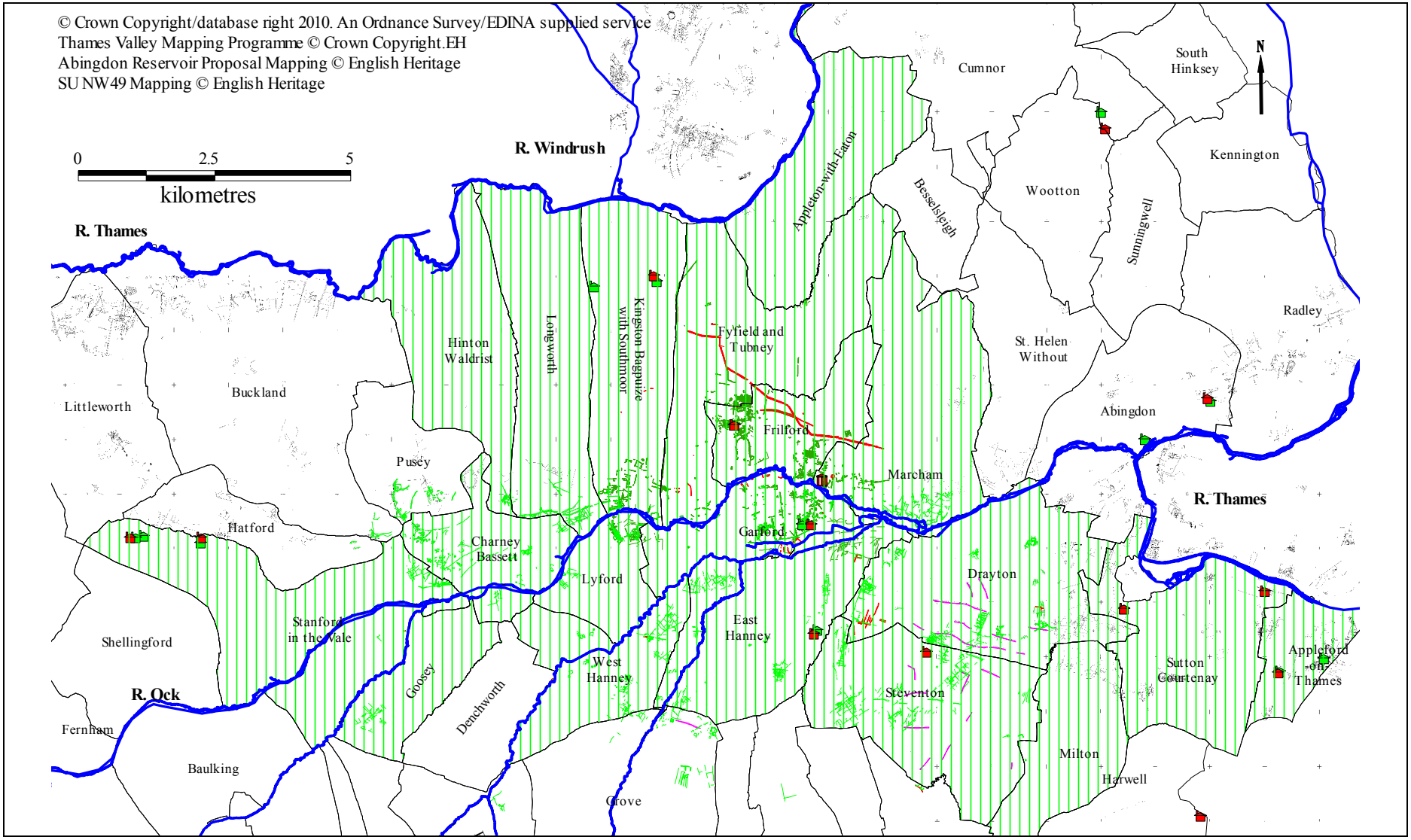


Figure 5.2 – Nineteen Civil Parishes in the Vale of the White Horse (See Catalogue 1)

Temple Villa (HER) Villa (NMR)

Parish	1801 Area (acres)	1801 Area (ha)	Modern Area (ha)	1801 Population	1801 Pop / ha
Appleford	862	349.0	297.1	200	0.67
Appleton	2077	840.9	838.2	341	0.41
Charney Bassett	1209	489.5	488.7	216	0.44
Drayton	1851	749.4	1070.2	484	0.45
East Hanney	2120	858.3	890.2	535	0.60
Frilford	1240	502.0	463.7	148	0.32
Fyfield and Tubney	2760	1117.4	1110.7	394	0.35
Garford	1055	427.1	433.1	183	0.42
Goosey	968	391.9	390.7	139	0.36
Hinton Waldrist	2016	816.2	812.4	275	0.34
Kingston Bagpuize and Southmoor	2163	875.7	873.6	421	0.48
Longworth	2291	927.5	928.7	401	0.43
Lyford	773	313.0	313.0	124	0.40
Marcham	2422	980.6	1017.2	607	0.60
Milton	1466	593.5	592.3	310	0.52
Stanford-in-the-Vale	2927	1185.0	1181.5	607	0.51
Steventon	2401	972.1	969.2	537	0.55
Sutton Courtenay	2292	927.9	834.5	874	0.94
West Hanney	1383	559.9	538.5	330	0.61
Total	**34276**	**13876.9**	**14043.5**	**7126**	**0.51**

Table 5.1 – Population in 1801 (Victoria County History of Berkshire, Volume 2)

Parish	Land for Ploughs	Meadow (acres)	People	Estimated Population	1086 Pop / ha
Appleford	6.5	60	37	185	0.62
Appleton	18.0	50	36	180	0.21
Charney Bassett	6.0	0	20	100	0.20
Drayton	2.5	13	10	50	0.05
East Hanney	15.0	230	56	280	0.31
Frilford	10.0	100	26	130	0.28
Fyfield and Tubney	20.0	127	60	300	0.27
Garford	7.0	36	26	130	0.30
Goosey	9.0	135	17	85	0.22
Hinton Waldrist	9.5	52	32	160	0.20
Kingston Bagpuize and Southmoor	8.0	60	40	200	0.23
Longworth	8.0	100	30	150	0.16
Lyford	4.5	40	22	110	0.35
Marcham	10.0	100	34	170	0.17
Milton	24.0	374	86	430	0.73
Stanford-in-the-Vale	20.0	318	51	255	0.22
Steventon	20.0	268	68	340	0.35
Sutton Courtenay	20.5	300	74	370	0.44
West Hanney	9.0	24	37	185	0.34
Total	**228.0**	**2387**	**762**	**3810**	**0.27**

Table 5.2 – Estimated Population in 1086 (Morgan 1979, Domesday Book - Berkshire)

5.2.2 The Archaeological Evidence

The archaeological evidence for these nineteen parishes has been analysed to see whether it provides support for a site density of 0.008/ha (0.8 per square kilometre) and 20 or 50 people per site. This has produced a qualitative estimate of support ranked as little or none, some, reasonable or considerable as listed below in table 5.3. The analysis and qualitative estimate is based on the number of prehistoric and Romano-British entries in the HER and NMR Pastscape records, cropmark evidence from aerial photographic mapping programmes, and published excavation records.

Parish	Modern Area (ha)	Sites at 0.008/ha	20 per site	50 per site	Archaeological evidence	Predominant Geology
Appleford	297.1	2.5	50	125	Considerable	Gravel
Appleton	838.2	7	140	350	Little or none	Clay
Charney Bassett	488.7	4	80	200	Considerable	Corallian
Drayton	1070.2	9	180	450	Considerable	Gravel
East Hanney	890.2	7	140	350	Considerable	Gravel/Clay
Frilford	463.7	4	80	200	Considerable	Corallian
Fyfield and Tubney	1110.7	9	180	450	Some	Corallian
Garford	433.1	3.5	70	175	Considerable	Corallian/Clay
Goosey	390.7	3	60	150	Little or none	Clay
Hinton Waldrist	812.4	6	120	300	Reasonable	Corallian/Clay
Kingston Bagpuize	873.6	7	140	350	Reasonable	Corallian/Clay
Longworth	928.7	7	140	350	Reasonable	Corallian/Clay
Lyford	313.0	2.5	50	125	Some	Clay
Marcham	1017.2	8	160	400	Considerable	Corallian
Milton	592.3	5	100	250	Some	Gravel/Clay
Stanford-in-the-Vale	1181.5	9.5	190	475	Considerable	Corallian
Steventon	969.2	8	160	400	Considerable	Gravel/Clay
Sutton Courtenay	834.5	7	140	350	Considerable	Gravel
West Hanney	538.5	4	80	200	Some	Clay
	14043.5	**113**	**2260**	**5650**		

Table 5.3 – Estimated Population in the Fourth Century AD

Two parishes, Appleton and Goosey contain almost no evidence for Roman period occupation. In both the soil is dominated by clay and this may either affect its suitability for agriculture or settlement in this period, or it may hinder the formation of cropmarks to make this settlement visible. A further four parishes have some, but limited, evidence: Fyfield and Tubney, Lyford, Milton and West Hanney. The latter three parishes are also dominated by clay and the settlement evidence tends to be located on alluvial deposits or the gravel terraces of the river Thames. Three parishes, Hinton Waldrist, Kingston

Bagpuize and Longworth have a reasonable amount of archaeological evidence for Romano-British settlement. These three parishes are adjacent to one another and run from the river Thames in the north to the river Ock in the south. Ten parishes, or over half the survey, contain considerable evidence for Romano-British settlement. This provides strong support that the late Roman population in these nineteen parishes was between about 2,500 and 5,500. This is still a wide range but does support the belief that the late Roman population was similar in size, or possibly larger than the population in 1086, here estimated to be approximately 3,800.

To demonstrate the variability in the archaeological evidence available for estimating population numbers four parishes are discussed in more detail. Two of these, Appleford and Appleton, are located beside the Thames and have very different archaeological potential. The other two parishes discussed are East Hanney, on the clay, and Hinton Waldrist, on the Corallian ridge. The details for all nineteen parishes analysed are given in Catalogue 1.

5.2.2.1 Appleford

Gault clay underlies all of Appleford but more relevant to the settlement archaeology are the drift deposits of the Thames terraces as illustrated in figure 5.3. Sands and gravels of the third or Wolvercote terrace are found in the south of the parish while to the north is an extensive area of the first or Northmoor terrace. Alluvial deposits are restricted to the extreme north close to the river Thames.

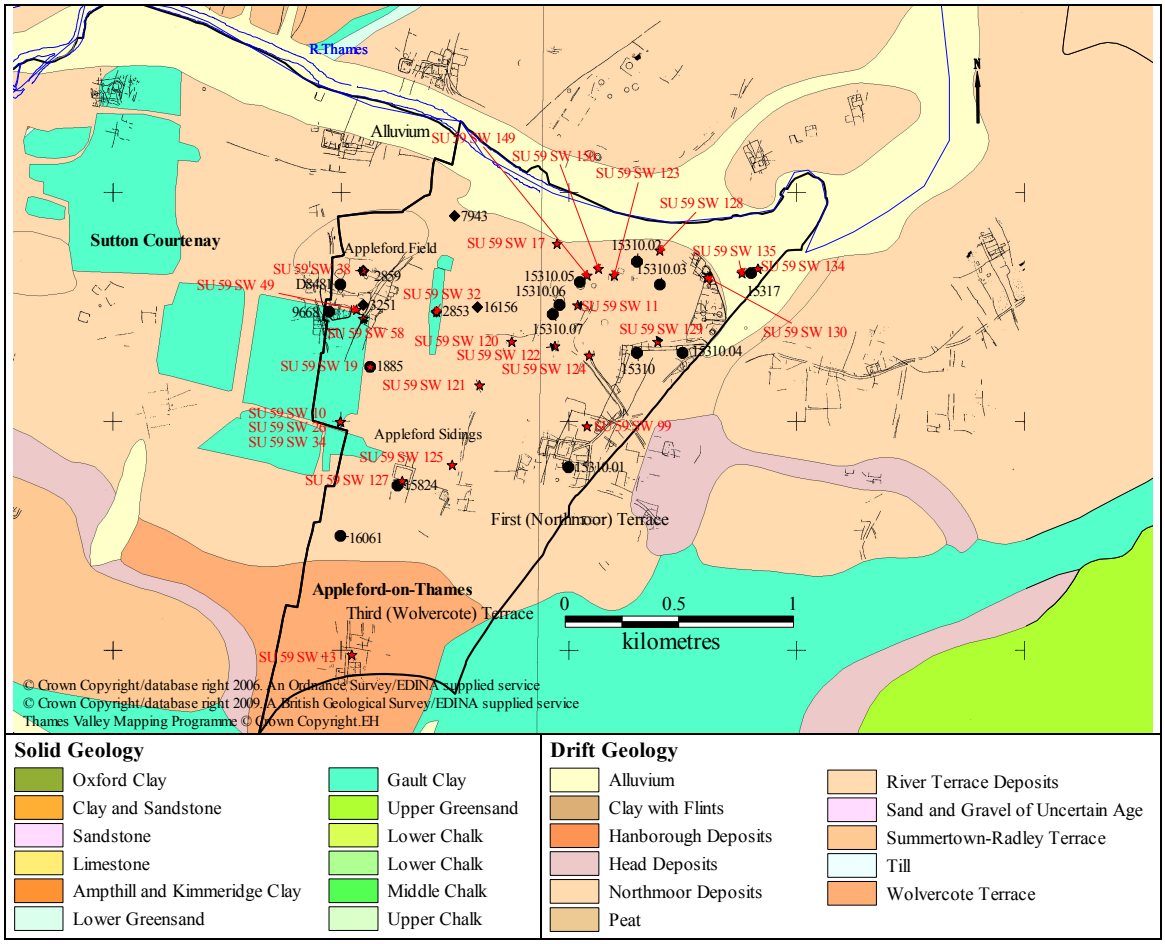


Figure 5.3 – Geology and the Prehistoric and Romano-British Archaeology of Appleford (British Geological Survey Sheets 253 – Abingdon and 254 -Henley)

The archaeological data for the prehistoric and Romano-British periods for Appleford is rich with 24 HER entries and 26 NMR entries and these together with the cropmark evidence from the Thames Valley Mapping Programme are also shown in figure 5.3. Artefactual evidence includes a fourth century coin hoard contained in two pots discovered by ploughing in 1954 (Kraay 1955; Robertson 2000, 303-305; HER 2859, SU59 SW 38), while extensive gravel quarrying in the 1960s uncovered a collection of Iron Age currency bars (Brown 1971, HER 3251, SU59 SW 58) and a pewter hoard (Brown 1974, HER 9668). These three finds lie within an extensive cropmark of an Iron

Age and Romano-British settlement with trackways, a field system and a late or post-Roman cemetery at Appleford Field in the north-west of the parish as illustrated in figure 5.4 (Hinchliffe and Thomas 1981, HER D8481, SU59 SW 49).

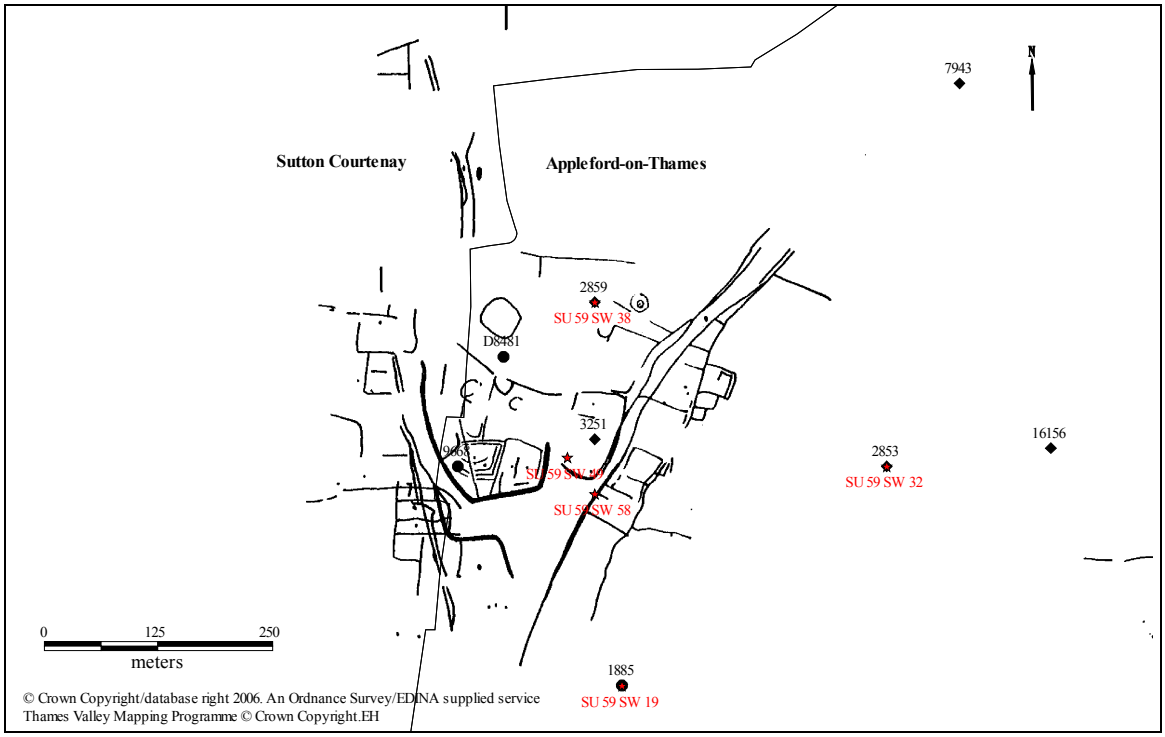


Figure 5.4 – The Prehistoric and Romano-British Archaeology of Appleford Field (Hinchliffe and Thomas 1981)

South-east of Appleford Field is the cropmark of an undated trackway and enclosures (SU59 SW 125) and the cropmark of a possible early Roman villa enclosure and ditches at Appleford Sidings (Booth and Simmonds 2005; SU59 SW 127; HER 15824). Further east is an extensive cropmark suggesting a multiphase site containing ditches, enclosures, hut circles and a possible villa (SU59 SW 99; HER 15310.01). The cropmark evidence for these sites is shown in figure 5.5 and the evidence for the villas is discussed in more detail in chapter 7.

Millett's estimate of 0.008 sites per hectare suggests 2.5 sites in the 297 hectares of Appleford. The cropmark evidence supports this number of sites, although clearly they may not all be contemporary. In addition, sites such as Appleford Field and SU59 SW99 appear compatible with a population estimate of 20 to 50 people per site. Moreover, the presence of two coin hoards, the pewter hoard and two possible villa locations indicates the accumulation of both portable and fixed wealth, particularly in the fourth century. Therefore the archaeological evidence to support a postulated late Roman population in

the range 50 to 125 seems considerable. Indeed, the population is likely to have been greater. Tables 5.1 and 5.2 indicate that Appleford had one of the highest population densities in both 1801 and 1086.

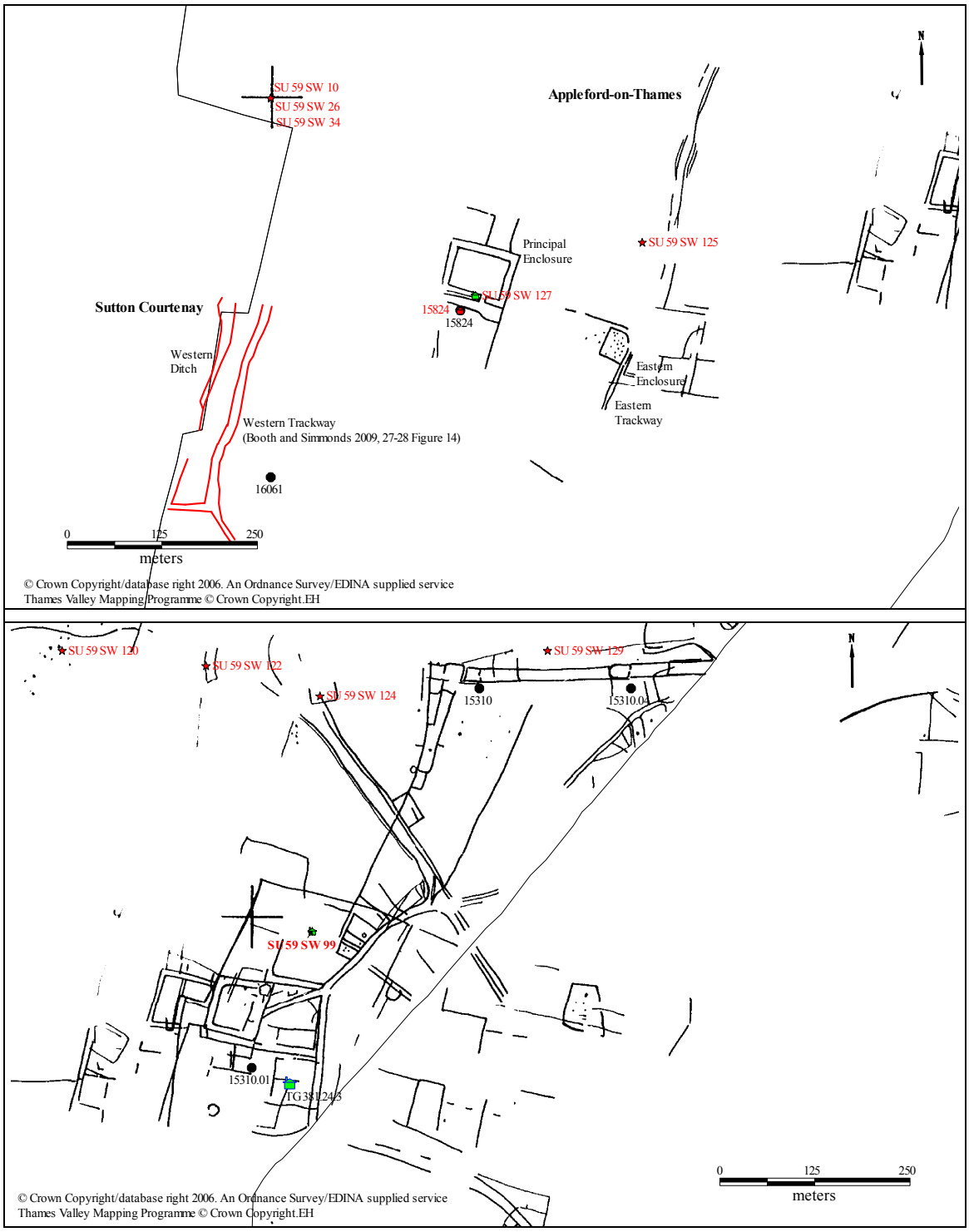


Figure 5.5 – Possible Romano-British Villas in Appleford
SU59 SW 127, Appleford Sidings (Top) and SU59 SW 99 (Bottom)

5.2.2.2 Appleton

Appleton lies on the south and east of the river Thames as shown in figure 5.6 and provides a useful contrast to Appleford. Whereas there are extensive areas of alluvial and gravel terrace deposits north and west of the river with cropmarks extending over the first or Northmoor terrace, south and east of the river the solid geology dominates. East of the river is a band of Oxford clay and to its east is an area of sandstone and mudstone of the Corallian ridge. The geology east of the river Thames is clearly less favourable to cropmarks than the gravels of the west. Although the river may mark a boundary between an intensively settled area to the north and west and a largely empty area to the south and east, it is perhaps more likely there is a deficiency in the available archaeological evidence.

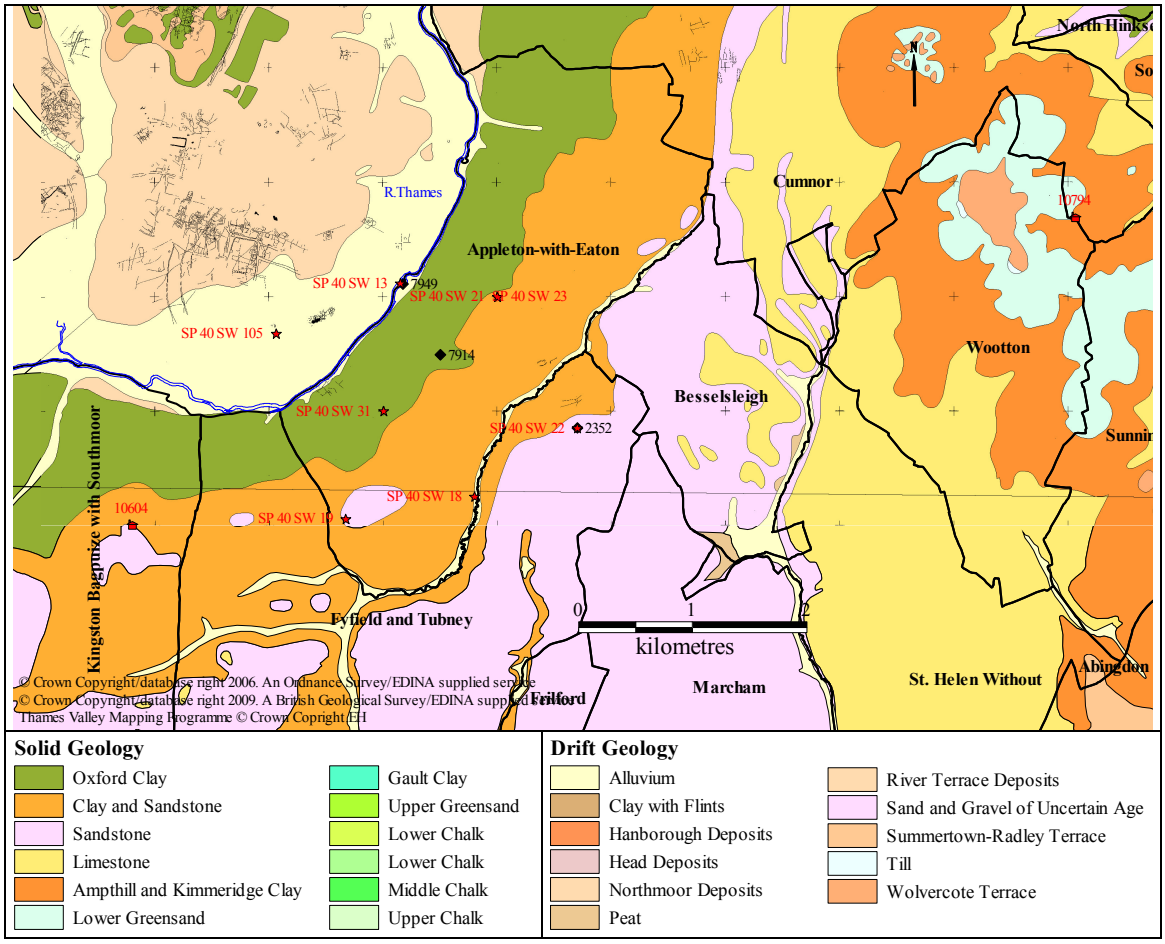


Figure 5.6 – Geology and the Prehistoric and Romano-British Archaeology of Appleton (British Geological Survey Sheets 236 - Witney and 253 - Abingdon)

Only two small areas of cropmarks are shown in the Thames Valley Mapping Programme and neither have Pastscape entries. The first lies in the south-west near the river Thames and the second in the east near the boundary with Tubney. Neither can be

dated. The limited cropmark evidence is matched by very few HER and NMR references to prehistoric and Romano-British finds and features as shown in figure 5.6. Of five HER entries one is in Tubney (2352) and the other four describe small finds of Roman pottery and other artefacts. The eight NMR references also mostly relate to nineteenth century artefact finds with only one, SP40 SW 105, from the Thames Valley Mapping Programme, but the grid reference for this is west of the Thames and not for Appleton.

Millett's estimate of 0.008 sites per hectare suggests seven sites in the 839 hectares of Appleton. For 20 and 50 inhabitants per site this would indicate a population of 140 or 350 people. It is clear that the available archaeological evidence provides little support for this. The contrast between Appleford and Appleton is apparent in tables 5.1 and 5.2. In 1801 the population density in individuals per hectare was 0.67 in Appleford and 0.41 in Appleton. The difference is even greater in 1086: 0.62 in Appleford and 0.21 in Appleton.

Although it is likely that the settlement density in the fourth century AD in Appleton was lower than in Appleford, it is perhaps also reasonable to suggest the archaeological evidence is incomplete. In particular, the lack of aerial photographic evidence from the Thames Valley Mapping Programme may be due to the Oxford clay inhibiting cropmarks.

Useful evidence for Iron Age and Romano-British settlement on the eastern side of the river Thames comes from Farmoor reservoir lying a short distance to the north of Appleton in Cumnor parish. The northern part of the reservoir lies on the Oxford clay but in the south-west it encroaches on alluvium and a small band of first or Northmoor terrace. Excavations in the 1970s detected Iron Age and Roman occupation (Lambrick and Robinson 1979, 134-140). In both periods the environment appears to have been grassland but with seasonal occupation in the Iron Age and more permanent settlement in the Roman period. Figure 5.7 illustrates the Farmoor reservoir area with Iron Age features at D8341 and D10601 and a Romano-British farmstead at D8342.

Although Lambrick (1992, 78) has argued that cropmarks may not provide a reliable indicator to prehistoric and Romano-British settlement as they failed to detect the middle Iron Age farmsteads at Farmoor beneath a metre of alluvium, it remains surprising there is so little other evidence of Romano-British settlement at Appleton. Goosey and

Denchworth, situated on the Kimmeridge clay of the Vale of the White Horse also provide little or no settlement evidence, and are not covered by a metre of alluvium.

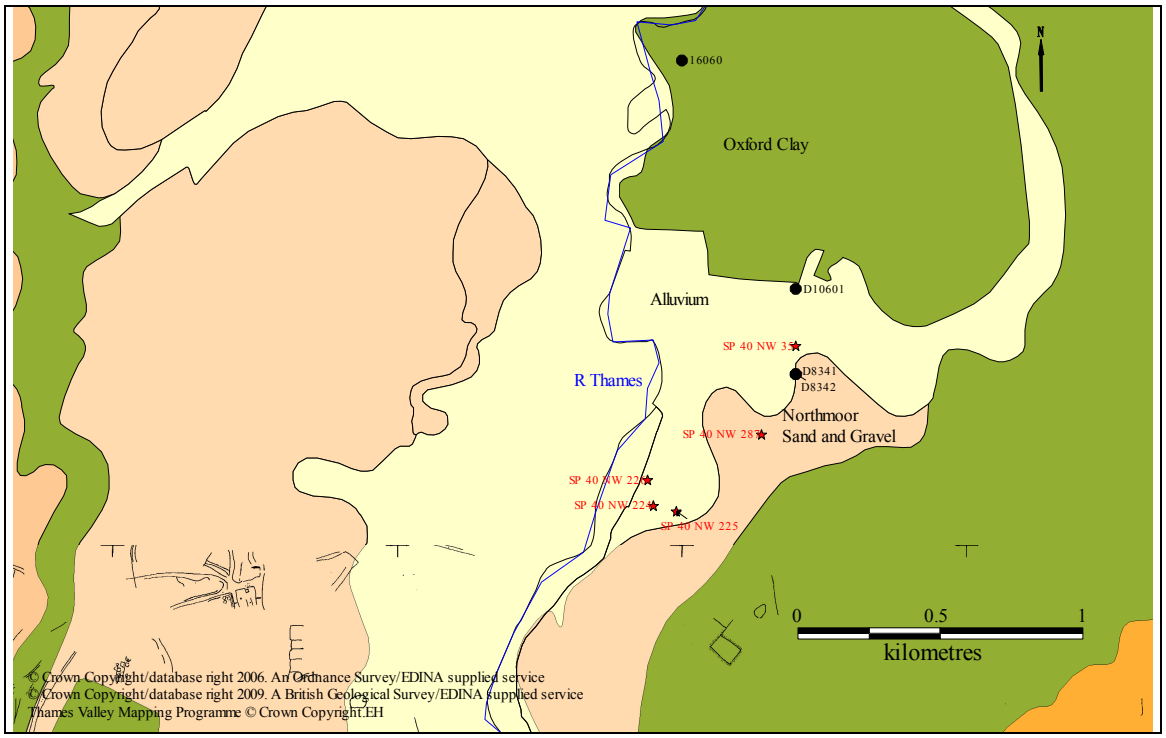


Figure 5.7 – The Geology and Archaeology of Farmoor (Cumnor)

5.2.2.3 East Hanney

Apart from a small area of lower greensand in the south-east, all of East Hanney lies on Kimmeridge clay. The drift geology is more complicated as shown in figure 5.8. Alluvial deposits are found in the north-west where the Letcombe and Childrey brooks converge and also in the east as a narrow strip adjacent to Cow Common brook. Northmoor deposits of the first terrace are in the east and south-west while in the centre of the parish is a north-south band of Summertown-Radley material of the second terrace.

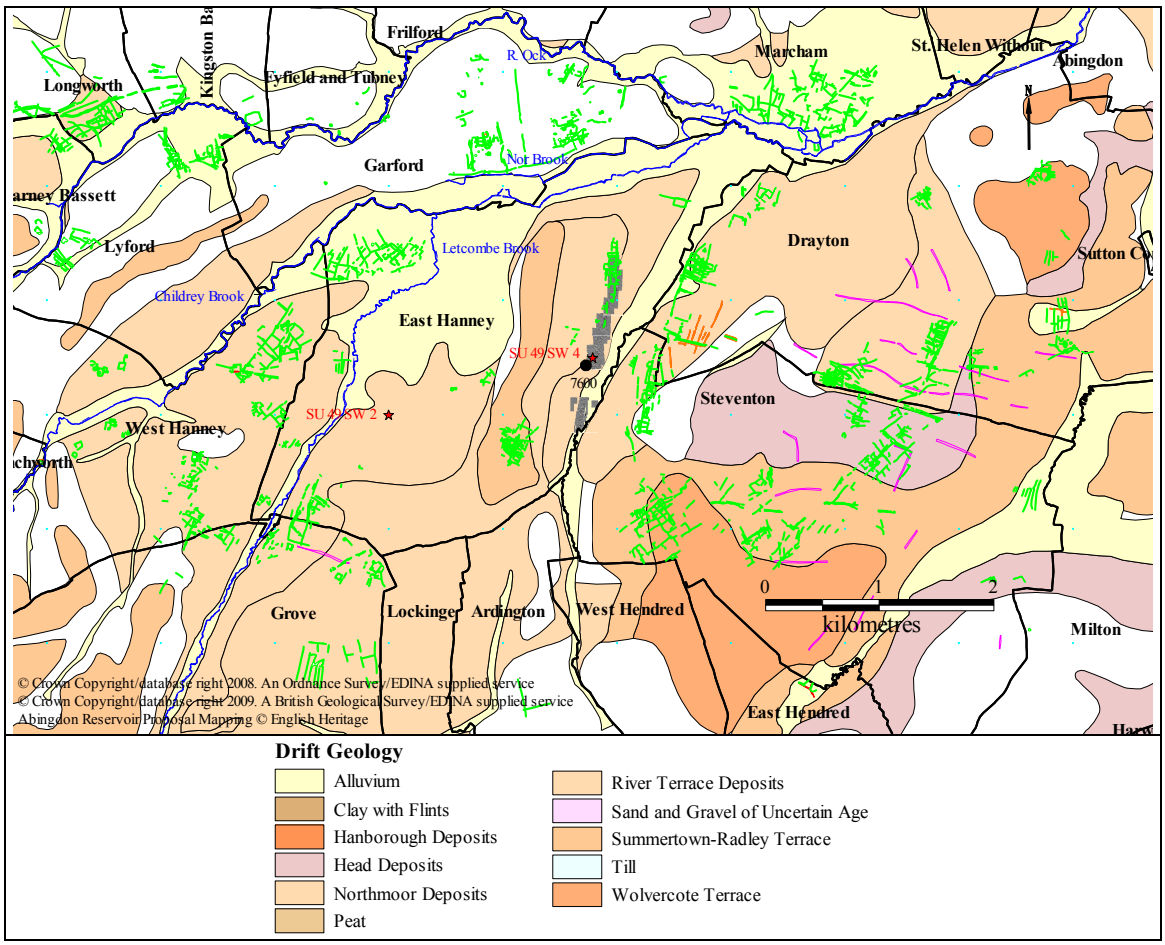


Figure 5.8 – Drift Geology and the Prehistoric and Romano-British Archaeology of East Hanney (British Geological Survey Sheet 253 - Abingdon)

The archaeological data for the prehistoric and Romano-British periods for East Hanney is also illustrated in figure 5.8. The HER and NMR references to prehistoric and Romano-British finds or features are meagre indeed. HER reference 7600 describes a villa site where Roman pottery and tiles were found in the 1960s. NMR reference SU49 SW 4 refers to the same site, while SU49 SW 2 refers to a find of a gold coin of Cunobelin. The literature relating to the villa is limited to a reference to sherds of second and third century AD Romano-British pottery and other material found east of the village

of East Hanney (Case and Sturdy 1961, 132) and the subsequent discovery of further Roman material by Wantage District Field Club from a small two-day excavation undertaken in 1967 (Rutland and Thomas 1968). Pottery extending from the first to the third or fourth centuries was recovered, together with one Saxon sherd.

Initially therefore, the archaeological evidence for Romano-British settlement in East Hanney would appear only marginally better than at Appleton. However, the extensive archaeological investigations undertaken in the 1990s for the Thames Water Abingdon Reservoir proposal have added important new evidence. This consists primarily of aerial survey mapping undertaken by English Heritage and the examination of over twenty sites in Drayton, East Hanney and Steventon with trial trenches. More recently, areas of East Hanney have been subjected to fieldwalking and geophysical survey as part of this thesis. In consequence a more substantial body of archaeological material now exists for East Hanney.

The villa at HER 7600 was investigated in 2006 through fieldwalking (Boyer *et al.* 2007) when substantial amounts of Romano-British pottery and ceramic building material (CBM) were collected and mapped to show a clear distributional pattern as illustrated in figure 5.9. The area with the highest concentration of pottery and ceramic building material appears to be related to a feature visible in the geophysical survey to the right of a long linear ditch and which may be the site of a small villa. Examination of the material in Reading Museum obtained from the fieldwalking and excavation undertaken in the 1960s confirmed the interpretation of a Roman building, with numerous fragments of roofing and hypocaust flue tiles and one small piece of painted wall plaster.

Following this initial investigation the geophysical survey area was considerably enlarged both northwards and southwards as illustrated in figures 5.10 to 5.12 which show a ditch, track or holloway running north-south with rectangular and circular enclosures to the west.

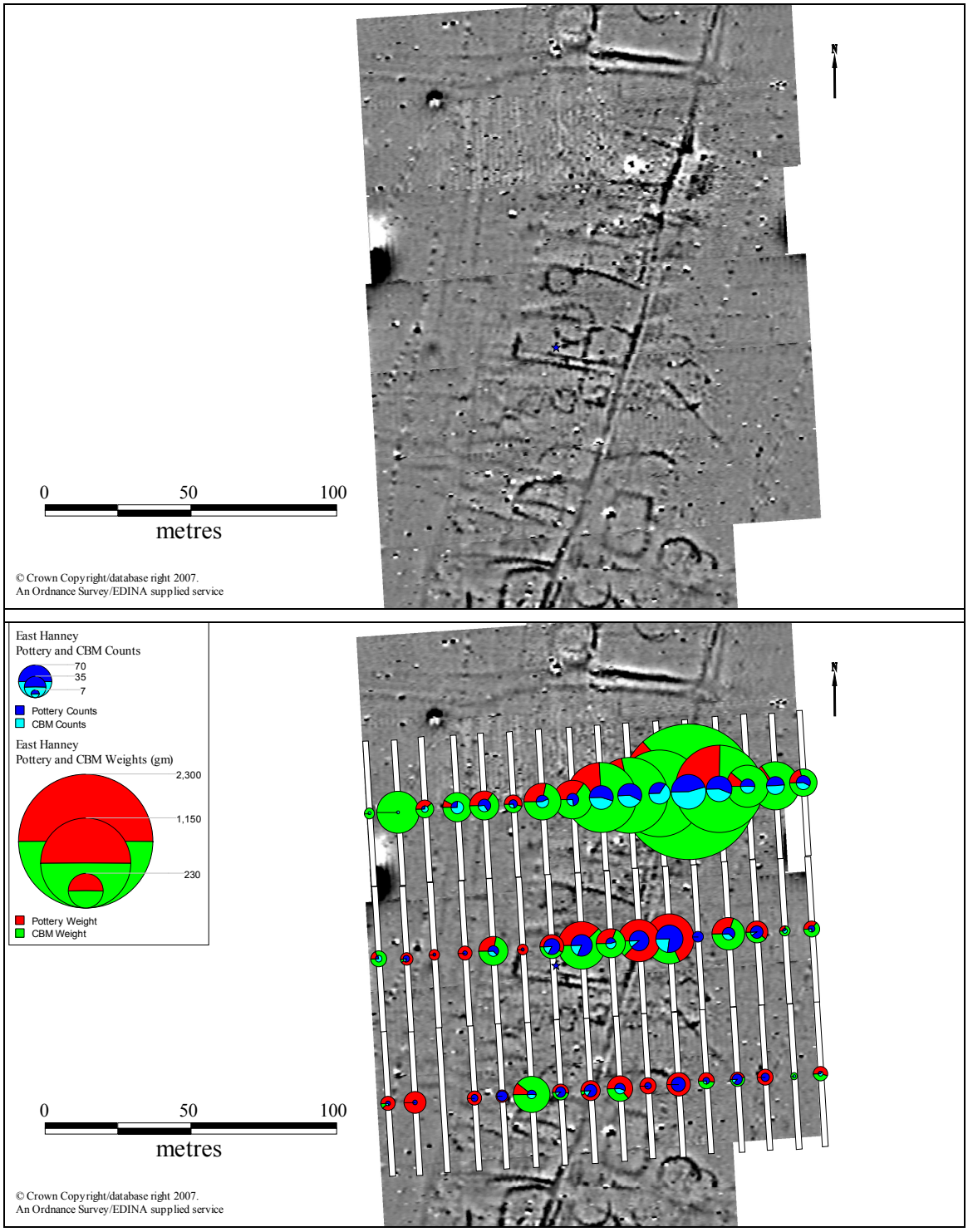


Figure 5.9 –Geophysical Survey (Top) and Fieldwalking (Bottom) in East Hanney Pottery and CBM by Weight and Count (Boyer 2006,75-76)

Cropmarks mapped by the Abingdon Reservoir proposal are illustrated in figure 5.8. In the north-west an extensive system of enclosures and possible trackways runs towards West Hanney and there are smaller areas of cropmarks further south and to the west of the Letcombe brook. East of the brook, in the south of East Hanney, a further complex of cropmarks extends into Grove. On the eastern side of East Hanney there are cropmarks

both north and south-west of the villa at HER 7600. The dating of these cropmarks is clearly imprecise, but Winton (1999) suggests prehistoric, Iron Age or Romano-British dates for the cropmarks in the north-west and a Roman date for those in the east, adjacent to the villa. More reliable dating evidence has been obtained from the excavation of seven sites in East Hanney (Hearne 2001), five of which have a Romano-British element as listed in table 5.4.

Site	Excavator	Bronze Age	Iron Age	Romano-British
110	Thames Valley Archaeological Services		Yes	Yes
181	?		Yes	
196	Cotswold Archaeological Trust		Yes	Yes
400	Oxford Archaeology		Yes	Yes
409	Oxford Archaeology		Yes	
416	Cotswold Archaeological Trust		Yes	Yes
417	Oxford Archaeology	Yes		Yes

Table 5.4 – Sites in East Hanney listed by Hearne (2001)

Sites 196, 110 and 416 lie within the area of the recent geophysical survey and correspond to a long linear settlement over one kilometre in length. Site 196 is the most northerly and is defined by an extensive cropmark over 600 metres in length. The cropmarks, the location of the seven evaluation trenches and recent geophysical survey are illustrated below in figure 5.10. The evaluation identified a multi-phased Romano-British settlement consisting of rectilinear enclosures to the west of the north-south trackway (Barber and Thomas 1998).

South of site 196 is site 110 which contains the villa referenced by HER 7600. The locations of the seven evaluation trenches at this site are shown in figure 5.11. Importantly, trench 1 was positioned to investigate the villa and four linear features were detected which contained substantial blocks of masonry. In addition two further linear features were detected to the north which may also represent building foundations (Hall 1994). Although the location of this trench does not quite correspond to the villa location suggested by the geophysical survey and field-walking discussed earlier, this evidence may suggest a number of substantial buildings in this area. In the north, trench 3 identified the linear feature as a ditch and later recut and produced 398 sherds of Roman pottery, principally of second century date, with smaller amounts of later Roman pottery in the upper fills. Further south in trench 5 a further 73 sherds of Roman pottery were recovered and their date suggests the ditch may have filled during the second half of the third century.

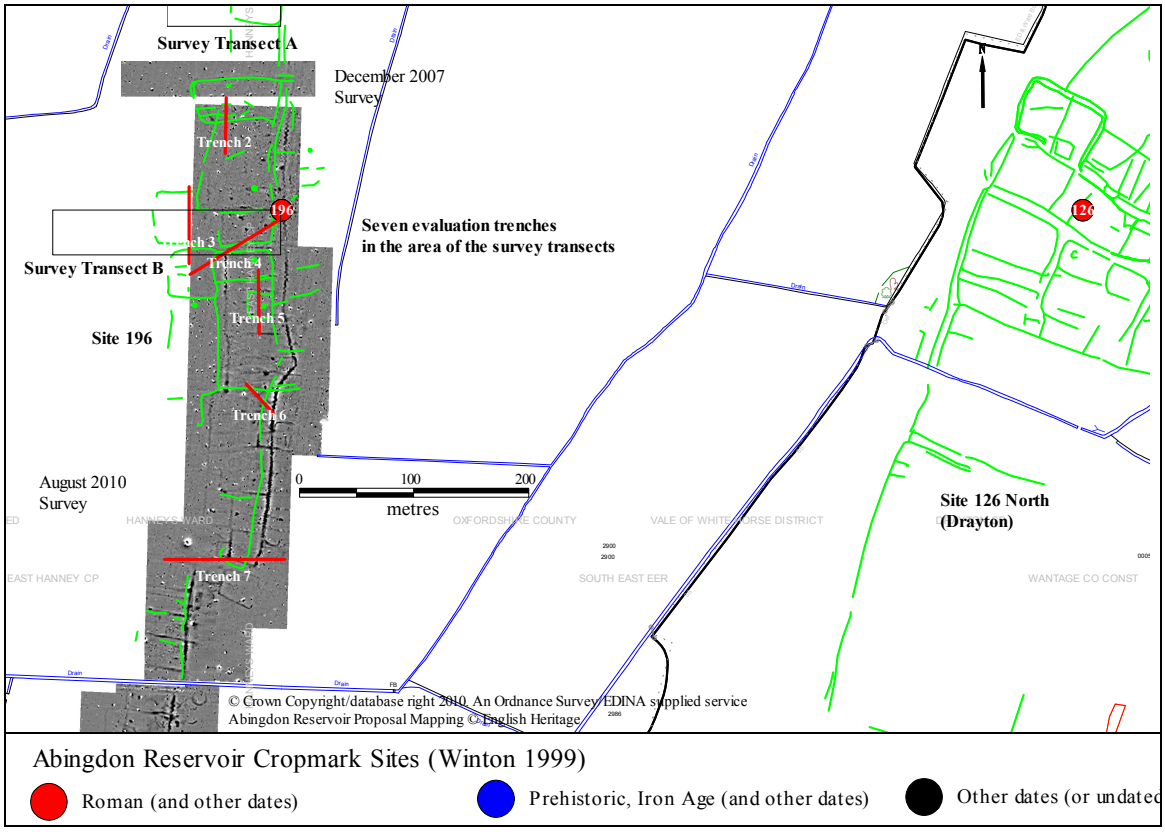


Figure 5.10 – Site 196

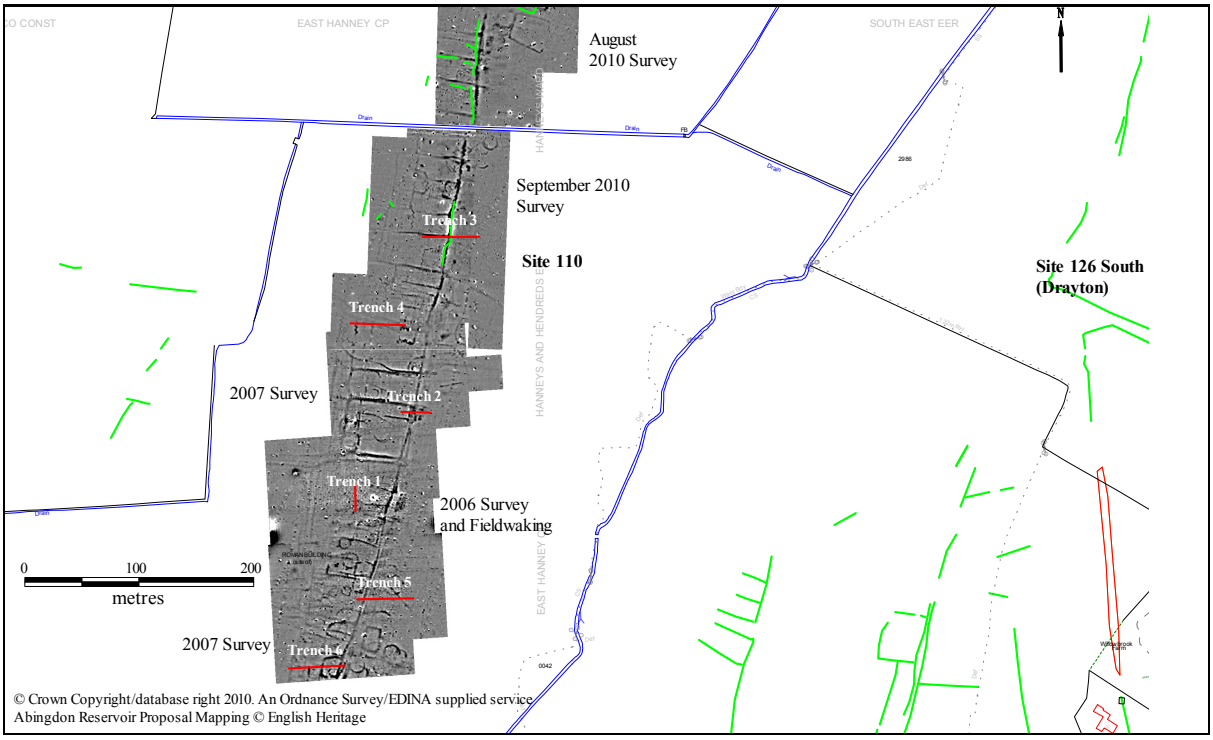


Figure 5.11 – Site 110

This linear settlement extends southwards to site 416 as shown in figure 5.12. Again, seven evaluation trenches (numbered 8 to 14) were excavated to examine the site. Features of Romano-British date were located in trenches 8 to 13, of possible late Iron Age date in trench 13 and of middle Iron Age date in trench 8 (Thomas 1998). Site 416 probably continued further south but has now been disturbed by Cow Common Brook.

Of these three sites only site 196 appears as a significant cropmark and this confirms that cropmark evidence, although extremely useful, provides only a partial indication of archaeological potential. Areas without cropmarks may also contain important archaeological information.

Three further sites are illustrated in figure 5.13 and are briefly discussed. Excavation at site 417 tentatively dated a trackway visible in the cropmark survey to the first or second century AD. However, earlier material was also present as trench 5 in the south located two ditches which were dated to the middle Bronze Age and a similar date was assigned to a feature located in trench 2 (Oxford Archaeology 1998b). At site 409 two trenches provided evidence for three middle Iron Age enclosures which may have served as raised living platforms (Oxford Archaeology 1998a).

Not detected by the aerial survey and discovered instead by geophysical survey in the 1990s is site 400 where excavation indicated apparently continuous activity from the middle Iron Age to the Romano-British period (Oxford Archaeology 1998b). The northern part of the site contained the highest density of features including rectilinear enclosures with internal subdivisions. These appeared to date from the middle Iron Age to the early Roman period as the finds were dominated by material of the late Iron Age and first and second century AD. Activity on the remainder of the site dated mostly to the third and fourth centuries AD although containing artefacts dating from the first century AD onwards. An important element was a double ditched trackway which appeared to date from the middle of the third century to the middle of the fourth century AD.

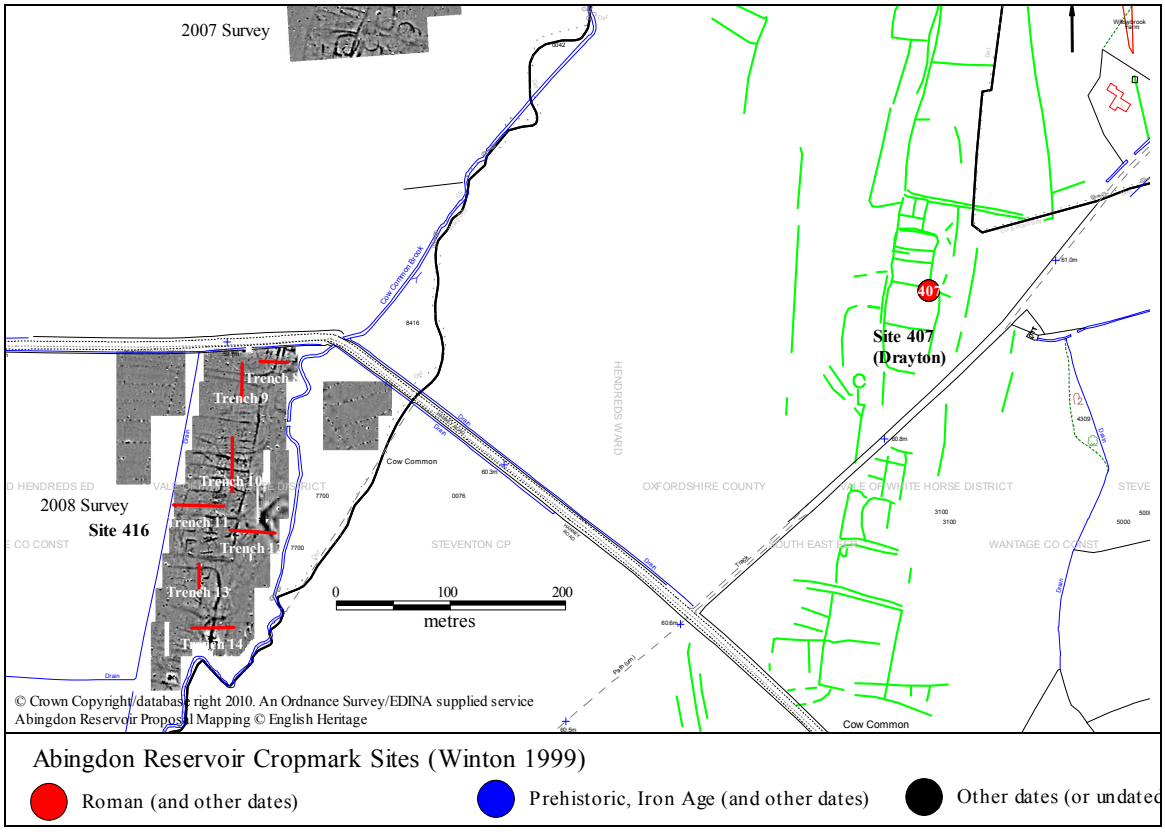


Figure 5.12 – Site 416

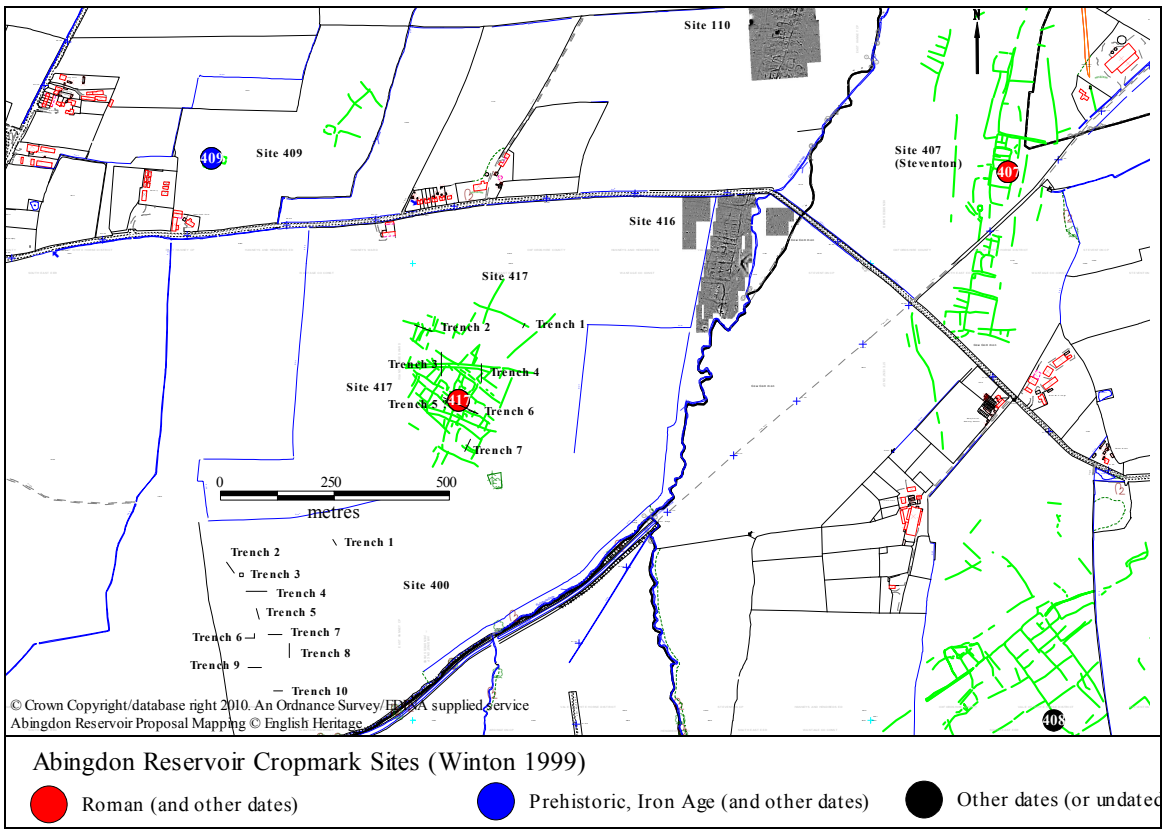


Figure 5.13 – Sites 400, 409 and 417

Although the excavations have demonstrated the settlements were not all contemporary, early Romano-British settlement is attested at sites 400 and 417 and later Romano-British settlement at sites 196, 110, 416 and 400.

Millett's estimate of 0.008 sites per hectare suggests seven sites in the 890 hectares of East Hanney. For 20 and 50 inhabitants per site this would indicate a population of 140 or 350 people. The aerial photographic evidence and excavations provide considerable support for this with extensive settlements on the gravel terraces in the east of the parish. Tables 5.1 and 5.2 indicate the population density of East Hanney was lower than Appleford but higher than Appleton in 1801 and 1086 respectively.

5.2.2.4 Hinton Waldrist

The final parish considered is Hinton Waldrist. Oxford clay is found adjacent to the river Thames in the north of the parish. South of this clay is the Corallian ridge with bands of clay and sandstone, sandstone and finally limestone in the south. Drift deposits are limited to a small area of first or Northmoor terrace in the extreme north-west of the parish while alluvial deposits are found beside the river Thames. It is noticeable that the cropmarks and HER references in the north-west are largely restricted to the gravels of the first terrace. An extensive area of cropmarks are visible further west in Buckland on the alluvium and first terrace of the river Thames. The largest areas of cropmarks in Hinton Waldrist are located on the limestone of the Corallian ridge in the south-east of the parish as illustrated in figure 5.14.

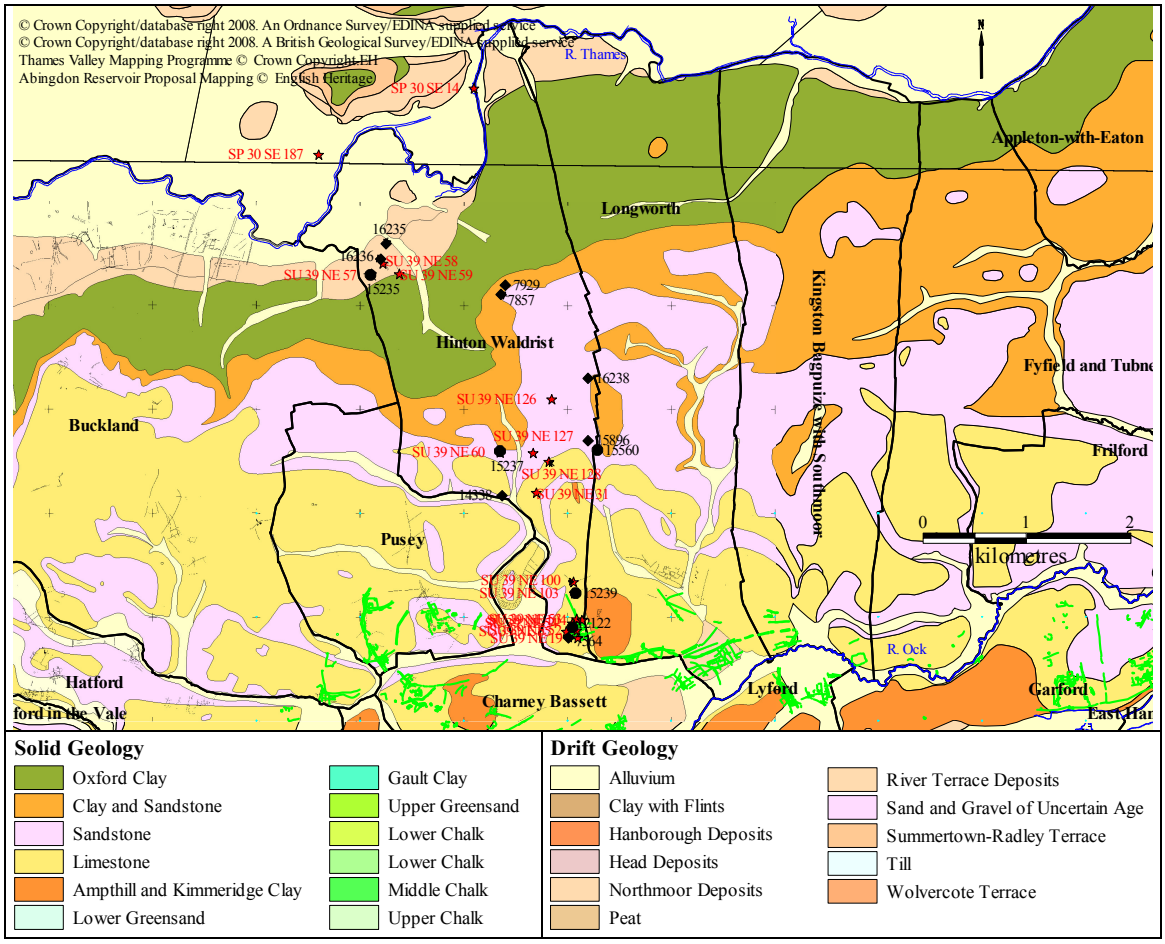


Figure 5.14 – Geology and the Prehistoric and Romano-British Archaeology of Hinton Waldrist (British Geological Survey Sheets 236 - Witney and 253 - Abingdon)

These cropmarks continue eastwards into Longworth and westwards into Pusey as shown in figure 5.15 and appear to represent an extensive system of trackways and fields.

Many of these cropmarks have been dated to the Roman period by morphological analogy with similar, dated cropmarks (Winton 1999).

The archaeological data for the prehistoric and Romano-British periods for Hinton Waldrist is also shown in figures 5.14 and 5.15. Of the thirteen HER entries four relate to Bronze Age features or artefacts, three to Iron Age artefacts and five to Romano-British features or artefacts. There are eighteen NMR Pastscape references of which three record archaeological finds but only one of these dates to the Roman period with the recovery of Iron Age and Roman pottery from a small excavation. The remaining fifteen entries describe crop marks mapped as part of the Thames Valley Mapping Programme. The majority of these are enclosures and trackways which have been assigned a prehistoric or Roman date while a number of ring ditches have been dated to the Bronze Age.

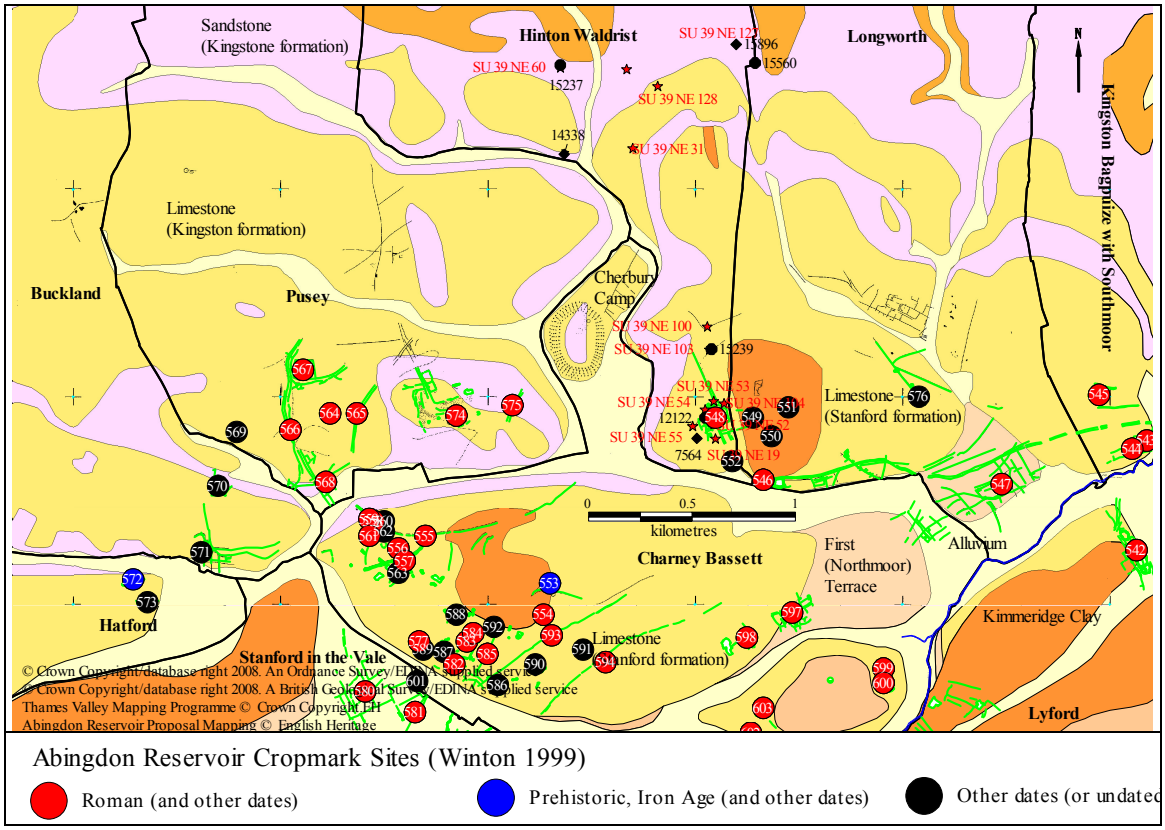


Figure 5.15 – The Prehistoric and Romano-British Archaeology of Hinton Waldrist

Only one site in Hinton Waldrist has been defined by the mapping for the Abingdon Reservoir proposal: site 548 in the south of the parish as shown in figure 5.16 and for which Winton (1999, 32-33) suggests a prehistoric or Roman date. This site lies south-east of the Iron Age enclosure of Cherbury Camp and corresponds to HER references

7564 and 12122. Both HER 7564 and SU39 NE 19 refer to two small excavations south-east of Cherbury Camp: the first by Mr D Maclean in the mid-1960s recovered second to fourth century Roman pottery (Anon-c 1966, 73) and the second, by Mr. G Maclean, twenty years later, found late Iron Age and Roman pottery together with metalwork including an Iron Age brooch (Anon-d 1986; Frere *et al.* 1986, 399). HER 12122 is the settlement illustrated in the upper part of figure 5.16 as mapped by English Heritage for the Abingdon Reservoir proposal. From this figure it is clear the two excavations relate to this settlement. To provide a better understanding of the cropmarks a geophysical survey was undertaken which revealed a small, organised settlement aligned on a trackway defined by a double ditch as shown in the middle part of figure 5.16. The morphology of the settlement, the pottery collected from the surface during the survey and the earlier small excavations all suggest a Roman date, but with indications of late Iron Age settlement activity.

Two phases of activity seem to be indicated as illustrated in the lower part of figure 5.16. The first appears to be defined by the central rectangular enclosure delimiting an area approximately 49 metres by 53 metres[2]. Within this are three circular ditches of diameter 11 to 12 metres which may represent the foundation trenches or drip gullies of roundhouses. It is of course not possible to demonstrate that these roundhouses are contemporary with the rectangular enclosure but this appears a reasonable assumption. A possible entrance to the enclosure is visible on the southern side.

At a later date a small, enclosed settlement appears to have replaced the rectangular enclosure. This settlement is on a very similar, but not quite identical, alignment to the earlier enclosure and contains well defined internal ditches apparently delimiting small fields or settlement plots. The double ditched trackway from the south appears to respect the original southern entrance, but cuts two of the roundhouse ditches and also cuts through the northern ditch of the enclosure. The presence of fourth-century pottery suggests this second phase lasted into the fourth century, but the start of this phase of the settlement cannot be established. The earlier rectangular enclosure could date to the late Iron Age and be contemporary with nearby Cherbury Camp, or it may date to early in the Roman period.

[2] Enclosures of similar size and shape are illustrated by Moore (2007, 263) as later Iron Age enclosures in the Cotswolds and Bredon Hill area.

If we assign the three roundhouses to the earlier phase there are few definite indications of houses (round or rectangular) in the later settlement. There is a well defined, approximately rectangular ditch in the south-west of the enclosure and an approximately circular ditch to the west of the rectangular enclosure. In addition, two other possible circular ditches are shown, in purple, in figure 5.16 which may represent houses. Alternatively, any houses may have been of post construction and therefore not detected by geophysical survey. This may suggest the occupants of the settlement were not particularly wealthy. There is certainly no evidence of a substantial Roman building.

This view is supported by the pottery evidence. Despite the stubble from the recently harvested crop, a small assemblage of 73 sherds was collected during the geophysical survey. This consisted of five sherds of medieval or post-medieval origin, eleven sherds of unidentified coarseware and a Roman component of 46 sherds of reduced greyware, two sherds of Oxfordshire colour coat mortaria and one sherd of Samian. In addition, there were seven oxidised sherds, some of which may be Roman. The final sherd was of shell gritted ware which may date to the Iron Age[3].

This survey at Hinton Waldrist provides increased confidence in the suggestion of a Romano-British date for the surrounding cropmarks of trackways and enclosures in Longworth and Pusey. Although it is not possible to refine the chronology or assess the contemporaneity of the features, the cropmarks shown in figure 5.15 appear to indicate an extensive and populated Romano-British landscape to the south-west and south-east of Cherbury Camp.

If we consider Millett's figure of 20 or 50 people per site it is perhaps not unreasonable to assume at least 20 people occupying this site in the fourth century. It is unlikely that the settlement would have reached a population of 50. Millett's estimate of 0.008 sites per hectare suggests six sites in the 812 hectares of Hinton Waldrist. For 20 and 50 inhabitants per site this would indicate a population of 120 or 300 people. The archaeological evidence to support a postulated late Roman population in the range 120 to 300 seems reasonable. This is clearly biased towards the south and north-west of the parish where there are cropmarks but it is not unreasonable to assume that people also lived and worked in the archaeologically blank areas of the Oxford Clay.

[3] The pottery discussion is based on an analysis and report by John Hawes.

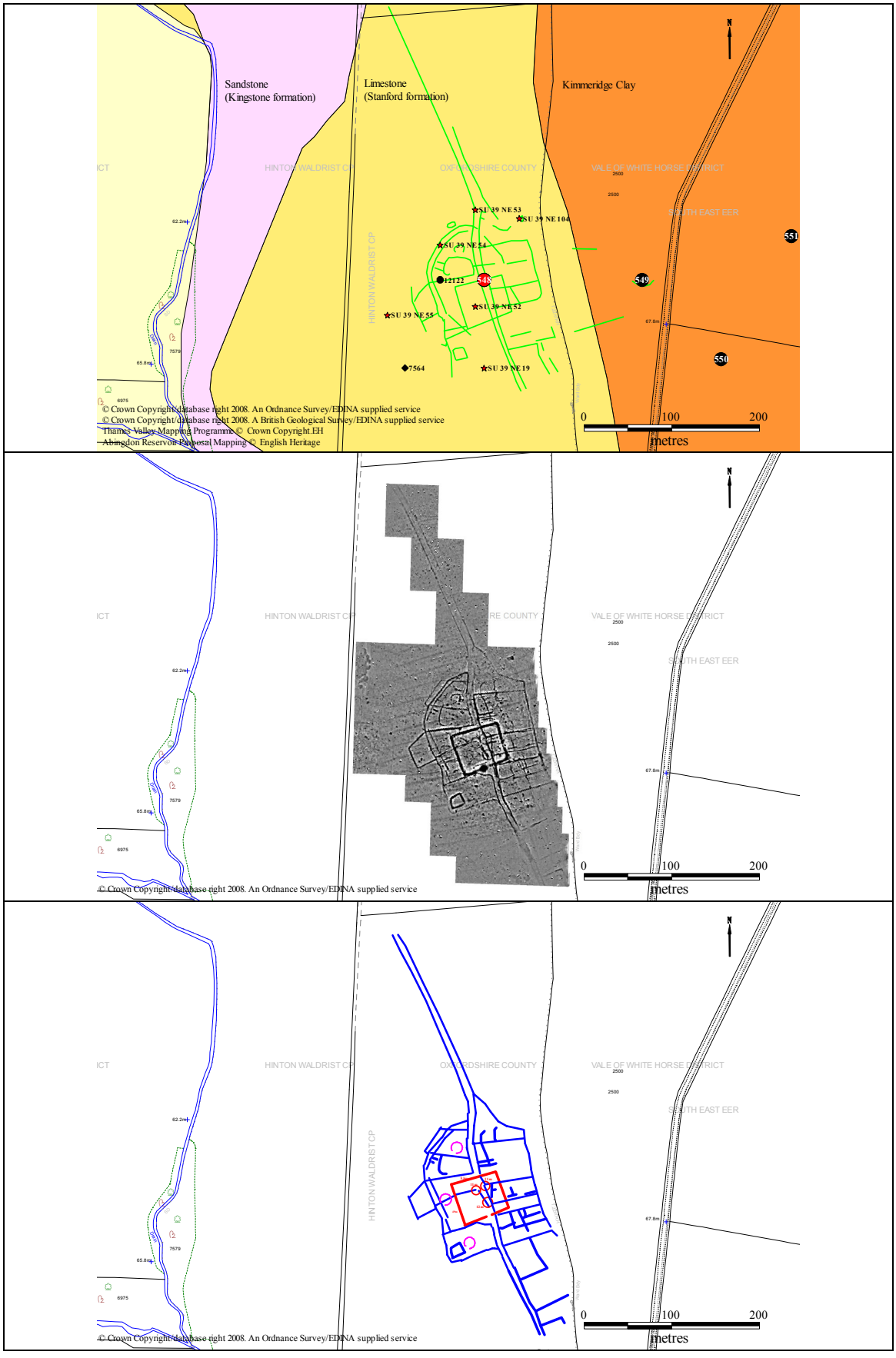


Figure 5.16 – A Romano-British settlement in Hinton Waldrist
The aerial photographic, HER and NMR evidence (Top) : The geophysical survey evidence (Middle)
The geophysical interpretation - Phase 1 in red and Phase 2 in blue (Bottom)

5.2.3 Discussion

The previous sections have provided four examples of the analysis undertaken for nineteen parishes to evaluate the available archaeological evidence in support of Millett's site density and population per site estimates. Each parish has been assigned to one of four possible qualitative categories and these are now converted into a quantitative estimate using the values in table 5.5. Parishes with reasonable or considerable archaeological evidence are assigned a site density of 0.008 sites per hectare and Millett's lower and upper population estimates respectively. Parishes with little or some evidence are assigned a lower site density of 0.004 sites per hectare and a lower number of people per site. These values have been chosen to provide a conservative estimate: other population estimates can be constructed by choosing different values.

Archaeological Evidence	Sites per hectare	Sites per km^2	People per Site
Little or None (2)	0.004	0.4	10
Some (4)	0.004	0.4	20
Reasonable (3)	0.008	0.8	20
Considerable (10)	0.008	0.8	50

Table 5.5 – Archaeological Evidence and Estimated Population

The estimated fourth century AD population of these nineteen parishes and the previous estimates for 1086 and 1801 are shown in table 5.6 and figure 5.17. The total for these nineteen parishes of 3,730 is close to the possibly equally imprecise estimate of the population in 1086 of 3,810. Although parishes such as Hinton Waldrist, Longworth, Steventon and Sutton Courtenay show good agreement between their estimated fourth and eleventh century populations, there are also parishes where the two estimates do not correspond.

Parishes where the estimated fourth century AD population is well below the estimated 1086 population include Appleton, Fyfield and Tubney, Goosey, Lyford, Milton and West Hanney. Either the heavy clay soils which cover all or most of Appleton, Goosey, Lyford, Milton and West Hanney were unattractive to Iron Age and Roman settlement, or insufficient archaeological investigation has been undertaken. The low estimate for Fyfield and Tubney, on the Corallian ridge is based on limited, undated cropmark evidence whereas recent excavation (Simmonds *et al.* 2011) might suggest the evidence is 'reasonable'. Parishes well above their 1086 estimate include Frilford, Marcham and Drayton. It has already been suggested that the Domesday entry for Drayton is incomplete and the same may apply to Marcham.

Parish	Modern Area (ha)	Archaeological evidence	Sites / ha	People per Site	4th Century AD Estimate	1086 Estimate	1801 Population
Appleford	297.1	Considerable	0.008	50	119	185	200
Appleton	838.2	Little or none	0.004	10	34	180	341
Charney Bassett	488.7	Considerable	0.008	50	195	100	216
Drayton	1070.2	Considerable	0.008	50	428	50	484
East Hanney	890.2	Considerable	0.008	50	356	280	535
Frilford	463.7	Considerable	0.008	50	185	130	148
Fyfield and Tubney	1110.7	Some	0.004	20	89	300	394
Garford	433.1	Considerable	0.008	50	173	130	183
Goosey	390.7	Little or none	0.004	10	16	85	139
Hinton Waldrist	812.4	Reasonable	0.008	20	130	160	275
Kingston Bagpuize	873.6	Reasonable	0.008	20	140	200	421
Longworth	928.7	Reasonable	0.008	20	149	150	401
Lyford	313.0	Some	0.004	20	25	110	124
Marcham	1017.2	Considerable	0.008	50	407	170	607
Milton	592.3	Some	0.004	20	47	430	310
Stanford-in-the-Vale	1181.5	Considerable	0.008	50	473	255	607
Steventon	969.2	Considerable	0.008	50	388	340	537
Sutton Courtenay	834.5	Considerable	0.008	50	334	370	874
West Hanney	538.5	Some	0.004	20	43	185	330
Total	**14043.5**				**3730**	**3810**	**7126**

Table 5.6 – Estimated Population in the Fourth Century AD

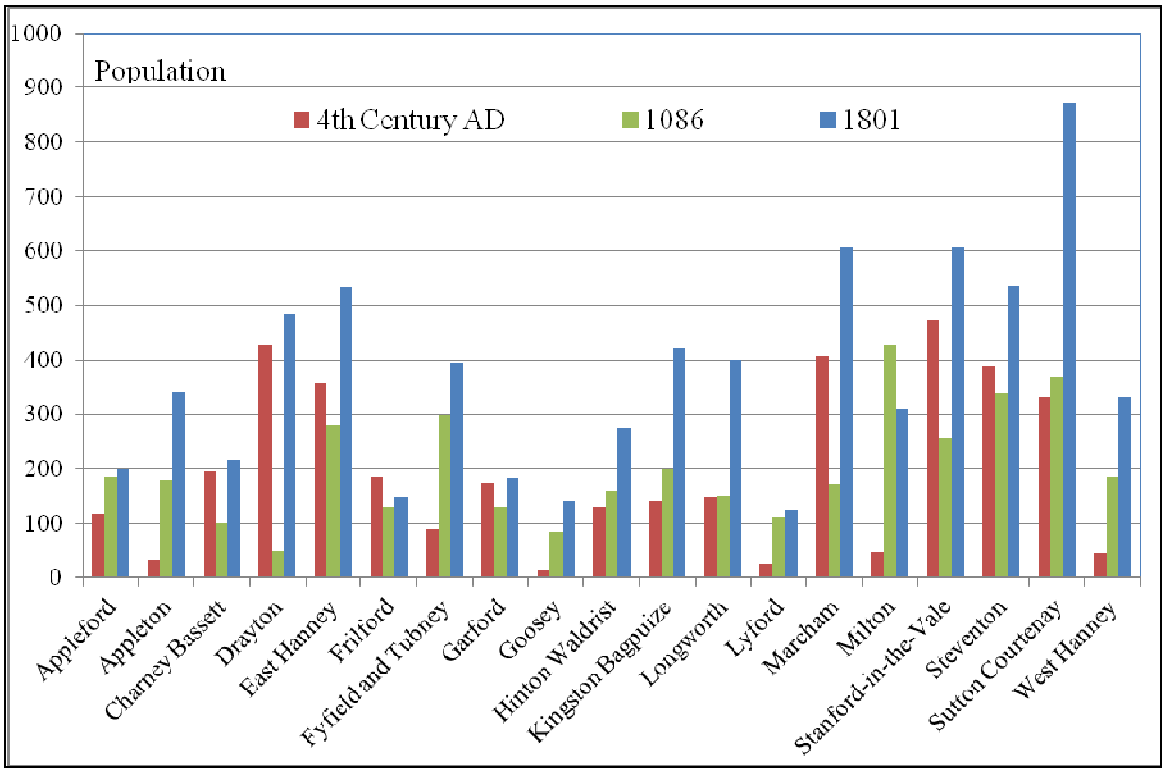


Figure 5.17 – Population Estimates for the Fourth Century AD, 1086 and 1801

Only Frilford has an estimated fourth century population greater than its 1801 level. Although this may suggest Frilford's Roman population has been overestimated, the archaeological evidence for Romano-British settlement is strong.

The relationship between the three population estimates can be gauged by calculating their correlation coefficients as listed in table 5.7. The correlation between the estimated fourth century AD population and the recorded population in 1801 is surprisingly good. This strengthens the conclusion that the variation in the Romano-British population density is real and not just an artefact of inadequate archaeological data for the parishes on clay. The correlation of the fourth century AD with 1086, and for 1086 with 1801, is lower. This might suggest weaknesses in the 1086 estimates as discussed earlier.

	Correlation
Fourth Century AD and 1086	0.15
Fourth Century AD and 1801	0.72
1086 and 1801	0.54

Table 5.7 – Correlation Coefficients for Estimated Population

The method above has produced an estimate of 3,730 people in an area of 14,044 hectares (140.5 square kilometres) which yields a population density of 26.5 people per square kilometre. This provides an estimated population of 14,605 for the 550 square kilometres of the sixty-six parishes in the study area and ca 3.1 million for the 116,000 square kilometres Millett used for the inhabitable area of England. For the Vale a small allowance might be added for small towns while additional numbers to cover urban centres and the army would be needed for England. The conversion of the qualitative estimate into quantitative values in table 5.5 was deliberately conservative and the estimate for England of 3.1 million lies at the bottom of the possibility band illustrated in figure 5.1.

This "bottom-up" method can be contrasted with Lambrick's "top-down" approach (Lambrick and Robinson 2009, 377-380). He started with an estimated population of 2,200 in the upper Thames Valley (or modern Oxfordshire) in 1500 BC and then assumed an average growth rate of 0.22% until about AD 300 by which time the population would have increased to about 117,000. Using a value of 2605 square kilometres for the area of modern Oxfordshire[4] this gives a population density of about 45 people per square

[4] Lambrick incorrectly states ca 260 square kilometres.

kilometre, nearly double the estimate calculated here. But the basis for Lambrick's population estimate for AD 300 is quite remote from the Romano-British archaeology. In contrast, the estimates of site density and people per site used here are based on Romano-British settlement data. A strength of the "bottom-up" approach is to emphasise the variability of the archaeological information even within a small area, which may indicate considerable local variation in the Romano-British settlement density. While any population estimate contains a number of assumptions, it is hoped this approach moves beyond "smoke and mirrors" (Esmonde Cleary 2004, 414).

Estimating the Iron Age population is even more difficult. The graph in figure 2.1 suggests that in about 250 BC the population may have been about 50% of the peak level achieved in the fourth century AD and at the end of the first millennium BC about 75%. Fulford (1992, 25) has suggested that the density of settlement on the gravels by the end of the first century BC was similar to that of the Middle Ages. Support for this is provided by parishes on the gravel terraces such as Appleford, Drayton, East Hanney, Steventon and Sutton Courtenay, all of which contain abundant evidence of Iron Age settlement and whose estimated Roman population levels approach or exceed those estimated for 1086.

Fieldwork at Chalton, Hampshire, allowed Cunliffe (1973; 1978) to construct an estimate of the late Iron Age population. Ten late Iron Age settlements were located in an area of seven square kilometres and by allowing five or ten individuals per site Cunliffe derived an estimate of seven to fourteen people per square kilometre. This was then generalised to propose a minimum population density of ten to fifteen per square kilometre for much of southern Britain (Cunliffe 1978, 15). These results are consistent with the fourth century AD estimates constructed here.

5.3 Settlement Expansion and Continuity

In the previous section an attempt has been made to estimate the population at the end of the Roman period. The fourth century AD marked the end of more than a millennium of steady population growth. This growth would have contributed to both social and economic change. For example, an increasing population may have led to increasing social differentiation, to increased economic specialisation and to changes in the methods of food production. This section will consider where the increasing number of people may have lived. Possibilities include the expansion of existing settlements or the formation of new settlements, or both. Settlement expansion may lead to the creation of large villages or small towns while the formation of new settlements would create a more intensively settled landscape with decreasing distance between settlements.

Archaeological evidence for settlement continuity on the Thames gravels was first examined by Lambrick (1992) who suggested three periods of discontinuity: at the end of the late Bronze Age, the transition from the middle to the late Iron Age, and in the late first century or early second century AD. The discontinuity from the middle to late Iron Age appears to be associated with small movements in settlement location as seen at Gravelly Guy, Claydon Pike and Mingies Ditch (Lambrick 1992, 83). More dramatic is the discontinuity at the end of the first century AD with evidence of large scale replanning, settlement shift and settlement abandonment. Although Lambrick (1992, 84) has suggested these discontinuities are more likely to be the result of external political and economic forces than through internal pressures of population and food production, it is clearly not possible to identify the cause(s) with any certainty. Moreover, external political forces may in turn be driven by, or assisted by, pressures of population growth.

Settlement continuity in the upper Thames Valley has also been discussed by Henig and Booth (2000, 106-108)[5] who have divided settlements occupied in the early first century AD into two classes based on their previous Iron Age occupation. Settlements either have evidence of occupation through much of the Iron Age or appear to have been first occupied in the late Iron Age. Unfortunately, Henig and Booth do not provide a figure on the relative size of each settlement class but their observation might suggest a period of new settlement formation in the late Iron Age. But, as they note, the situation is

[5] A similar discussion is also given in Booth *et al.* (2007, 43).

complicated by sites such as Gravelly Guy where the new late Iron Age settlement was located close to a middle Iron Age predecessor.

Henig and Booth (2000, 106) argue that while the second half of the first century AD appears to show considerable settlement continuity this seems to end early in the second century AD when many sites, particularly those first formed in the late Iron Age, are abandoned. Indeed, they believe that more sites show evidence of abandonment than continuity in this period. However, this widespread abandonment of existing settlements is matched by the creation of new settlements associated with new field systems often on new alignments. While many of these settlements are clearly the successors of earlier sites and were located close by, others lack evidence of nearby predecessors and appear to be new formations. The majority of settlements occupied in the second century AD show evidence of occupation in the third and fourth centuries AD.

The archaeological evidence for Iron Age and Romano-British settlement continuity and discontinuity in the Vale of the White Horse is discussed in the following three sections. The first section considers the evidence from published excavations where the chronology is based on excavated pottery. The second section considers the results of the largely unpublished work from the Thames Water Abingdon Reservoir proposal consisting of aerial survey mapping and evaluation excavations. Here again the chronology is based on excavated material. The final section considers recent cropmark survey, geophysical survey and fieldwalking at sites in Garford and Frilford. Without the fine detail provided by excavation there is much less chronological precision.

5.3.1 Published Excavations

Thirteen excavated sites in the Vale of the White Horse are considered with regard to settlement formation, expansion and continuity with the results summarised in figure 5.19 and table 5.8[6]. Sites on the gravel terraces include Ashville Trading Estate, Appleford Field, Appleford Sidings and Barton Court Farm while sites on the Corallian ridge include Manorhouse Farm, Hatford and Tubney Wood Quarry, Tubney. Two sites in Wantage are located on the Upper Greensand at the foot of the Berkshire Downs. There

[6] Bibliographic references are summarised in Appendix 3.

are no published sites on areas of the Gault or Kimmeridge Clay not covered by gravel terraces. The sites do not contribute equally to considerations of settlement continuity because of limitations on the areas excavated and restrictions on the time available and this is recorded in table 5.8 with a column indicating the quality of the available evidence. Nine sites are discussed below as examples of the information available and the analysis undertaken.

Only limited areas could be investigated in the rescue excavation at the Ashville Trading Estate in advance of redevelopment (Parrington 1978). Located on the second or Summertown-Radley terrace the site produced evidence ranging from the Bronze Age to the Roman period and included three distinct phases of Iron Age activity. The pottery suggests Roman activity from the first century AD with occupation lasting until the third century AD (Parrington 1978, 74). A cemetery nearby may date to the fourth century AD. Continuity from the Iron Age into the Roman period is suggested by the similar alignment of some Iron Age and Romano-British ditches (Parrington 1978, 36).

Subsequently, three further areas at Wyndyke Furlong a few hundred metres to the north-east were examined in 1994 (Muir and Roberts 1999). Near the original excavations further early and middle Iron Age features were located including possible evidence for three circular features defined by stakeholes and six or more possible middle Iron Age roundhouses defined by circular gullies. To the north-east, and possibly outside the settlement were a middle to late Iron Age waterhole and ditches. Still further north-east a ditched trackway and field system was dated to the first and second centuries AD (Muir and Roberts 1999, 9). The bulk of the pottery assemblage dates to the middle Iron Age with only 14% classified as late Iron Age and Roman. The Roman material is largely restricted to the first and second century AD.

The middle Iron Age Ashville/Wyndyke complex appears to represents a hamlet or village settlement with evidence of fifteen or more contemporary roundhouses (Muir and Roberts 1999, 63). Two landscape re-organisations can be identified. At the end of the middle Iron Age much of the Ashville/Wyndyke settlement was abandoned and replaced with a ditched field system. Muir and Roberts (1999, 65) suggest this could be due to either outside stimulus or from declining arable productivity caused by decreasing levels of soil nitrogen. Despite the abandonment, artefactual evidence suggests that a new

settlement was established nearby. A more subtle landscape change was introduced by the late first century AD with the development of a trackway and field system to the north-east, which may have been an expansion and continuation of the late Iron Age system.

Continuing activity in the Roman period is demonstrated through pottery and ditched field systems. Evidence of late Roman occupation is limited but may be indicated by a cemetery to the south. All this suggests settlement mobility, but possibly within a limited area, together with occasional landscape reorganisations. Ashville may represent a settlement which grew larger through the middle Iron Age but which relocated, possibly more than once, in the late Iron Age and during the Roman period.

The excavations at Appleford Field (Hinchliffe and Thomas 1981) were conducted during gravel extraction with limitations on the extent and duration of the excavation. It is therefore unclear how representative the excavated section is for the entire area defined by cropmarks. Hinchliffe and Thomas (1981, 33) suggest the cropmark evidence (see figure 5.4) indicates settlement activity ranging from the Bronze Age to the late Roman period. Within the area excavated two separate periods of occupation were distinguished. The earliest dateable features, a series of enclosures from the middle Iron Age, were overlain by a Romano-British trackway and various associated enclosures (Hinchliffe and Thomas 1981, 62). Material from the trackway ditches suggested a construction date in the early second century AD, while recuttings indicate they remained in use until at least the early or middle fourth century AD.

This appears to be a site where occupation was probably continuous, but with various small relocations, from the late Bronze Age to the late fourth century AD. Hinchliffe and Thomas (1981, 109) are uncertain whether the Iron Age occupation represents a single unit of settlement periodically moving location, or several contemporary settlements. Although the Iron Age settlement contained trackways and enclosures, a much more elaborate and extensive system was laid out from the second century AD. An element of continuity is suggested by the similar alignments of Iron Age and Romano-British trackways. The evidence of long term continuity of settlement and activity lead Hinchliffe and Thomas (1981, 107) to suggest the resilience of the soils may have been an important factor in this stability. Appleford Field may therefore be a settlement which

grew larger, probably to accommodate a larger population, through the Iron Age and into the Roman period.

At Appleford Sidings, about 750 metres to the south, settlement began in the early first century AD with no evidence of preceding Iron Age settlement (Simmonds and Booth 2009). An important feature, illustrated in figure 5.5, is a short lived, double-ditched enclosure dated from the mid-first century AD to the early second century AD within which were successive phases of a small rectangular building. To the east, and possibly later, was a single ditched enclosure, trackway and field system while to the west a trackway defined by two ditches was associated with a parallel boundary ditch. This trackway and boundary may have continued in use until the late Roman period and may have connected to the the trackway system at Appleford Field.

The rectangular, double-ditched enclosure and building appear as intrusive elements in the late Iron Age landscape. Simmonds and Booth (2009, 125-130) suggest this is a high status site, albeit short lived, and that the settlement at Appleford Field, although of lesser status, may be its successor. But it might also be suggested that this intrusive site was deliberately established in an empty landscape adjacent to, but separate from, the existing settlement at Appleford Field. Although the double ditched enclosure and rectangular building seem to have been abandoned in the second century AD, other aspects such as the trackways and field ditches appear to have been recut and maintained into the third and fourth centuries AD. This suggests that even without the high status site, the land remained integrated into the local economic and agricultural system, possibly farmed and managed from Appleford Field.

At Barton Court Farm to the north-east of Abingdon, Miles (1986, 49) identified three main phases of use. The first, in the late Iron Age was an enclosed farmstead constructed either at the end of the first century BC or the beginning of the first century AD. This appears to have gone out of use by the middle of the first century AD to be replaced shortly thereafter by a second farmstead on a new alignment, probably developed by the second half of the first century AD. Despite the new alignment this second farm had a similar functional layout and material culture to its late Iron Age predecessor. In turn, this appears to have been abandoned during the second century AD and was not replaced until the later third or early fourth century AD. The new farmstead supported a small villa,

with a cellar, set amongst a system of paddocks and enclosures. Despite the gap in occupation in the late second and early third century AD, some indication of settlement on the site, or nearby, is provided by early third century pottery.

Barton Court Farm appears to be a new settlement of the late Iron Age with at least three phases of building and land divisions. The first two, covering the late Iron Age and early Romano-British, are probably continuous. The second phase ends in the second century AD and the third phase starts anew in the late third century AD.

Moving from the Thames' gravels to the sands of the Corallian ridge, the excavation of two small areas in 1991 at Manorhouse Farm, Hatford, in advance of sand quarrying, detected features and pottery suggesting two periods of occupation: a middle Iron Age settlement followed by late Iron Age to early Roman activity ending in the early second century AD (Bourn, 2000). A further excavation in 2003 produced similar dating evidence, with some features possibly of the later middle Iron Age overlain by ditches of a late Iron Age field system abandoned by the end of the first century AD (Booth and Simmonds 2005). Although both excavations appear to agree with Henig and Booth's description of settlements ending in the second century AD, the excavated areas form only part of a wider focus of activity and settlement dating from the later Bronze Age to the late Roman period. The cropmark evidence is shown in the upper part of figure 5.18 and suggests extensive areas of fields and trackways.

To the south-west of these cropmarks is HER 12754, across the Frogmore Brook in Stanford-in-the Vale, illustrated in the lower part of figure 5.18. This site was initially investigated by fieldwalking when pottery dating from the second to fourth centuries AD was found (Faringdon Archaeological Study Group, 1977). Miles (1982b, 63-64) interpreted the site as a villa adjacent to the Frogmore Brook with an extensive "native" settlement to the west. Field survey indicated an extensive Romano-British settlement covering some twelve hectares between the suggested villa at HER 12754 and Bowling Green Farm (Miles 1982b; Chambers 1988). The area around Bowling Green Farm received only limited excavation before its destruction by a sand quarry.

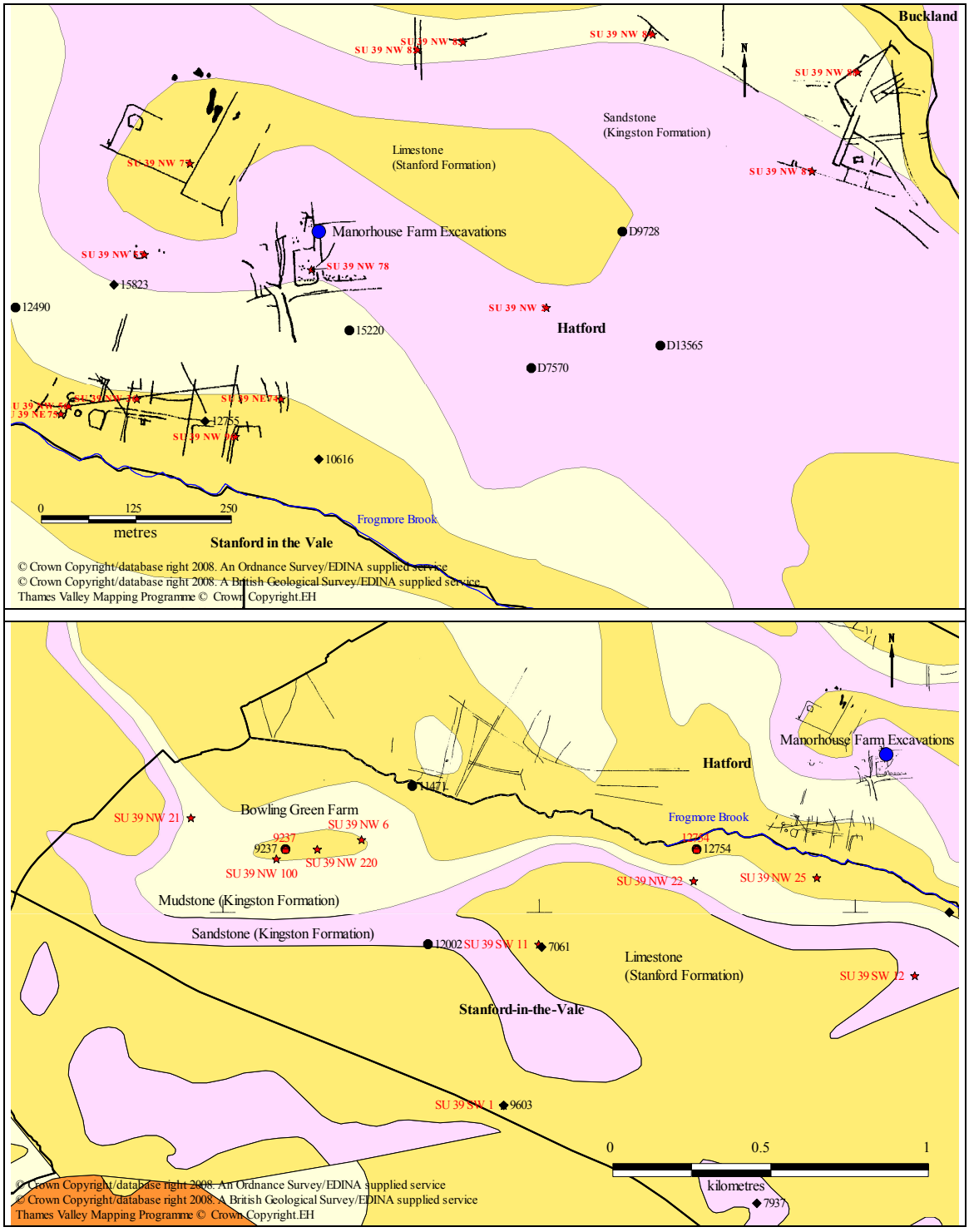


Figure 5.18 – Manorhouse Farm, Hatford. Excavation Site and Cropmarks (Top)
Bowling Green Farm, Stanford-in-the-Vale (Bottom)

Excavation of part of the western end of the settlement revealed a third and fourth century AD settlement overlying late Iron Age and/or early Romano-British farms. The large number of building foundations, cobbled surfaces, paths, kilns and hearths led Chambers (1988) to suggest the presence of craftsmen and traders operating in a small market town. This late Roman village, or small town, seems to have been aligned on an

earlier villa located within a ditched enclosure. Pottery dating from the second century AD and wall plaster were found in the enclosure ditch. By the fourth century the villa had been replaced by lower quality buildings (Chambers 1989). However, accumulations of domestic rubbish suggest the settlement may have been in decline by the end of the fourth century AD. Further limited excavation in 1992 uncovered additional spreads of rubble and cobbled surfaces (Mudd 1993).

Although chronological precision is limited the area in and around Bowling Green Farm appears to have been occupied by small farmsteads from at least the late Iron Age, one of which may have developed into a small villa. This however had disappeared by the fourth century AD to be replaced by an extensive village or small town. This is not just the result of population growth, but an economic system able to support the specialist manufacturing and trading of goods.

Recent work at Tubney, also on the Corallian ridge, has been undertaken in advance of sand quarrying (Simmonds *et al.* 2011). A cluster of 37 pits were dated to the end of the middle Iron Age: the second to first centuries BC but with little evidence for early or late Iron Age occupation. From the mid-first century AD the area of the pit cluster was restructured into a complex of rectilinear fields. Continuity from the Iron Age occupation is suggested by the shared alignment of these new ditched boundaries with the pit cluster (Simmonds *et al.* 2011, 113). To the north-east a large trapezoidal enclosure was constructed on a different alignment, suggesting two independent settlement and farming complexes. During the first half of the second century AD both complexes were re-organised: in the south-west the earlier enclosures were replaced by a single linear boundary ditch on a new alignment while in the north-east the trapezoidal enclosure was replaced by rectangular enclosures associated with a trackway. These trackway and enclosure ditches appear to have silted up by the early third century AD. They contained more than 25 kilograms of pottery, suggesting occupation nearby. Evidence for occupation in the third and fourth centuries AD is limited to the south-west, where a large rectilinear field was established with a small inhumation cemetery in one corner. The lack of finds suggests the associated settlement was located some distance from the excavated area.

Tubney provides evidence of settlement in the middle Iron Age and in the early Roman period. The development of field systems in the very late Iron Age and in the late Roman period indicate settlement nearby but outside the excavated area. This suggests settlement mobility, but possibly within a limited area, together with various landscape reorganisations, the most important of which occurred in the first half of the second century AD.

Romano-British settlement in and around Wantage remains poorly understood. The medieval and modern town lies to the east of Letcombe Brook whereas Romano-British settlement appears to be located primarily west of the brook in Belmont. The clustering of prehistoric and Roman findspots and sites as recorded by the HER and NMR suggest a reasonable Romano-British settlement density and Wantage may have been an extensive village or possibly a small town, perhaps similar to Bowling Green Farm. Two sites excavated in Belmont in the 1990s provide important evidence for prehistoric and Romano-British activity: Mill Street (Holbrook and Thomas 1997) and Denchworth Road (Barber and Holbrook 2002).

The foundations of a stone building were found at the latter site and this been speculatively classed as a villa (HER PRN 15887), partly on the basis of 33 tegulae, 28 imbrices and 22 box flue tiles. Also recovered were 1497 pottery sherds weighing 23.5 kilograms. Of these only 19 sherds were prehistoric and no prehistoric structural features were identified. The bulk of the material dates from the Roman period with some sherds dating to the late first century AD but most from the second to the fourth centuries AD. Barber and Holbrook (2002) suggest the stone building was constructed after AD 270. The excavated part contained four rooms with a corridor in the north-west. At some time after the fourth century the building was dismantled and robbed. As only part of the building could be excavated a full interpretation is not possible.

Evidence also exists for features and activity prior to the construction of the stone building. The earliest feature, dated to the late first to mid-second century AD in the north of the site, is a metalled trackway together with ditches defining small agricultural or domestic plots. But from the mid-second to mid-third century AD the area appears to have been primarily agricultural.

The Mill Street site lies to the south-east where three phases of Romano-British activity were identified (Holbrook and Thomas 1997). The earliest dated from the late first century AD to the mid-second century AD and was represented by seven ditches and a pit, interpreted as agricultural land divisions although the finds suggest occupation and buildings were nearby. Two timber buildings were constructed in the second phase, dated from the mid-second century AD to the mid-third or early fourth century AD. While one building appears to be a granary the other may be domestic with evidence for wattle and daub walls and a roof of limestone tiles. During the third period, mid-third or early fourth century to late fourth century AD, this domestic building was demolished and replaced by a new stone structure which Holbrook and Thomas (1997, 124) interpret as a tower granary of two or more storeys.

These two excavations suggest Romano-British settlement in Wantage may have been primarily of an agricultural nature rather than for manufacture or trade. However, the very limited areas excavated may not be representative.

5.3.2 Discussion

Figure 5.19 and table 5.8 summarise these thirteen sites with regard to settlement continuity, creation, expansion and abandonment and. Extended settlement continuity, although not always on the same site, is suggested at Ashville Trading Estate. The possible late Romano-British cemetery was located a short distance from the main excavation. At Appleford Field, continuity indicated by pottery is represented by the dashed line, with the two specific periods of occupation marked as a solid line. Although middle Iron Age activity was detected it is unlikely to have lasted three hundred years. Settlement at Appleford Sidings started in the early Roman period. Barton Court Farm began slightly earlier, possibly in the late first century BC, and the three periods of occupation are shown.

At Manorhouse Farm, Hatford, the dashed lines are used to indicate possible settlement continuity at least somewhere in the wider area represented by the cropmarks. Settlement evidence at Bowling Green Farm is shown from the late Iron Age and through the Roman period. Earlier Iron Age activity is probable but was not found within the

small areas excavated. The complex sequence at Tubney is indicated with late Roman-British occupation indicated by the dashed line. The two sites in Wantage date from the first century AD. Although no prehistoric features were detected, small amounts of prehistoric pottery were recovered and it is very probable that late Iron Age features remain to be found.

Sites not discussed in detail include Kingston Hill Farm, Kington Bagpuize where middle Iron Age and Romano-British activity was found but late Iron Age activity was not detected. Similarly, at Farmoor the middle Iron Age and Romano-British periods are shown, but the middle Iron Age activity may not have lasted for three hundred years. Further west at Coxwell Road, Faringdon, Iron Age features including pits and roundhouses were located, but evidence of Romano-British activity was limited to pottery. At Watchfield Triangle, features of Iron Age and Romano-British date were investigated with an apparent gap between middle and late Iron Age occupation.

As illustrated in figure 5.19, sites beginning in the late Iron Age or early Roman period include Appleford Sidings, Barton Court Farm, Watchfield, Wantage and possibly Bowling Green Farm. Sites with evidence of continuity and expansion, but with possible relocation or reorganisation include Ashville Trading Estate, Appleford Field, Coxwell Road (Faringdon) and Manorhouse Farm (Hatford). This suggests that the increasing population was housed both by expanding existing settlements, possibly by relocation, and by the formation of new settlements.

Sites which appear to be abandoned in the second century AD include Appleford Sidings, Barton Court Farm and Manorhouse Farm. Settlement re-organisation during the second century AD is attested at Appleford Field, Tubney, Watchfield and the two Wantage sites. The nature of the settlement at Bowling Green Farm may change during the second century AD with the development of a villa. Settlements appearing to commence or relocate in the second century AD are limited to Farmoor and possibly Mill Street in Wantage.

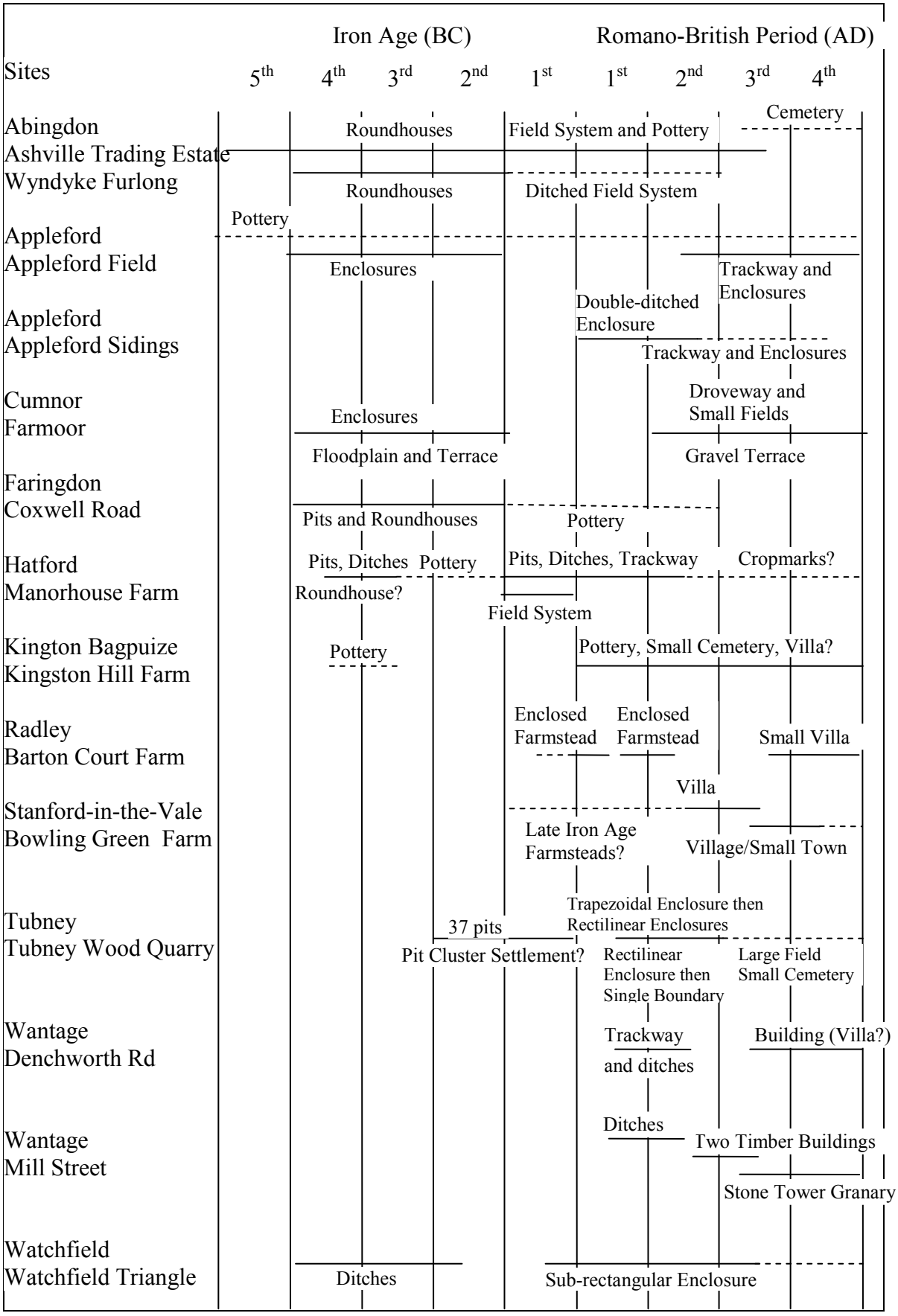


Figure 5.19 – Chronology of Excavated Sites

Parish	Site	Quality	Geology	Settlement creation or expansion	Settlement continuity
Abingdon	Ashville Trading Estate[7]	Reasonable	Gravel Terrace	Growth and expansion through middle Iron Age	Continuous but with relocations or reorganisations
Appleford	Appleford Field	Reasonable	Gravel Terrace	Expansion	Continuous but with relocations or reorganisations
Appleford	Appleford Sidings	Good	Gravel Terrace	New settlement in late Iron Age	Ends in second century AD
Cumnor	Farmoor	Good	Alluvium / Clay	New settlement in second century AD	Discontinuous
Faringdon	Coxwell Road	Good	Lower Greensand and Corallian Beds	Growth and expansion through middle Iron Age.	Unclear. Possibly continuous but with periodic settlement relocation.
Hatford	Manorhouse Farm	Reasonable	Corallian Ridge	Expansion. Possibly from early Iron Age. Settlement relocation.	Ends in second century AD
Kingston Bagpuize	Kingston Hill Farm	Limited	Corallian Ridge	Unclear, possibly expansion	Unclear. Possibly continuous but with periodic settlement relocation.
Radley	Barton Court Farm	Good	Gravel Terrace	New settlement in late Iron Age	Discontinuous. Late IA farmstead, early RB farmstead, late RB Villa
Stanford-in-the-Vale	Bowling Green Farm	Limited	Corallian Ridge	Expansion in Roman period	Continuous. IA farmsteads, Villa replaced by small town in fourth century AD
Tubney	Tubney Wood	Reasonable	Corallian Ridge	New settlement in late Iron Age	New alignment in second century AD
Wantage	Denchworth Road	Reasonable	Upper Greensand	Probable expansion in Roman period	No obvious continuity from Iron Age. Possible 2nd century AD discontinuity.
Wantage	Mill Street	Reasonable	Upper Greensand	Probable expansion in Roman period	No obvious continuity from Iron Age. Possible 2nd century AD discontinuity.
Watchfield	Watchfield Triangle	Good	Corallian Ridge	New settlement in late Iron Age on site of earlier middle Iron Age settlement	Unclear. Possibly continuous but with periodic settlement relocation.

Table 5.8 – Settlement Expansion and Continuity

[7] Includes Wyndyke Furlong.

5.3.3 Abingdon Reservoir Proposal Excavations

As part of the archaeological evaluation for the proposed Abingdon reservoir a range of sites in Drayton, East Hanney and Steventon were investigated by trial trenches. Many of these sites were chosen from the results of the aerial photograph mapping undertaken by English Heritage for an extended area stretching from Drayton and Steventon in the east to Charney Basset in the west (Winton 1999). Part of the cropmark evidence from this survey is illustrated below in figures 5.20 and 5.21. A small number of additional sites were excavated following geophysical survey or fieldwalking.

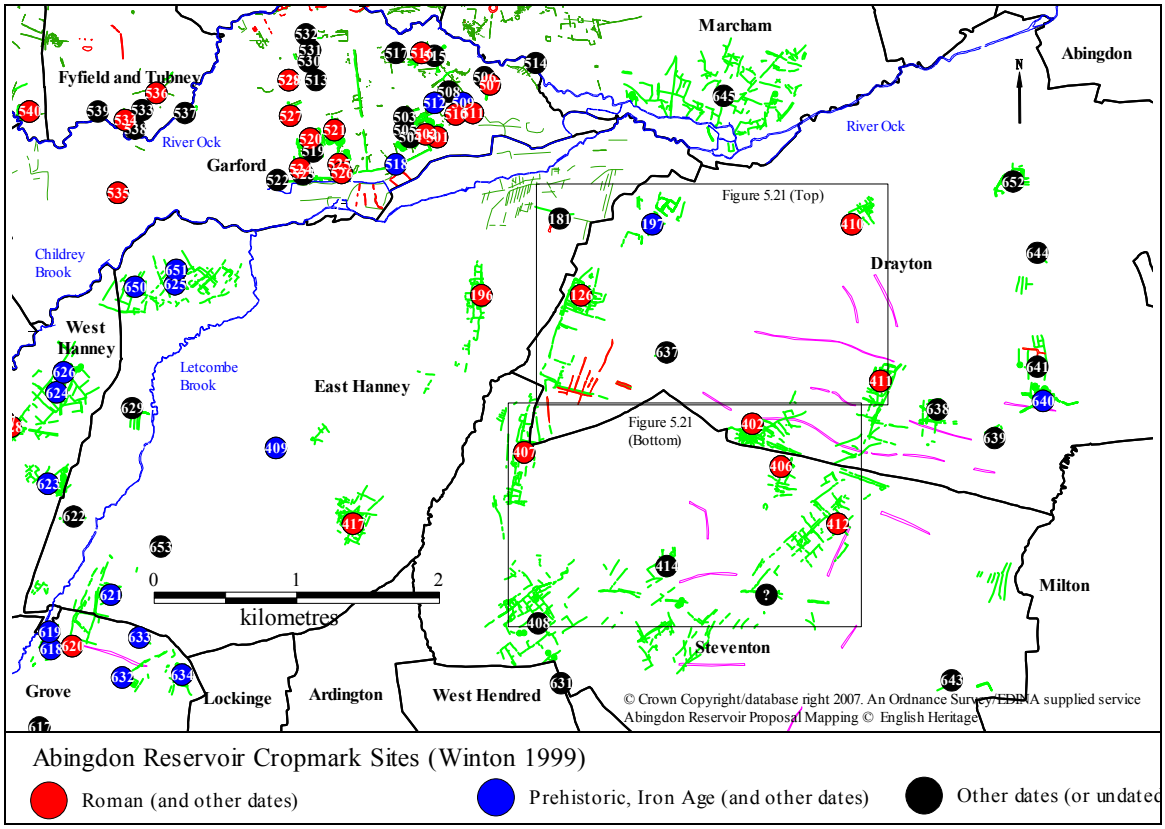


Figure 5.20 – Cropmarks in Drayton, East Hanney and Steventon (Based on Winton 1999)

A summary of the evaluation excavations was provided by Hearne (2001), who mapped nineteen sites in Drayton, East Hanney and Steventon with symbols identifying the period of activity. Subsequently, further sites have been investigated. The excavation reports from seventeen sites have been analysed to extract greater chronological detail and include the six in East Hanney discussed in section 5.2.2.3, plus seven from Drayton and four from Steventon as listed in table 5.9. All the sites are summarised in figure 5.22.[8]

[8] Bibliographic references are summarised in Appendix 4.

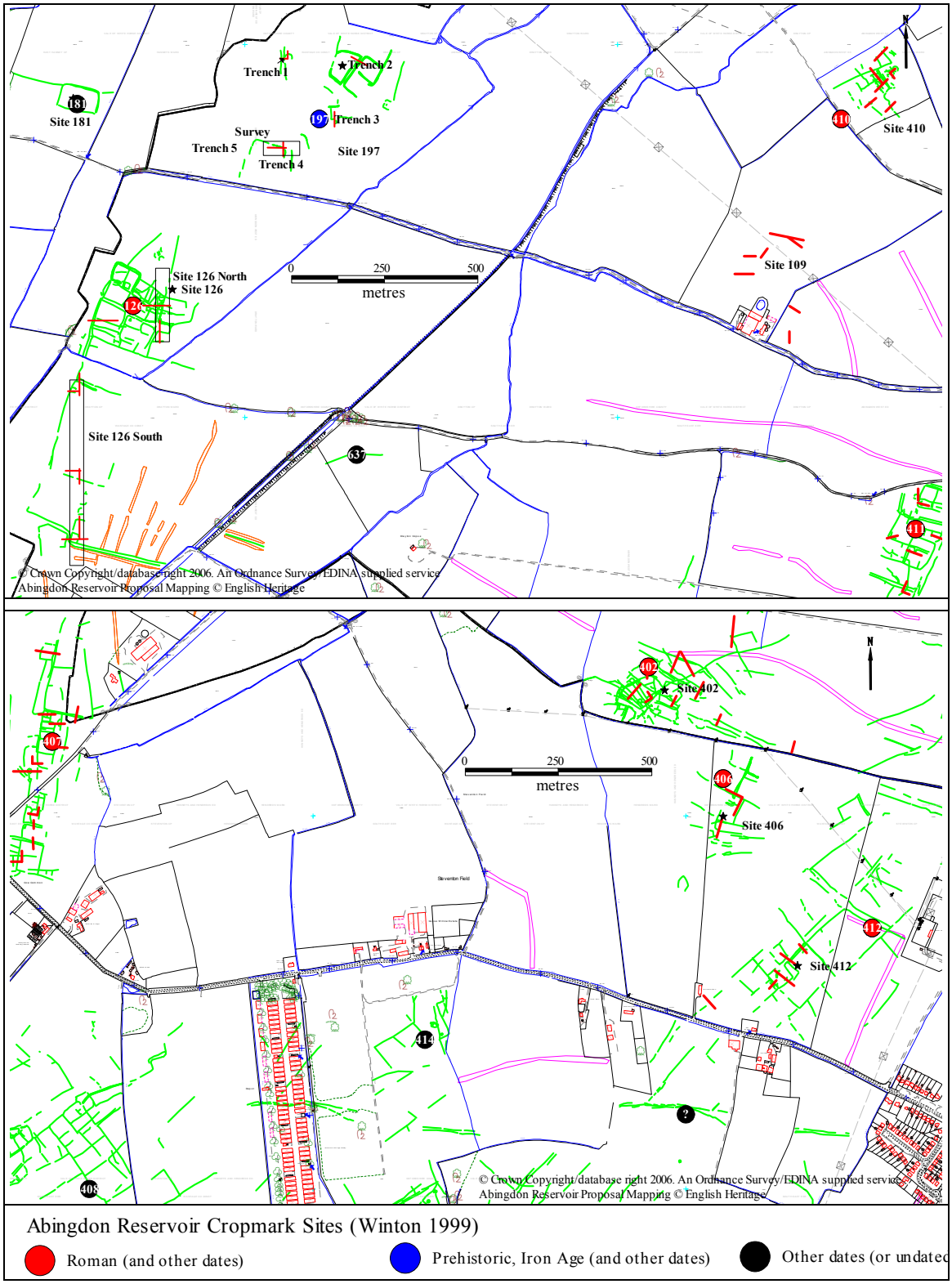


Figure 5.21 – Abingdon Reservoir Proposal – Sites in Drayton and Steventon Sites 109, 126, 197, 410 and 411 (Top) - Sites 402, 406, 407 and 412 (Bottom)

Integrating the excavation data with the cropmark evidence allows the excavation results to be placed in a larger landscape context. This may reveal whether settlements have migrated across the landscape, indicating settlement continuity on a wider scale, even if each individual settlement may have lasted for a shorter period. However, as the excavations were undertaken purely for evaluation, only limited areas within each cropmark complex have been excavated. Moreover, not every feature within each trench was sampled. The excavations in East Hanney have been discussed in section 5.2.2.3, and two examples from Drayton are discussed below to indicate the available information and analysis undertaken.

Parish	Site	Excavator	Iron Age	Romano-British
Drayton	109	Oxford Archaeology		Yes
Drayton	126 North	Thames Valley Archaeological Services	Yes	Yes
Drayton	126 South	Thames Valley Archaeological Services	Yes	Yes
Drayton	197	Thames Valley Archaeological Services	Yes	
Drayton	402	Oxford Archaeology		Yes
Drayton	410	Cotswold Archaeological Trust	Yes	Yes
Drayton	411	Oxford Archaeology		Yes
Steventon	406	Cotswold Archaeological Trust	Yes	Yes
Steventon	407	Cotswold Archaeological Trust	Yes	Yes
Steventon	412	Cotswold Archaeological Trust	Yes	Yes
Steventon	419	Cascade Consulting		Yes

Table 5.9 – Sites in Drayton and Steventon listed by Hearne (2001)

The cropmark at site 126 North, illustrated in figure 5.21, consists of a series of enclosures interlinked by trackways and was investigated by fieldwalking, geophysical survey and three evaluation trenches (Weaver 1998a). The principal dating evidence is the pottery assemblage of 2711 sherds weighing 24 kilograms, most of which dates from the late third to fourth or fifth century AD (Timby in Weaver 1998a). Small amounts of residual prehistoric and early Roman material were also present suggesting some limited activity on the site in the Iron Age and early Roman period but with the field system and main phase of activity dated to the late Roman period.

Also illustrated in figure 5.21 is the cropmark defining site 402 which was investigated by geophysical survey and ten trenches (Oxford Archaeology 1998a). The pottery assemblage of 1044 sherds weighing 13.5 kilograms was largely of first and second century AD date, with a limited amount of middle Iron Age material and some third and fourth century AD sherds. The main phase of activity at this site appears to date to the early Roman period, but with limited earlier and later activity.

5.3.4 Discussion

Figure 5.22 summarises settlement continuity at these seventeen sites. The dashed lines in the figure are used to represent dated pottery or other finds even though no features of this date were identified. Settlements which may have ceased to be occupied in the early second century AD include sites 109, 406, 411, 412 and possibly also 400 North and 417. Conversely, sites which may have commenced at this date include 126 North and South, 410, 110, 196, 416 and 407. This provides considerable support to Lambrick's and Henig and Booth's suggestion of settlement discontinuity in the early second century AD.

The majority of settlements occupied in the Romano-British period appear to have evidence of earlier Iron Age activity, usually of middle Iron Age rather than late Iron Age date. It is useful to consider the sites 110, 196 and 416 in East Hanney which correspond to one long ditch or trackway with associated enclosures. At site 110, Timby (in Hall 1994) indicates that the bulk of the prehistoric pottery dates to the third and second century BC, with Roman material beginning in the second century AD, and is quite explicit that there does not appear to be any continuity from the Iron Age. Similarly, sites 196 and 416 both date to the middle Iron Age and second to fourth century AD (Barber and Thomas 1998; Thomas 1998). Only in one trench at site 416 was one feature potentially dated to the late Iron Age.

The late Iron Age is poorly represented in figure 5.22. Only three sites (400 North, 406 and 412) appear to have archaeological features of this date, although other sites may have first century BC pottery. In addition figure 5.22 provides little or no evidence of new settlements being created in the late Iron Age. This lack of late Iron Age settlement may either be correct or may indicate continued use of middle Iron Age pottery wares. Alternatively, it could reflect difficulties in dating late Iron Age pottery from the evaluation excavations.

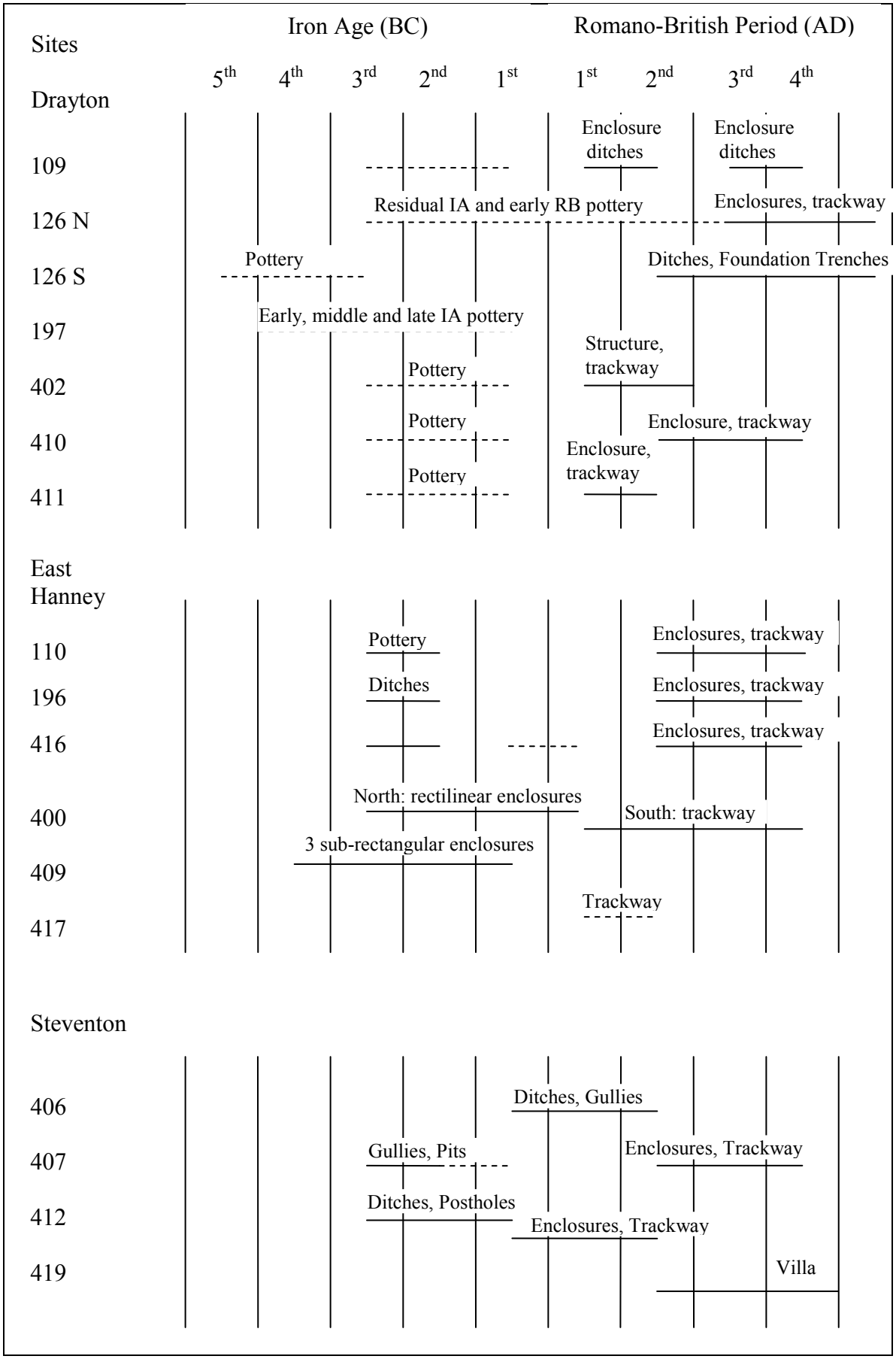


Figure 5.22 – Chronology of Excavated Sites in Drayton, East Hanney and Steventon

5.3.5 Frilford and Garford

These two parishes are of considerable interest in a study of settlement continuity and population as they contain extensive areas of cropmarks recently mapped by English Heritage. In addition, recent geophysical survey and fieldwalking has provided useful new evidence. Frilford is located to the north of the river Ock while Garford lies to the south between the river Ock and the Childrey brook. In Frilford and in East Garford the solid geology of the limestone and sandstone bands of the Corallian ridge dominates as shown in figure 5.23. Alluvial deposits are found adjacent to the river Ock and the Childrey and Nor brooks.

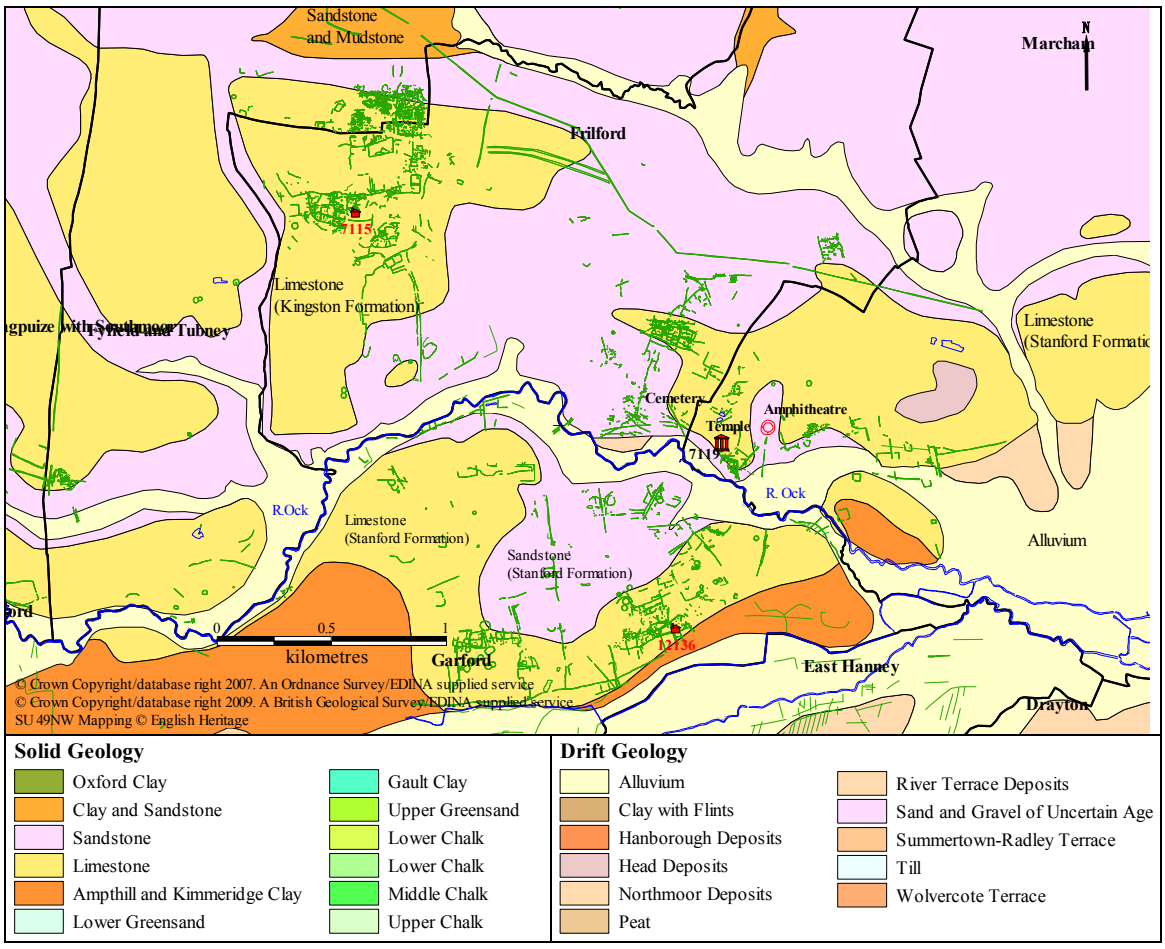


Figure 5.23 – Geology and Cropmarks in Frilford and Garford (British Geological Survey Sheets 236 - Witney and 253 - Abingdon)

The archaeological potential of Garford was first investigated by Richard Hingley through fieldwalking and an analysis of aerial photographs (Hingley 1979; 1980b; 1981b) from which he identified a Bronze Age cemetery, other ring ditches, prehistoric and Roman settlement evidence together with a small villa. Based on this work a map of the

cropmarks and villa was published by Miles (1982a, 73). In contrast, Frilford has a longer history of archaeological investigation, dating from the nineteenth century, both in the east (Akerman 1865a; Rolleston 1869; 1880) and in the west (Evans 1897). Further research was undertaken by Richard Hingley through fieldwalking and analysing aerial photographs and based on this a map of the cropmarks and villa in west Frilford was published by Miles (1982a, 72).

The aerial survey mapping and geophysical survey results in eastern Garford are illustrated in figure 5.24. The earliest activity appears to be the digging of ring ditches, probably burial barrows from the early Bronze Age. The greatest concentration of ring ditches lies to the west of the A338 in what appears to be a barrow cemetery. The geophysical survey and fieldwalking results from this barrow cemetery area are shown in more detail in figure 5.25. The ring ditches are clearly visible and mostly have a diameter of between 24 and 28 metres. This field also contains evidence of later settlement, marked by irregular ditches and pits, to the east and west of the barrow cluster. A more regular field system lies to the north-east, with a trackway dividing two field systems. The smaller, western field system or enclosure contains numerous pits and may therefore have been an occupation area. The eastern fields contain very few pits and may represent small enclosures for stock. Although the geophysical data can only be dated through morphological analogy, useful dating evidence is provided by the fieldwalking survey also shown in figure 5.25. Romano-British pottery is distributed somewhat unevenly across the field with three concentrations in the north-west, south-west and north-centre. Surprisingly small amounts of pottery were found over the enclosure directly to the north of the barrows, with more found in the apparently empty fields to the east. The prehistoric pottery is largely restricted to the east and south-west.

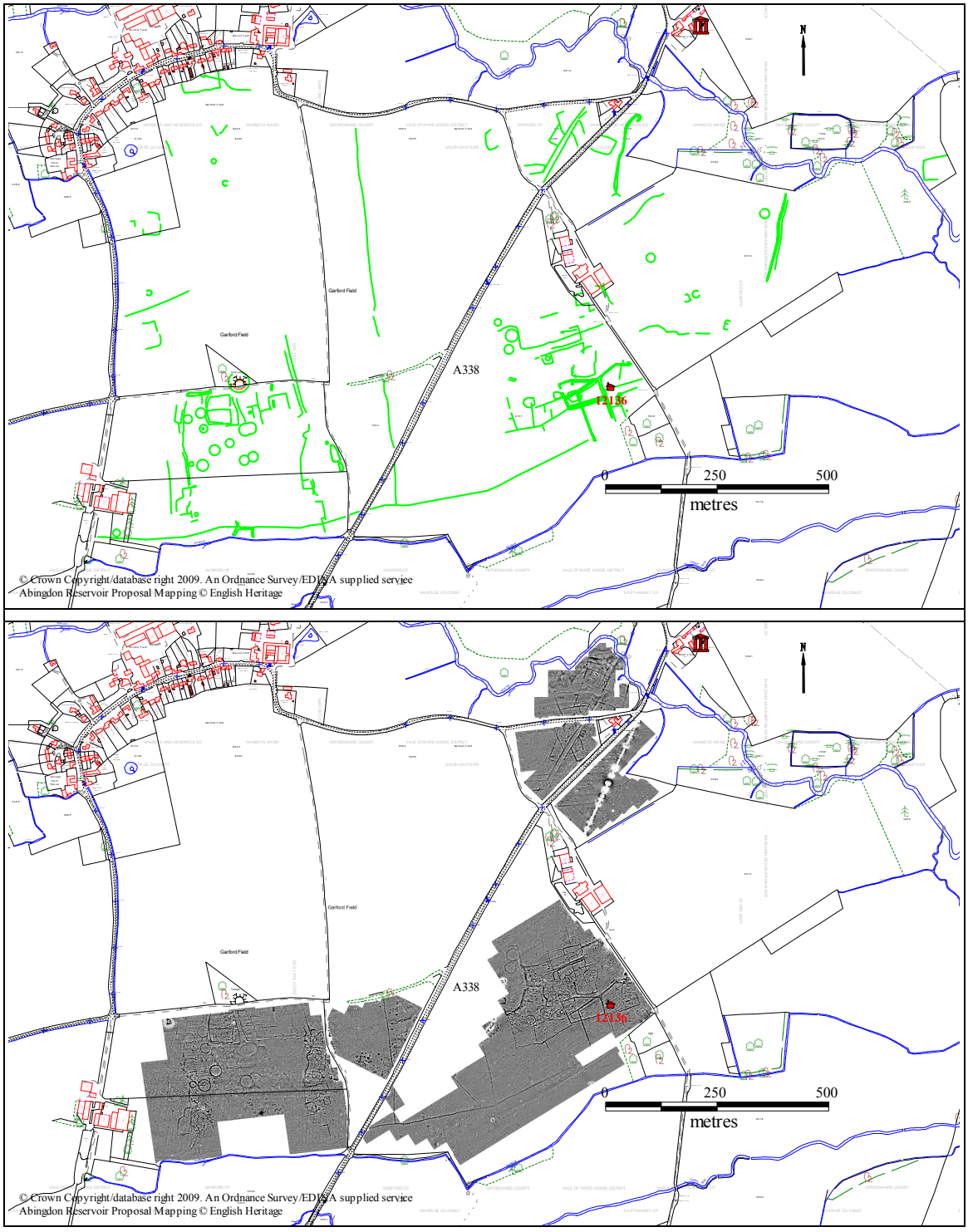


Figure 5.24 – Garford: Aerial Survey Mapping (Top) and Geophysical Survey (Bottom)

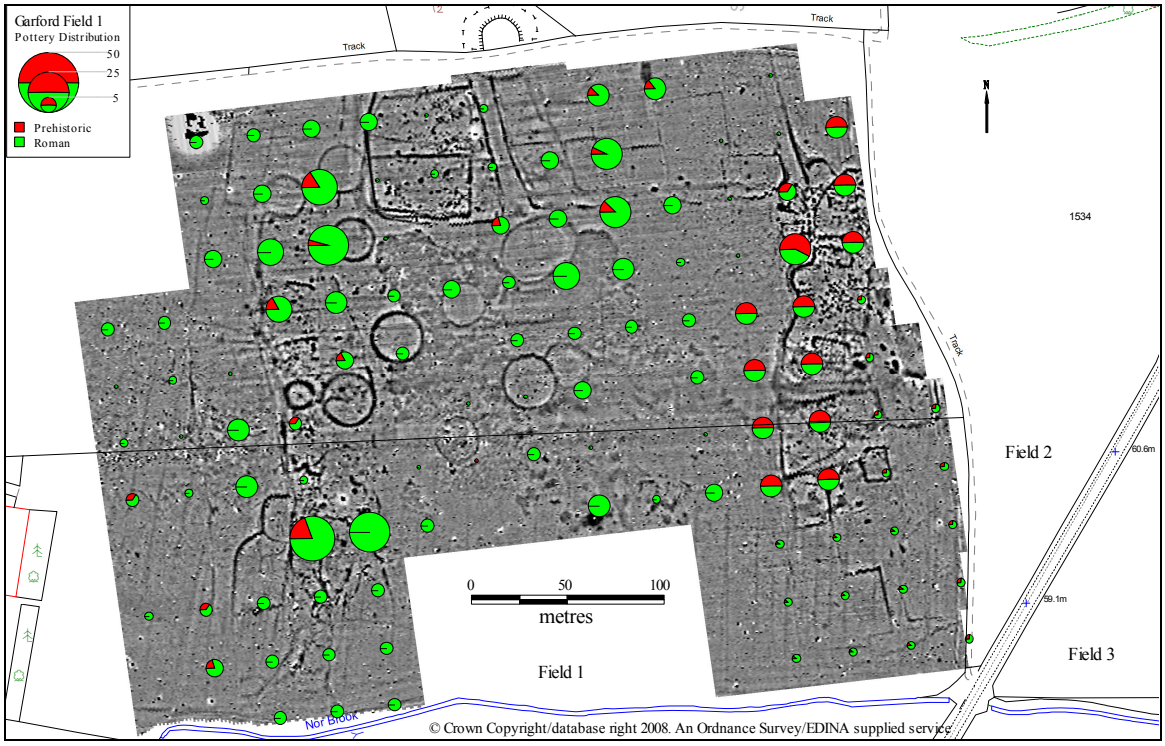


Figure 5.25 – Geophysical Survey and Pottery Distribution in Field 1 (Bronze Age barrow cemetery)

Fieldwalking recovered a total of 970 sherds weighing 7 kilograms, of which 548 were Romano-British and 90 were prehistoric[9]. Most of the Romano-British pottery was heavily abraded with little diagnostic material. The largest component was 386 sherds of reduced greyware. In addition there were 48 sherds of Oxford white ware and 35 sherds of Oxford colour-coated ware. The assemblage also contained eleven sherds of Roman shell gritted ware, five small fragments of Samian and small amounts other wares. No Roman ceramic building material was found. The assemblage appears to date mostly from the middle to late Roman period. The pottery concentration seems too high for all of this assemblage to be accounted for by field manuring and it is probable that one or more small settlements were located here. The majority of the prehistoric pottery sherds were shell/flint tempered but some burnished and sand tempered wares were also present. Most appears to date to the early and middle Iron Age. The eastern part of the field associated with enclosures and pits accounted for 72 of the 90 sherds.

The occupation sequence seems to begin in the Iron Age to the east and south-west of the barrows. A more regular field system appears to be introduced during the Roman period and settlement may have continued in both these eastern and south-western areas.

[9] The pottery discussion is based on an analysis and report by John Hawes.

The lack of high status pottery and structural features would suggest this was a relatively low status, rural settlement.

The geophysical and fieldwalking survey then continued in a field to the east of the A338 from which a total of 1305 sherds weighing 12.3 kilograms were recovered[10] as shown in figure 5.26. The majority of this, 964 sherds, can be dated to the Romano-British period and consists of 643 sherds of reduced greyware; 90 fragments of Oxford colour-coat ware (red and brown); five sherds of Oxford white-coated ware including two pieces of mortaria; 54 fragments of oxidised wares which are probably Roman but some of this may be abraded colour-coat wares. The Oxford ware assemblage is completed by 50 sherds of Oxford white ware including five pieces of mortaria. Samian is limited to twenty sherds some of which are patterned and two show signs of burning. The remainder of the Roman pottery consists of black sandy coarse ware, shell gritted ware and some black burnished ware.

The prehistoric pottery consists of 136 sherds which appear to date from the early to middle Iron Age. The assemblage consists mainly of shell/flint tempered wares although 26 burnished pieces were also recovered together with 25 pieces of sand tempered ware. This prehistoric pottery is mainly concentrated to the northwest of the villa building in an area of pits and circular features. The absence of late Iron Age pottery may suggest there was no continuity of settlement from the Iron Age but this is perhaps unlikely.

The site of the villa (HER 12136) is under grass and could not be fieldwalked. Figure 5.26 demonstrates that the highest concentration of Roman pottery is located directly to the north and north-west of the villa. The number of sherds per grid declines rapidly with increasing distance from the villa apart from two survey grids positioned over rectangular enclosures in the very north of the survey area. Although the amount of Samian recovered is small it may indicate settlement from the second century or earlier. The rest of the Roman pottery indicates a later occupation through to the fourth century.

[10] The pottery discussion is based on an analysis and report by John Hawes.

Figure 5.26 – Geophysical Survey and Pottery Distribution in Field 3
Iron Age and Roman Settlement

Ceramic building material was collected where it was believed to be Roman and included eight fragments of tegula, eight pieces of combed tile of various patterns, most probably from box flue tiles, together with fifteen other fragments of possible Roman tile. This material suggests the villa supported a tiled roof and perhaps had under floor heating

as attested at Frilford (Evans 1897; Boyer *et al.* 2008) and probably also at East Hanney (Boyer *et al.* 2007). The villa is situated less than a kilometre to the south of the Romano-British temple site at Marcham/Frilford, in the south-east of field 3 (see figures 5.24 and 5.26) and is discussed in more detail in chapter seven.

Turning next to Frilford, where geophysical surveys have been undertaken in both the east, discussed in Chapter 4, and in the west, at Ham Field about two kilometres to the north-west of the Romano-British temple site at Marcham/Frilford. The Ham Field location is the site of a small villa (Evans 1897; HER 7115) together with an extensive set of cropmarks. The villa is discussed in more detail in chapter seven.

Four distinct areas over known cropmarks were fieldwalked in 2006 in a rapid survey to identify any specific concentrations of material. Seven 100 metre transects were walked over the site of the villa and yielded 73 Roman and prehistoric pottery sherds together with 284 pieces of ceramic building material (Boyer 2006, 38). In particular it is the ceramic building material, including tegulae, imbrices and flue tiles, which confirm the location of the villa as illustrated in figure 5.27. Systematic fieldwalking was not attempted during the 2007 geophysical survey but pottery was collected and bagged according to survey grid. In addition, pottery sherds were collected without recording their position. In total this yielded 50 sherds of Roman pottery and 50 fragments of ceramic building material from the central and southern areas.

The results of the geophysical survey in Ham Field are illustrated in figures 5.27 and 5.28 where it can be seen there are at least three distinct sets of archaeological features. In the south is a set of small fields with trackways leading south and east, while to the west is a large funnel-shaped entrance. In contrast, the central area contains a number of oval shaped ditched enclosures. It is in one of these enclosures that the villa excavated by Evans lies. Finally, in the north of the field are a number of large rectangular fields with some smaller, circular features. These latter may represent gullies around roundhouses.

The geophysical survey failed to identify the features excavated and described by Evans. Instead the survey demonstrates that the archaeological features in the immediate vicinity of the villa and in the surrounding field are much more complicated than Evans realised. The villa is situated in the south-east of a ditched enclosure with a further

ditched enclosure to the south-east. It is probable that these enclosures represent settlement sites and not just stock enclosures. Five circular features are identified in figure 5.28 which may represent the foundation trenches or drip gullies of roundhouses and all lie outside these enclosures. Four of these have diameters of about 12 metres while one has a diameter of 14 metres. One such circular feature lies between the two enclosures and remaining four are situated in the rectangular field system at the north of Ham field. These could date to either the Iron Age or Romano-British period.

The recent aerial photographic mapping illustrated in figure 5.28 has demonstrated that cropmarks extend into the field to the west and also into the field to the north of the A415. There appear to be many more such circular features north of the A415 together with dense clusters of pits (HER 12266). This may be more representative of an Iron Age occupation site but may well extend into and through the Roman period.

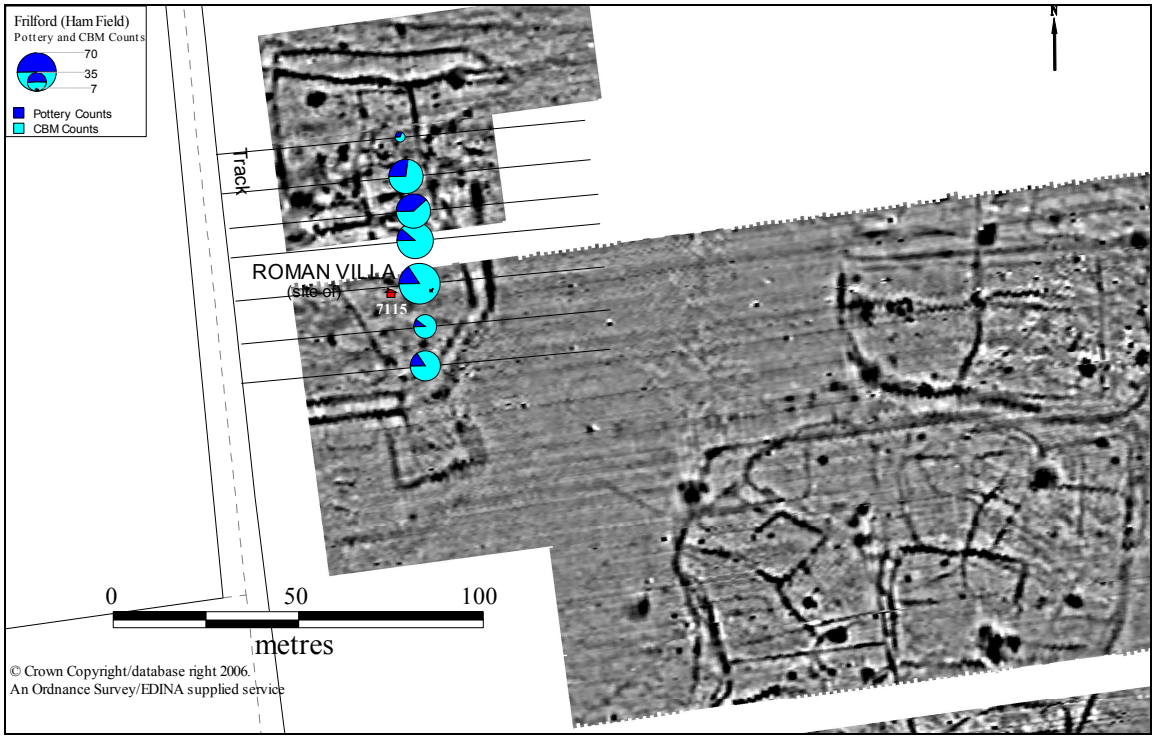


Figure 5.27 – Frilford Villa: Geophysical Survey and Fieldwalking

The dating in Frilford is less certain than at Garford as much less pottery was collected. However, the dense clusters of features makes it reasonable to assume the Romano-British occupation was preceded by Iron Age occupation. As at Garford, a small villa was established, probably in the later Roman period.

**Figure 5.28 – Ham Field: Aerial Survey Mapping and Geophysical Survey (Top)
Geophysical Survey and Interpretation (Bottom)**

5.3.6 Discussion

Figure 5.29 summarises the suggested settlement continuity. Garford fields 1 and 3 both have middle Iron Age and Romano-British occupation as attested through the pottery assemblages. The lack of late Iron Age pottery does not necessarily exclude continuity of settlement through this period. Middle and late Iron Age occupation at and near Ham Field, Frilford is probable, suggested largely from the cropmark evidence. Romano-British occupation is certain but it is not possible to state when this began and ended. As at Garford, settlement continuity through the late Iron Age is likely but cannot be demonstrated.

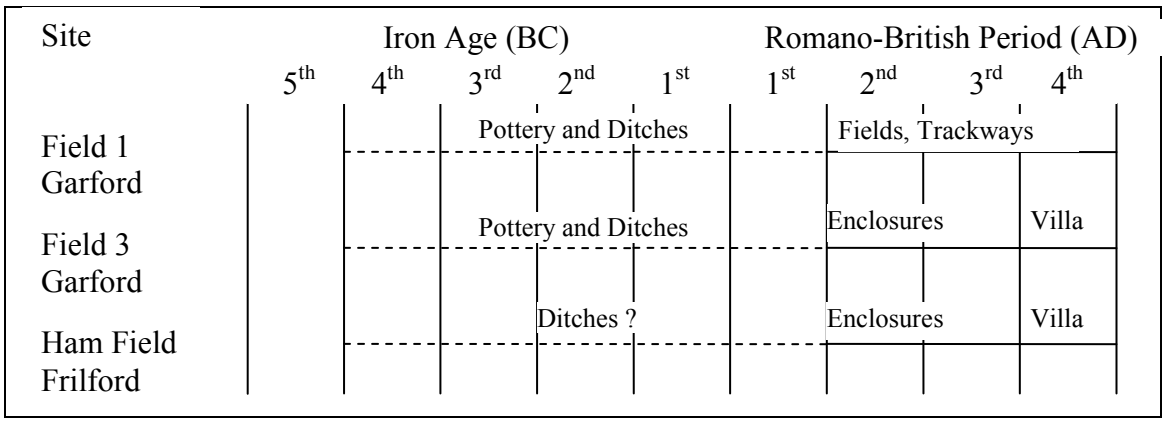


Figure 5.29 – Chronology of Sites in Frilford and Garford

The chronological evidence from the cropmarks, fieldwalking and geophysical survey in Garford lacks sufficient precision to define any specific settlement movement or re-organisation. Nevertheless, in both fields there does appear to be continuity of settlement location within a reasonably restricted area from the middle or late Iron Age into the Roman period. In the eastern field there would also appear to be evidence of re-ordering of field or enclosure boundaries, possibly from a relatively disorganised system to a more orderly system. In the western field there appears to be a more organised field system with a trackway, but to its south-east is a more disorganised, and probably earlier settlement enclosure. The evidence perhaps best fits an expansion of settlement (and population) from a small settlement to a larger one, on much the same site, over a period of several centuries.

Ham Field, Frilford suffers from the same lack of chronological precision. Nevertheless, the scale of the cropmark complex suggests long term occupation by a

reasonable population. There may also be a move from a relatively disorganised enclosure system towards a layout of rectangular fields.

Garford and Frilford both provide evidence of long term settlement. In each case it is likely that settlement began in the middle Iron Age and subsequently developed and increased in population. At both sites a small Roman villa was established probably with neighbouring Iron Age style roundhouses to accommodate those working the land. Occupation continued until the fourth century AD. This continuity of occupation throughout the Iron Age and Romano-British periods is similar to that of the nearby Noah's Ark Inn religious complex.

5.4 Conclusions

The second part of this chapter has considered two themes: the creation and/or expansion of settlements related to population increase, and settlement continuity. In section 5.3 it was suggested that the increasing population of the Iron Age and Romano-British period may have been accommodated by the expansion of existing settlements or the formation of new settlements, or both. This should be visible archaeologically in the creation of villages or small towns, or through a more intensively settled landscape.

The evidence from thirteen excavated sites, summarised in figure 5.19 and table 5.8, indicates that new settlements were created and that some existing settlements were expanded. It was suggested that Appleford Sidings, Barton Court Farm, Watchfield, Wantage and possibly Bowling Green Farm began in the late Iron Age or early Roman period. Sites suggesting expansion and continuity, but with possible relocation or reorganisation, include Ashville Trading Estate, Appleford Field, Coxwell Road (Faringdon) and Manorhouse Farm (Hatford). Further expansion of existing settlements in the Romano-British period occurs at Bowling Green Farm and possibly at Wantage with the formation of small marketing villages or towns.

Settlement continuity has been considered with regard to the two periods of settlement discontinuity identified by Lambrick (1992): from the middle to late Iron Age and at the end of the first century AD or early second century AD. Sites which appear to be abandoned in the second century AD include Appleford Sidings, Barton Court Farm and Manorhouse Farm. Settlement re-organisation during the second century AD is attested at Appleford Field, Tubney, Watchfield and the two Wantage sites. The development of a villa at Bowling Green Farm appears to start during the second century AD. Settlements appearing to commence in the second century AD are limited to Farmoor and possibly Mill Street in Wantage.

In the three parishes investigated as part of the Abingdon Reservoir proposal up to seven settlements may have been abandoned in the early second century AD while a further six may have commenced at this date.

For both settlements in Garford middle Iron Age and Romano-British occupation is attested through the pottery assemblages. Continuity of settlement through the late Iron Age is likely but cannot be demonstrated. Iron Age occupation at Ham Field in Frilford is probable, suggested largely from the crop mark evidence. As at Garford, settlement continuity through the late Iron Age is probable but cannot be demonstrated.

The next chapter considers the types and forms of rural settlement in the Vale of the White Horse, how this changed over time, and how settlements were linked within the wider agricultural landscape.

6 Settlements in the Landscape

6.1 Introduction

This chapter examines the nature and form of Iron Age and Romano-British settlement within the Vale of the White Horse. It begins by considering the Iron Age hillforts, valley forts and enclosed oppida within and adjacent to the Vale. The construction and maintenance of these sites required significant amounts of human labour and other resources and this can provide an indication of the exercise of power and perhaps, also, the development of a group or community identity. Identity is also examined through the distribution of inscribed coins from three late Iron Age tribes.

The second part of this chapter considers rural settlement from the Iron Age into the Romano-British period. Such settlements encompass a wide variety of forms: they may be open or enclosed, contain one or more farmsteads, and grow to become small villages or towns. Aspects considered include the form and structure of settlements, their adjacent agricultural landscape, and how this changed through time.

Iron Age rural settlements are typically characterised by one or more roundhouses standing within or adjacent to field systems. Roundhouses are constructed from a circle of timber or stake posts which support a daub wall and thatched roof. They can range in size from six to thirteen metres and many are surrounded by drainage or drip gullies. Rectangular post-built structures, defined by four or six posts and ranging in size from two to four metres, are another common building form. Many Iron Age settlements contain large number of cylindrical pits of varying size and depth, often interpreted as grain storage pits, but which may perform a range of other functions. From the middle Iron Age onwards there is a tendency for settlements to be enclosed by ditches, with the area enclosed typically of the order of 0.5 to 0.8 hectares (Allen 2000, 6-9).

Two types of settlement can be distinguished in the Roman period: villa and native or non-villa settlements. The latter are more numerous, occur in a wide variety of forms, and appear to represent economic and social continuity from the Iron Age. Their material culture usually contains fewer coins and metalwork, and a more restricted range of pottery, than villas. In addition, they lack buildings representing status and wealth (Hingley 1989, 23). These native settlements are discussed in the second part of chapter 6 while villas are examined in chapter 7.

6.2 Hillforts, Valley forts, Enclosed Oppida

Hillforts are among the largest and most obvious prehistoric earthworks, frequently positioned to take advantage of natural defensive features such as hilltops, cliffs or promontories, with further defensive or display capability added through the construction of earth, timber or stone ramparts. Although the term hillfort is used for a wide range of sites, of varying sizes, forms, dates and functions, understanding their development and roles is important to understanding the economic, social and political development of Iron Age societies. This is emphasised by Cunliffe (2005, 347) who observes that the human resources needed for their construction required the co-ordination and effort of a substantial population. As the ditches, banks and ramparts often exceeded the requirements of defence, hillforts may symbolise the expression of power and the development and maintenance of group identities (Bowden and McOmish 1987).

The construction of enclosures on hilltops appears to commence in the late Bronze Age, in the late second and early first millennium BC. Examples include Rams Hill on the Berkshire Downs (Bradley and Ellison 1975; Needham and Ambers 1994) and further east, Castle Hill at Little Wittenham (Lambrick and Robinson 2009, 344-346; Allen *et al.* 2010, 22-25). Cunliffe (2005, 378-396, 402-406) has outlined the chronological development of hillforts in southern England. Large, lightly defended "hilltop enclosures" appear in the earliest Iron Age (800-600 BC) and are followed by the "early hillforts" of the early Iron Age (600-400 BC). These differed from the earlier hilltop enclosures in having stronger defences and more evidence of continuous occupation. During the middle Iron Age (400-100 BC) these early hillforts were either abandoned or became yet more strongly defended to become "developed hillforts". Many hillforts appear to have been abandoned in the late Iron Age (100 BC – AD 43) and their functions may have been replaced by new settlements on or adjacent to rivers. Where these settlements are enclosed, Cunliffe (2005, 402-406) refers to them as "enclosed oppida" with examples at Dyke Hills and Abingdon.

The Oxfordshire HER lists nine certain or possible hillforts in the Vale of the White Horse and the adjacent Berkshire Downs. Four of the five on the Downs lie on or close to the Ridgeway with the small enclosure at Alfred's Castle situated south of the Ridgeway. Three hillforts, or possible hillforts, lie on a slight elevation at the western end of the Vale

of the White Horse with perhaps the most doubtful site at Bury Hill, Buscot, (Hingley 1981a, 107). The final hillfort, Cherbury Camp, is not situated on a hill but lies within the flat Vale between small tributary streams of the river Ock. Burroway, situated just to the north of the Thames (Sutton 1968, 37; Allen 2000, 17; Lambrick and Robinson 2009, 356-358), can be added to these nine. There are no hillforts in the clay Vale.

The location of these ten hillforts and of the enclosed oppidum at Abingdon are shown in figure 6.1 while table 6.1 below provides a reference to the size and underlying geology of eight of them. A comparison of the relative sizes and shapes of six hillforts is provided in figure 6.2.

Hillfort	Parish	Size (hectares)	Geology	Location	HER PRN	SAM
Segsbury Camp	Letcombe Regis	10.5	Chalk	Downs	7200	28183
Little Coxwell Camp	Little Coxwell	5	Corallian	Vale	7529	207
Cherbury Camp	Charney Bassett	3.75	Corallian	Vale	4943	238
Badbury Hill Camp	Great Coxwell	ca 3.5	Corallian	Vale	7101	257
Uffington Castle	Uffington	3.5	Chalk	Downs	7304	21778
Rams Hill	Kingston Lisle	3	Chalk	Downs	10556	-
Hardwell Camp	Compton Beauchamp	>2	Chalk	Downs	7320	28167
Alfred's Castle	Ashbury	0.8	Chalk	Downs	7333	28163

Table 6.1– Hillforts in or adjacent to the Vale of the White Horse

Limited areas of three hillforts on the Berkshire Downs were excavated as part of the Hillforts of the Ridgeway Project: Uffington Castle (Miles *et al.* 2003), Segsbury Camp (Lock *et al.* 2005) and Alfred's Castle (Gosden and Lock 1999; 2003). Near to Uffington Castle is Rams Hill, excavated in the 1930s and 1970s (Piggott and Piggot 1940; Bradley and Ellison 1975; Needham and Ambers 1994). Only Hardwell Camp remains unexcavated. Little is known of Badbury Camp or Little Coxwell Camp north of the river Ock (Huntingford 1936; Cotton 1962; Edwards *et al.* 1980; Hingley 1983c), although Allen (2000, 17) describes them as early Iron Age defended sites. Also north of the river Ock is Cherbury Camp, where a small excavation was undertaken in 1939 (Bradford 1940), and Abingdon, where evidence of an oppidum was uncovered in the late 1980s and early 1990s (Allen 1991; 1997; 2000).

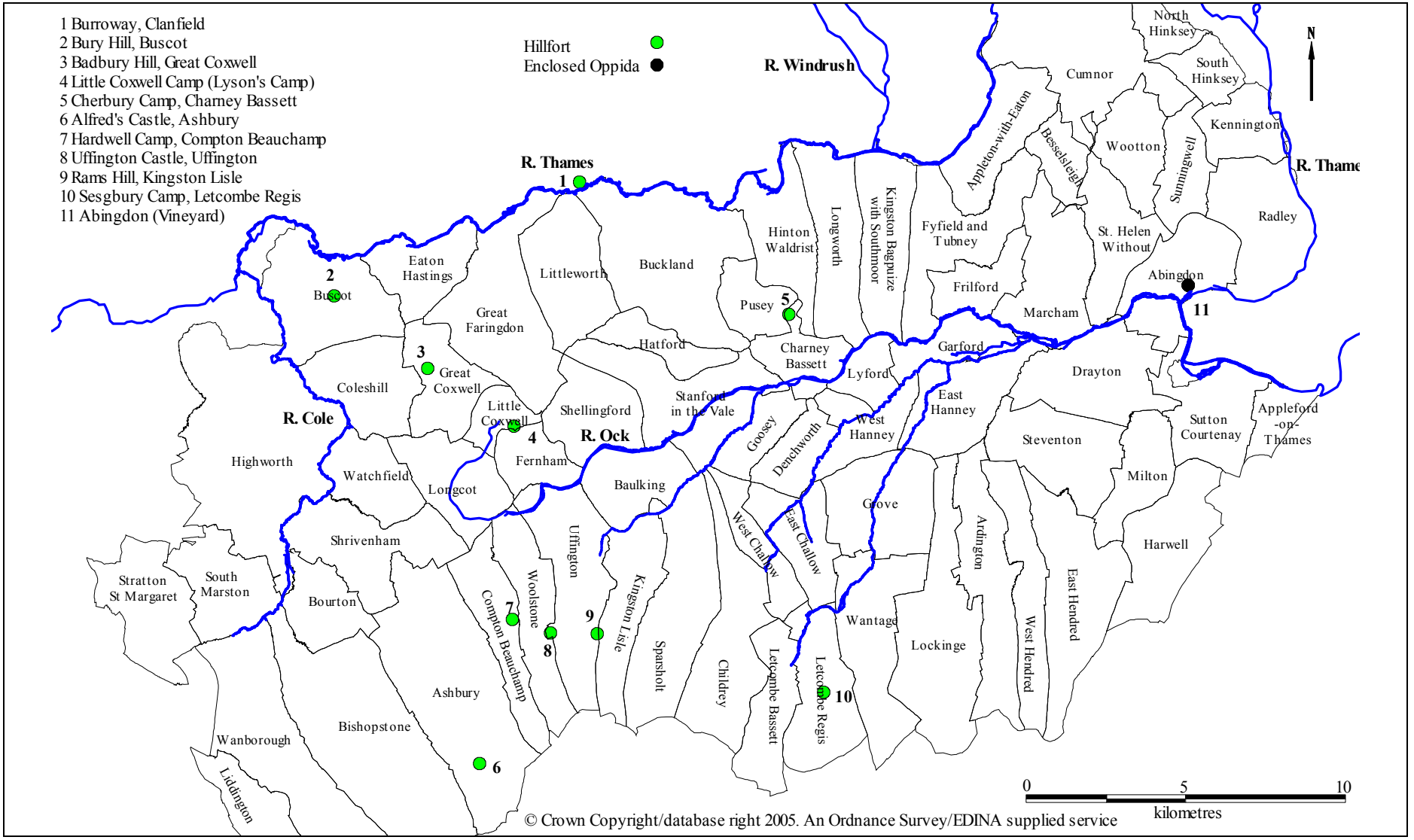


Figure 6.1 – Hillforts in the Vale of the White Horse

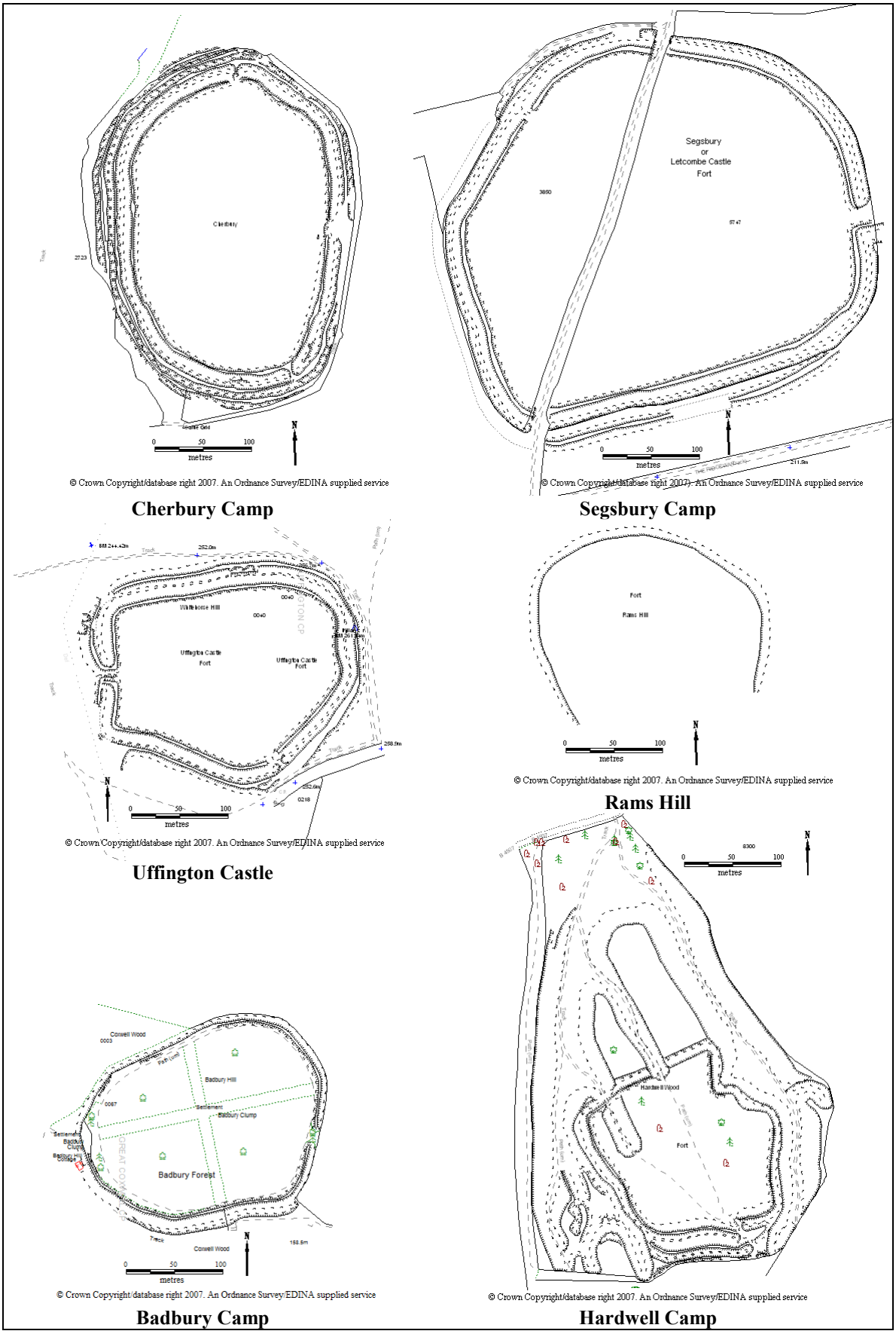


Figure 6.2 – Relative Sizes of Hillforts in or adjacent to the Vale of the White Horse

Hillforts will have played a number of roles in the lives of Iron Age communities. Importantly, their size distinguishes them from other forms of contemporary settlement and the construction of their banks and ditches, particularly of developed hillforts, would have required the effort of a significant workforce, whether co-erced or voluntary. For instance, Segsbury Camp is interpreted as representing a community project through which a community identity was constructed and expressed (Lock *et al.* 2005, 133-135). It is therefore necessary to consider where and how that community lived, and what changes occurred to that community over the lifetime of the hillfort. It is clear that many hillforts, particularly early ones, did not have substantial, permanent occupation: a point emphasised by recent geophysical survey at nineteen hillforts in central southern England (Payne *et al.* 2006) and summarised below in table 6.2.

Occupation Evidence	**Number**	**Examples**
Little or no evidence	5	Ladle Hill, Oliver's Camp, Walbury, Martinsell, (Fosbury)
Scatters of pits	4	St Catherine's Hill, Woolbury, Perborough Castle, Uffington Castle.
Some occupation, varies	4	Segsbury Camp, Beacon Hill, Liddington Castle, Oldbury
Dense Settlement	4	Bury Hill II, Barbary Castle, (Danebury, Alfred's Castle)
Elaborate Planning	2	Norsebury, Castle Ditches.

Table 6.2 – Evidence for occupation in Hillforts (Payne *et al.* 2006, 143)

Although the geophysical survey of Segsbury Camp indicated circular gullies, interpreted by Payne (1996, 175; 2005, 26) as roundhouses, Lock *et al.* (2005, 144) have argued they did not represent permanent occupation. Instead, as is also the case with developed hillforts, all or most of the community must be looked for outside the hillfort. At Segsbury Camp Lock *et al.* (2005, 141-144) suggest that in its early phases its community was located mainly to the south on the chalk downlands, and only, perhaps with the subsequent elaboration of the defences in the fourth century BC, may the hillfort's community have expanded to include people living within the Vale.

Towards the end of the Iron Age new and much larger defended settlements were constructed in river valleys, frequently adjacent to rivers. But it is possible that some defended valley settlements (or valley forts) date from the middle or early Iron Age. For instance, the river side enclosure of Burroway had a rampart constructed on a timber foundation and containing timber reinforcements. Although Allen (2000, 17-18) suggests this use of timber reinforcing usually dates to the early Iron Age his map 1.9 indicates a middle Iron Age date for Burroway. Likewise, Lambrick and Robinson (2009, 356)

propose an early Iron Age origin for the enclosure but with later modifications. Although the interior provided evidence of an occupation layer, as the dating and nature of the site are still poorly understood, its relevance to understanding Iron Age communities within the Vale of the White Horse is limited.

More relevant is Cherbury Camp which in its current form may date from the latter part of the middle Iron Age, most probably from after 200 BC. Limited finds of pottery indicate middle Iron Age occupation, although earlier activity cannot be excluded. Middle to late Iron Age occupation is attested through a sherd of a Frilford/Cassington bowl found in the entrance (Lambrick and Robinson 2009, 356-358).

Much larger and probably later than Burroway and Cherbury are enclosures at the confluence of the Thames with its tributaries. At Dyke Hills, a deep ditch between two substantial earth banks encloses over forty hectares between the rivers Thames and Thame. The site has not been excavated and is known primarily through cropmarks. Aerial photographs of the interior indicate roundhouses, pits and small enclosures as illustrated in figure 6.3. Without excavation the chronology and contemporaneity of the features remain undetermined. In contrast, the 'oppidum' upstream at Abingdon on the confluence of the river Ock has been discovered through excavation (Allen 1991; 1997; 2000; Lambrick and Robinson 2009). The late Iron Age settlement of over thirty hectares is defined by two or more ditches with a probable inner bank. An extended chronology has been provided by numerous small excavations within the interior which suggest at least 15 hectares were occupied with roundhouses, storage pits, and post-hole structures (Lambrick and Robinson 2009, 362). These excavations indicate that the settlement originated in the early Iron Age and developed through the middle and late Iron Age. Fills from the enclosing ditches have been radiocarbon dated and indicate the ditches were constructed between 200 BC and AD 55 (Allen 2000, 24). Subsequently, early Roman activity resulted in the infilling of the inner ditch during the second century AD.

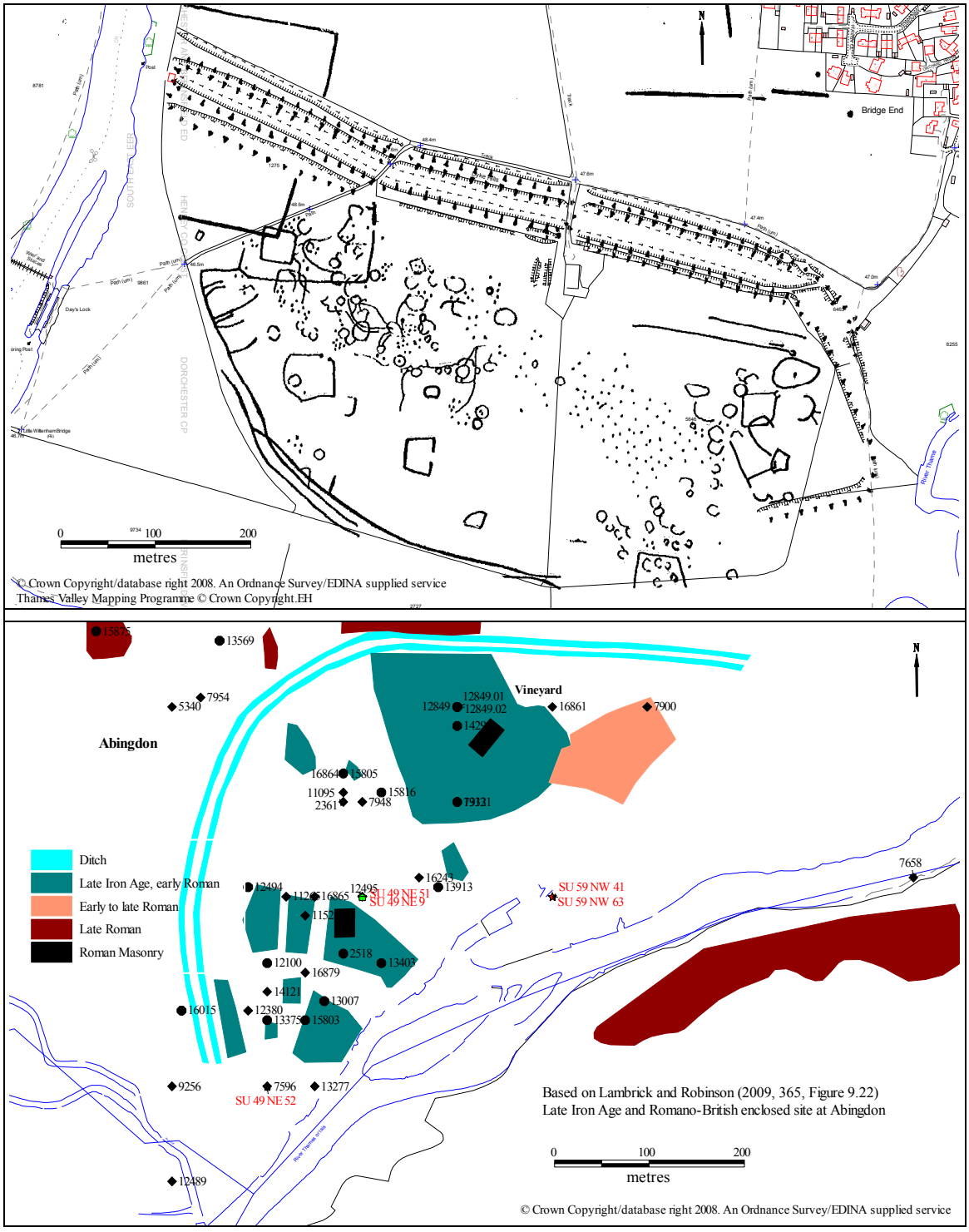


Figure 6.3 – Enclosed Oppida
Dyke Hills (Top) – Abingdon (Bottom)

There are similarities between Abingdon and Dyke Hills: the area enclosed, the nature of the ditches and banks which define their landward side and the evidence for occupation. Smaller, and with only a single bank and ditch is the Cassington Big Enclosure upstream at the confluence of the rivers Evenlode and Thames. The area enclosed is about five hectares and the approximately circular ditch appears to date to the

first half of the first century AD (Allen 2000, 24). Apart from the ditch there is little evidence of other late Iron Age activity and the site may have been abandoned before completion. There is no equivalent site at the junction of the Thames and Windrush, but much further north is a large rectangular enclosure of over twenty hectares at Salmonsbury, Gloucestershire, between the rivers Windrush and Dikler (Dunning 1976). Limited excavations in the 1930s revealed timber roundhouses surrounded by drainage ditches while the pottery suggested occupation from the first century BC into the Roman period (Allen 2000, 24). More recently, geophysical survey has confirmed the settlement evidence but indicated activity on the site commenced much earlier and an open, middle Iron Age settlement may have been enclosed in the late Iron Age (Lambrick and Robinson 2009, 361). This sequence appears to be similar to Abingdon.

Three important characteristics of hillforts are enclosure, visibility and communal functions (Cunliffe in Payne *et al.* 2006, 152). Enclosure is clearly important at the four potential oppida of Salmonsbury, Cassington, Abingdon and Dyke Hills and is also present at Burroway and Cherbury. But visibility plays a much lesser role in these six sites: they are much less visible from the surrounding countryside than earlier hillforts and lack the commanding views. Allen (2000, 24) suggests this is compensated for by defence in depth through multiple ditches and ramparts as at Cherbury Camp, Abingdon and Dyke Hills. This may not be the case at Burroway and is not true of Cassington, although this enclosure may be incomplete. Cassington also differs from the other valley forts by lacking evidence of late Iron Age settlement. Multi-vallation may also be intended to increase the social isolation and enhance the status of the settlement's inhabitants (Bowden and McOmish 1987, 77).

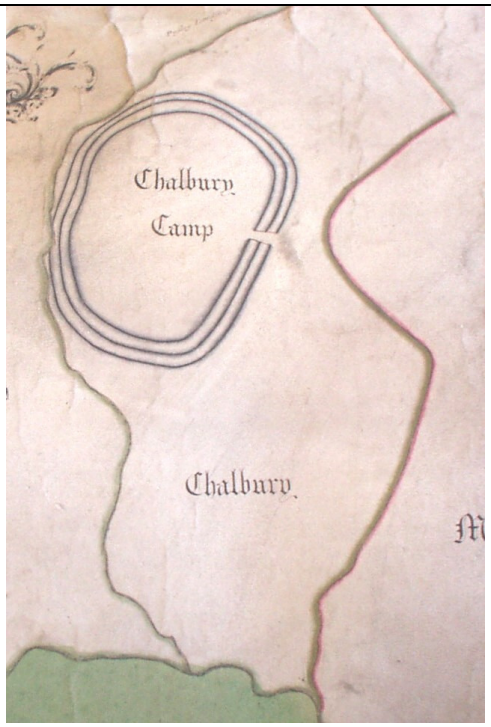
Of primary interest to a study of the late Iron Age in the Vale of the White Horse, particularly when considering communal functions and the expression of community identity, are Cherbury Camp and the oppidum at Abingdon. For this dissertation a geophysical survey was undertaken at Cherbury Camp (Wintle 2007a; Wintle *et al.* 2009) and the results are discussed next. This is followed by an evaluation of the role of Cherbury Camp and Abingdon in representing communal functions and expressing community identity in the late Iron Age.

6.2.1 Cherbury Camp

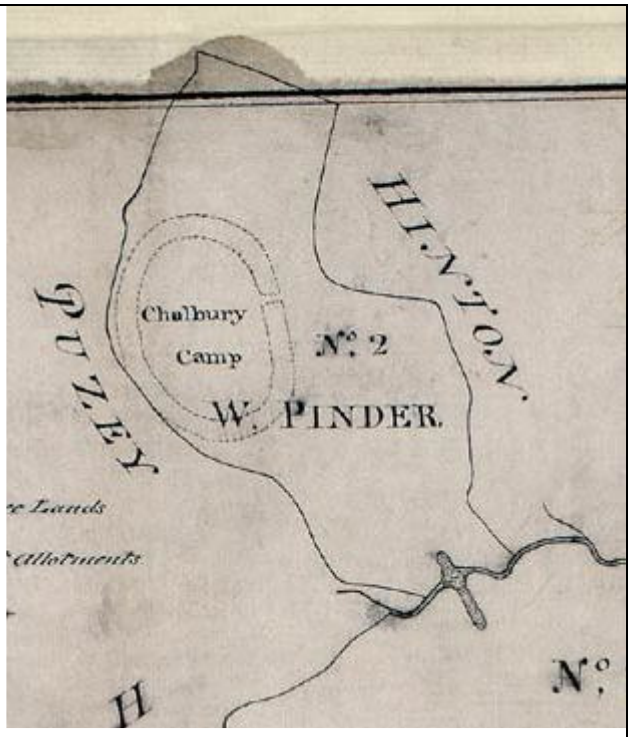
Cherbury Camp is situated in a low-lying part of the Vale of the White Horse, two kilometres north of the river Ock, where it is surrounded by small streams and wet ground. It has been argued that this wet and boggy environment provided a natural defensive position with access only from the north (Arkell 1939). The enclosure lies on the southern edge of the Corallian beds on a small island of sand within a larger island of limestone stretching northwards. Further bands of sand and limestone lie to the east and west. Alluvial silts cover the approaches from almost all directions, through which flow small streams from the west and north, draining south towards the river Ock. Illustrated in figure 6.4 are a mid eighteenth-century and an early nineteenth-century map which indicate an entrance into the Camp from the east, suggesting the current northern entrance may date from the nineteenth century.

A five week excavation in 1939 by Bradford (1940) examined the entrances and eastern ramparts but work was not continued due to the outbreak of war. He confirmed that the original entrance to the hillfort is in the east where he located a gateway defined by two large postholes and a cobbled street (Bradford 1940, 18). Outside lay a roadway consisting of a shallow layer of small stones. The most recent archaeological investigation of Cherbury was by the RCHM(E) who surveyed the earthworks in 1992 at a scale of 1:1000 as illustrated in figure 6.4.

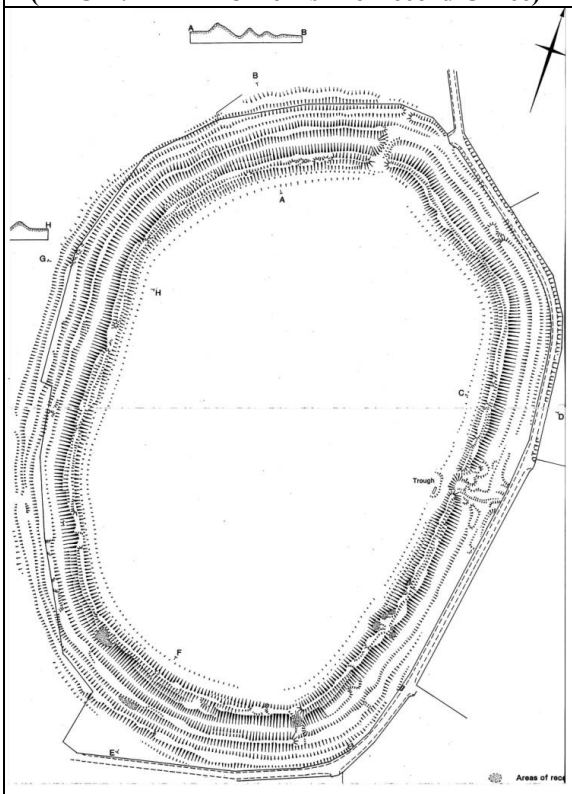
The hillfort is defined by three concentric banks with intervening ditches. This multi-vallate system of defences led Bradford to date the hillfort to the century before the Roman conquest (1940, 19). Moreover, he argued that the pottery evidence was consistent with a date early in the first century AD. Harding (1972, 52) felt this was unnecessarily late and that the pottery is not later than the second half of the first century BC. Instead, he views the absence of late Iron Age pottery as indicating that Cherbury was abandoned by the last quarter of the first century BC and suggests the ramparts may have been constructed in more than one phase, with the latest, tri-vallate phase obscuring earlier ramparts. Subsequently, Hingley (1983a, 123) has proposed that the Camp (and possible nearby settlements) were occupied in the early and middle Iron Age, with the multi-vallate defences dating from the middle Iron Age.



Extract from Charney Bassett
Manorial Map 1765
(BRO D/EEL P1 © Berkshire Record Office)



Extract from Charney Bassett
Enclosure Map 1804
(BRO D/EEL P4 © Berkshire Record Office)



RCHME Survey of Cherbury Camp
© Crown Copyright.EH

NMR 883/260 – 27th July 1975
© Crown Copyright.EH

Figure 6.4 – Historical Maps of Cherbury Camp (Top)
Earthwork Survey and Aerial Photograph (Bottom)

6.2.1.1 The Aerial Photographic Evidence

The first analysis of aerial photographs was undertaken by Hingley (1983a, 125) who recorded a small number of circular features and a larger number of pits within the hillfort interior. More importantly, Cherbury Camp lies within the area covered by the Thames Valley National Mapping Programme (Fenner 1994) and this also suggests features within the hillfort, although fewer and covering a lesser area than Hingley had mapped. Nearby settlements are also mapped by the National Mapping Programme as part of an extensive area of undated cropmarks lying both to the south-east and south-west of the hillfort. More recently, the cropmarks of parts of Charney Bassett have been re-mapped as part of the Thames Water Abingdon Reservoir proposal and these two mapping programmes are illustrated in figure 6.5.

Shown also in figure 6.5 are the approximate locations of Oxfordshire HER entries for the prehistoric and Roman periods for Cherbury Camp and its immediate neighbourhood. Many of the features are undated but are assumed to be prehistoric, either through morphological analogies or proximity to the hillfort. The HER references have been colour coded into a broad chronological scheme of Bronze Age, Iron Age and Romano-British. Although the dating of the finds from findspots is reasonably secure, less reliance can be placed on the dating of the HER features. The bronzework finds suggests this area was occupied before the construction of the hillfort, although the nature and extent of this occupation is unclear. The evidence for Roman material suggests an element of settlement continuity in the area from the Iron Age into the Romano-British period. Similarly, the 'sites' defined as part of the Thames Water Abingdon Reservoir proposal have been colour coded into a broad chronological scheme using Winton's (1999) interpretation.

A more detailed view of the aerial photographic interpretation of Cherbury Camp is provided in the lower part of figure 6.5 where one circular feature and an area of pits are shown in the interior. To the south-west of the hillfort there appears to be an extensive settlement marked by pits, possibly of Iron Age date, at HER 12162. The settlement south-east of Cherbury Camp (HER 12122) has been discussed in section 5.2.2.4 where it was suggested to be of two phases. Although the second phase is most probably of Romano-British date, the first phase might date to the late Iron Age and may be contemporary with the late phases of the hillfort.

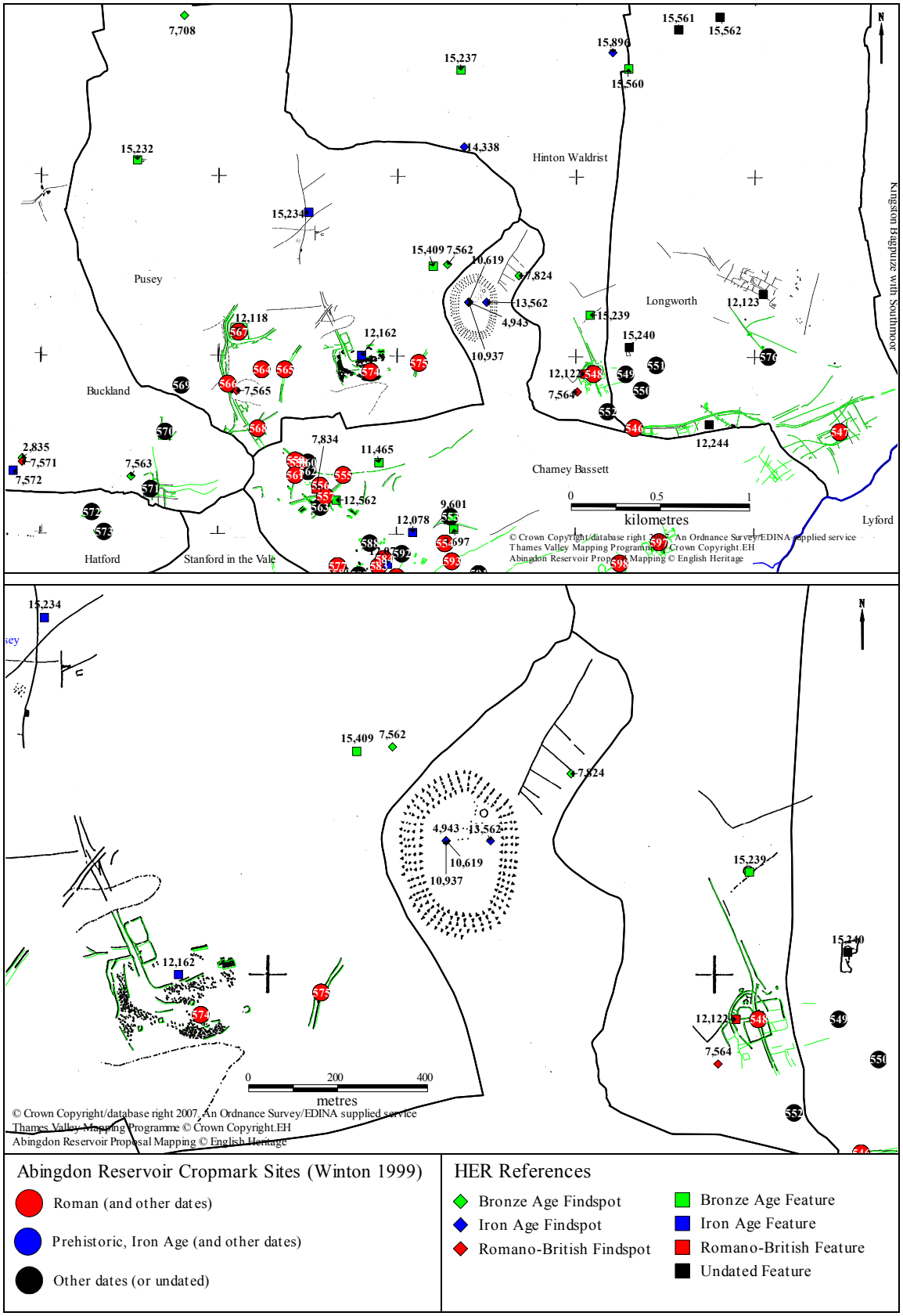


Figure 6.5 – The Landscape of Cherbury Camp
Overview (Top) - Detail (Bottom)

6.2.1.2 The Geophysical Survey

Geophysical surveys were undertaken by Andrew Payne of English Heritage (Payne 1996; 2003; 2005) prior to the excavations at Uffington Castle (Miles *et al.* 2003), Segsbury Camp (Lock *et al.* 2005) and Alfred's Castle (Gosden and Lock 1999). Subsequent geophysical surveys at a further sixteen hillforts demonstrated the ability to locate and identify evidence of occupation and settlement (Payne *et al.* 2006). The aim of the Cherbury Camp survey was to establish the location and extent of features such as roundhouses (or their gullies) and pits, thereby indicating the density of settlement within the hillfort. The results not only assist in understanding the Iron Age landscape of the Vale of the White Horse but can also be compared with the earlier hillfort surveys on the chalk of the Berkshire Downs.

Figure 6.6 illustrates the processed results of the survey, while figure 6.7 shows both the survey location within the hillfort and the archaeological interpretation. The survey extended close to the inner bank on the southern and western sides. The northern extremity was not included as this area is likely to have been disturbed when the northern entrance was inserted, while the eastern edge was not surveyed as this is close to the area excavated by Bradford in 1939. In addition, a large metal trough is situated just within the eastern entrance. The survey provides more detail than the aerial photographic evidence particularly with regard to smaller features such as pits.

The geophysical survey shows a straight line running from the eastern entrance south-west across the camp. On the east this line appears to pass within a few metres of the trough. This feature may therefore mark the line of a plastic pipe, either bringing water to the trough, or taking water to the western side to a trough which is no longer present. One issue with this interpretation is that the pipe appears to define one side of an enclosure on the south-western side. The possibility that this is an archaeological feature cannot be excluded. More importantly, the geophysical image shows distinct areas with and without anomalies. The areas with anomalies appear to contain a substantial number of pits, while there are at least a dozen circular features which can be interpreted as gullies surrounding Iron Age roundhouses. In a small number of them, entrances and potential postholes for posts to support the roof can also be detected.

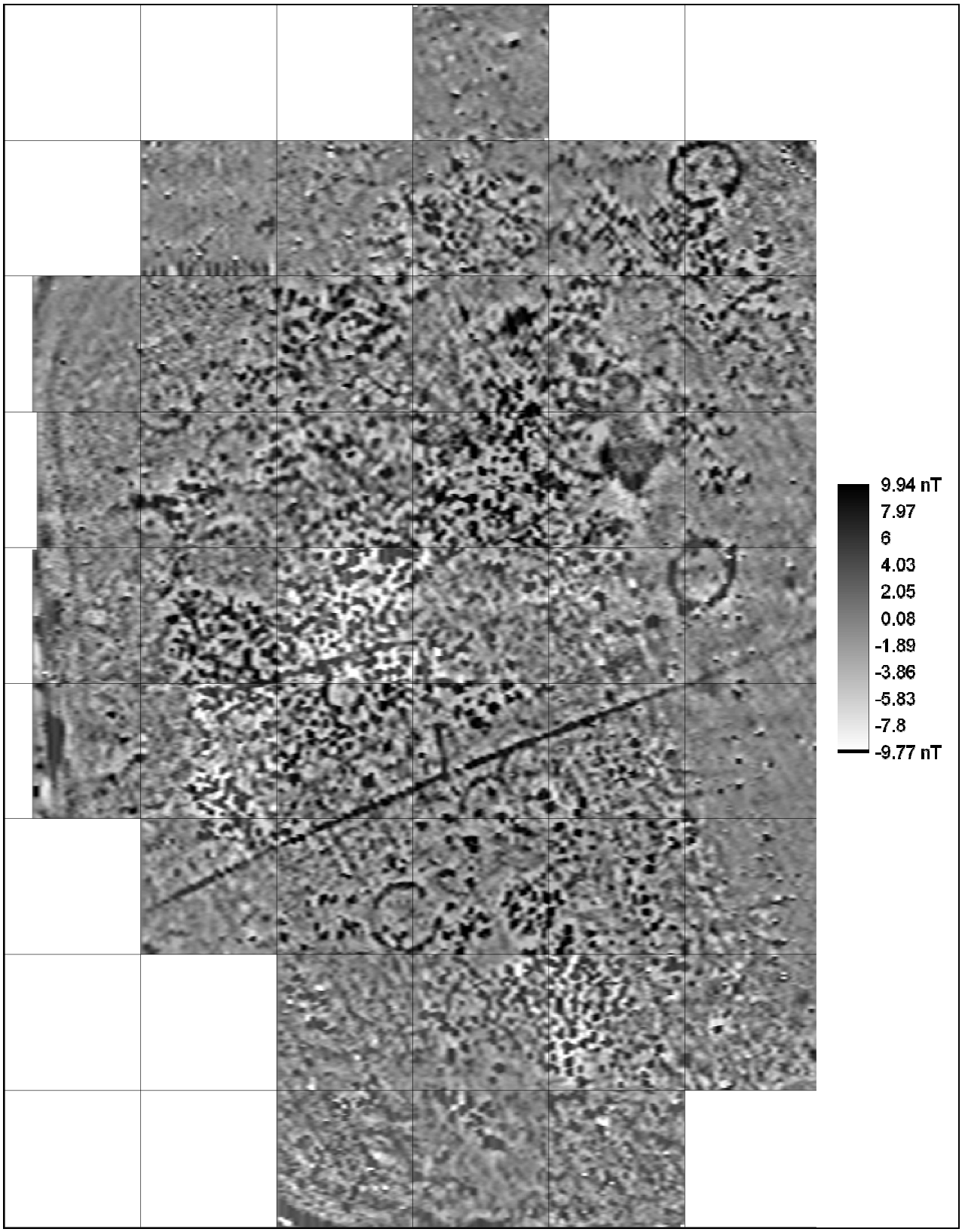


Figure 6.6 – Geophysical Survey of Cherbury Camp
(Grids are 30 metre squares. North is at the top)

The majority of the magnetic anomalies most probably represent pits, although some may represent hearths. Iron Age pits are frequently interpreted as being for grain storage, but, given the damp environment at Cherbury, this may not have been their function here.

6.2.1.3 Discussion

In his survey of Segsbury Camp, Payne (1996, 175; 2005, 26) identified about twenty gullies defining roundhouses but with more gully features only partially resolved. Cherbury is very similar. This interpretation of circular gullies as representing roundhouses is clearly an assumption but from the middle Iron Age most roundhouses were surrounded by drainage gullies (Allen 2000, 9). While ten of the clearest examples of gullies are represented in figure 6.7, there are many more possible circular features present in the image, often partial, and mostly smaller than the selected ten. In some cases the gullies may be obscured by pits or other magnetic anomalies. Those shown in figure 6.7 are probably the largest, and vary in size from 9 to 14 metres in diameter. Payne (2005, 26) observed that the gullies at Segsbury Camp averaged 12 metres in diameter but one circular feature had a diameter of 20 metres. The results from Cherbury can also be compared with the maximum diameter of 14 metres at Beacon Hill, Hampshire, 16 metres at Oldbury, Wiltshire and 18 metres at Liddington, Wiltshire (Payne 2005, 27). At Segsbury the gullies appear to be associated with pit clusters and are set well back into the hillfort interior with few near the enclosing earthworks (Payne 2005, 27). The situation is similar but not identical at Cherbury Camp, possibly because of its smaller enclosed area. The central part of Cherbury is dominated by pits but they do not extend to the ramparts. The clearest evidence of circular gullies is on the edge of these pit areas, with a few approaching the ramparts. Gullies in the central area may be obscured by the pits, thus distorting the evidence for the location of houses.

Several gullies contain a small gap or entrance which may indicate the location of the roundhouse door or porch. These gaps are situated mostly in the south-east or north-east: this easterly preference for the entrance to a roundhouse may be influenced as much by ritual practice as by considerations of weather and light (Oswald 1997; Fitzpatrick 1997, 77).

There is a very faint indication of a roadway passing directly west across the hillfort from the eastern entrance. This is represented by a faint negative (white) feature which passes through the central, pitted area, but fades away before reaching the western rampart. This 'road' does not appear to divide the hillfort into two zones, and one circular feature is cut by, or cuts, the road near the eastern entrance.

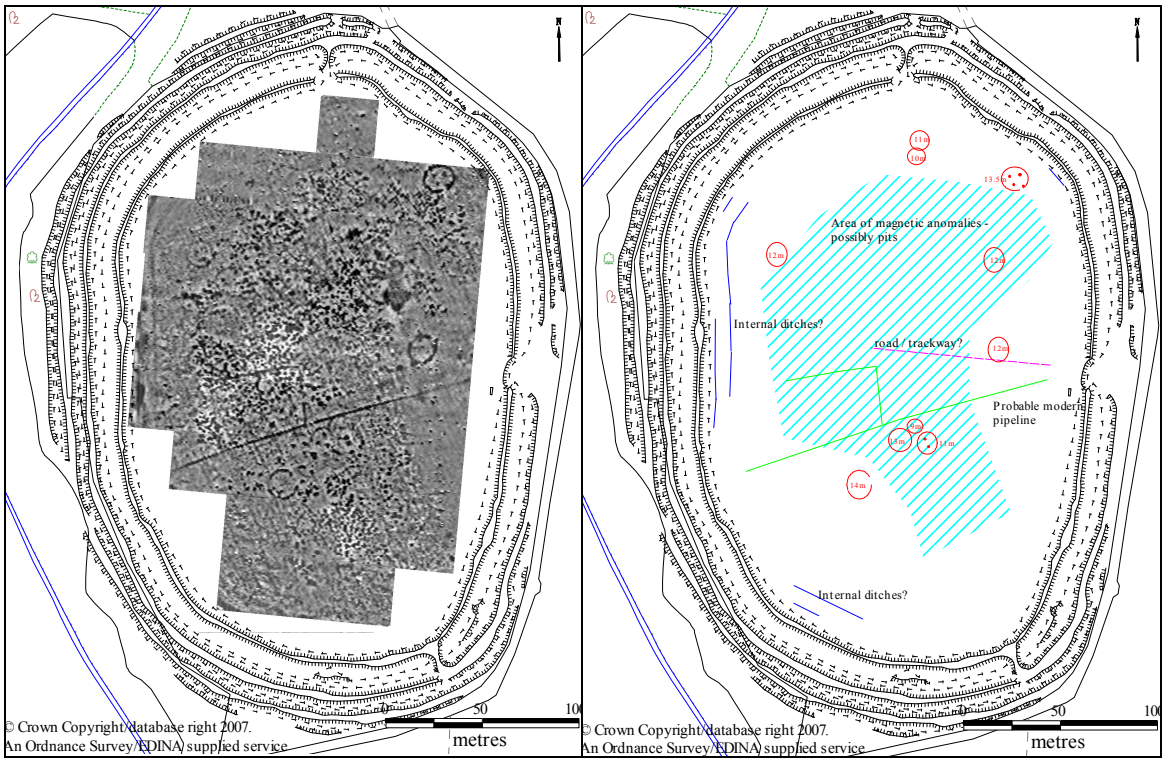


Figure 6.7 – Location and Interpretation of the Geophysical Survey

In the west, where the survey most closely approached the ramparts, there appears to be evidence of a double line of ditches. This double line is also visible for a short distance in the south-west, and a single ditch appears in the extreme north-east. These indications strongly suggest a continuous, concentric single or double ditch within the hillfort. While this may represent post-medieval drainage channels, they may be Iron Age features. A disjointed, curvilinear feature around the northern and eastern side of Segsbury's interior was noted by Payne, while similar magnetic anomalies are also visible at Liddington Castle just inside the rampart (Payne 2005, 28). Excavation of part of the feature at Segsbury Camp recovered pottery possibly of Iron Age date (Payne 2005, 27-28). Payne suggests such features may represent quarries for earlier less substantial ramparts. The possibility of earlier ramparts preceding the multi-vallate defences at Cherbury has been suggested by Harding (1972, 52).

It is clear that the results from Cherbury Camp have many similarities to those from Segsbury Camp. Payne (2006, 143) places Segsbury Camp, Beacon Hill, Liddington Castle and Oldbury in his hillfort class as containing some settlement evidence (see table 6.2) and this also applies to Cherbury. It might be a step too far, but perhaps not impossible, to place Cherbury in the class of dense settlement. Although Payne (1996, 175; 2006, 96) suggests that Segsbury belongs to the class of Danebury style 'developed' hillfort with a planned, zoned layout and a probable function as a centre of population with an enhanced storage capacity, this was not the interpretation of the excavators (Lock *et al.* 2005, 144). Central to their rejection of permanent occupation at Segsbury was the lack of postholes or stakeholes to support the thatched roof of a roundhouse and this was felt to indicate any structures within the ring gullies must be flimsy and impermanent. But middle Iron Age roundhouses were often constructed of less easily detectable stakes rather the timber of the early Iron Age (Allen 2000, 9). The geophysical survey at Cherbury provides some indication of postholes associated with ring gullies. The clearest example is the ring gully in the north-east which appears to have four internal pits together with a south-eastern entrance; but this may represent a four-post structure rather than a roundhouse.

Cherbury Camp can also usefully be compared with the larger enclosed oppidum of Dyke Hills as mapped by aerial survey in figure 6.3. Both Dyke Hills and Cherbury provide evidence of pits and ring gullies. But unlike Dyke Hills there are no regular and irregular internal enclosures at Cherbury. The large number of pits at Cherbury Camp suggests considerable storage capacity but the low-lying environment of sites such as Cherbury Camp, Dyke Hills and Abingdon would appear to make pits less suitable for storing grain than the higher chalklands. Nevertheless, the evidence of the roundhouses, pits and magnetic enhancement strongly suggests a small community living and working for some considerable period of time within the Cherbury Camp enclosure.

The geophysical survey does not indicate any Romano-British settlement within the hillfort, at least in terms of rectangular buildings or masonry foundations. This may indicate the site had already ceased to be occupied by the late Iron Age.

6.2.2 Iron Age Communities

To the inhabitants of the Vale of the White Horse the importance of the hillforts on the Berkshire Downs would have been fading by the latter part of the middle Iron Age. Construction had ceased although seasonal gatherings and maintenance may have continued. The repeated scouring of the White Horse adjacent to Uffington Castle may indicate some continuity in group identity throughout the late Iron Age and Roman period (Allen 2000, 16; Miles *et al.* 2003, 262). Taking their place were perhaps Cherbury Camp and Abingdon. The earliest enclosure at Cherbury Camp may date from the middle Iron Age but in its current form it probably dates from after 200 BC and it may have been abandoned by the end of the first century BC. Neither excavation nor geophysical survey has demonstrated Romano-British occupation. The settlement at Abingdon probably started earlier and certainly continued into the Romano-British period. Its conversion into an enclosed oppidum occurred in the late Iron Age (Lambrick and Robinson 2009, 362).

The third of Cunliffe's hillfort common denominators was communal functions (Cunliffe in Payne *et al.* 2006, 152) and through this the expression of power and the development of a community identity. A possible measure of power may be the effort required to construct the hillfort's enclosing banks and ditches (Sharples 2010, 116-124). The construction of the multi-vallate defences at Cherbury Camp and Abingdon would have required considerable human resources. The communities responsible for providing this labour almost certainly came from middle and/or late Iron Age settlements within the Vale of the White Horse. The relatively short duration of occupation and use at Cherbury Camp might suggest that the community responsible for its construction either became part of the Abingdon community or no longer required the functions initially provided by the enclosure.

An estimate of the effort required to construct the late Iron Age Cassington Big Ring has been made by Startin (1982a) who assumed a perimeter of 3000 feet, a depth of 12 feet and a ditch width of 30 feet at the top and 5 to 7 feet at the bottom. This produces a total volume of 660,000 cubic feet to be moved from the ditch onto a bank. He further assumed two people armed with a pick and shovel could remove 36 cubic feet per hour in gravel which yields an estimate of 37,000 manhours to dig the ditch. To this must be added the effort of basket carriers to construct the internal bank. Here Startin believed an

average of four basketers per pick and shovel was required which brings the total effort to 111,000 manhours. He states this could have been expended by a work force of 400 to 500 men in about 23 to 28 days, which implies a working day of about 10 hours.

The ditch volume of 660,000 cubic feet at Cassington approximates to 18,700 cubic metres. This can be compared to the ditches at the Abingdon oppidum where Lambrick and Robinson (2009, 362) give a general figure for both ditches of 10 to 12 metres wide and 2.6 metres deep, a similar width but shallower depth than Startin used for Cassington. If, for ease of calculation, a width of 10 metres, a depth of 2.5 metres and v-shaped profile is assumed, the ditch cross section is 12.5 square metres. The length of the ditches shown in figure 6.3 is 1800 metres and the complete length would be greater. Nevertheless, taking 1800 metres gives a ditch volume of 22,500 cubic metres; with two ditches this yields at least 45,000 cubic metres of material to be removed. Thus the total effort to construct the two Abingdon ditches and internal bank is probably three times that required at Cassington. A similar effort was probably required to construct the kilometre long ditch and two banks at Dyke Hills. This effort was clearly invested at Abingdon and Dyke Hills, whereas the Cassington enclosure was unfinished.

Similar calculations have been made for the middle Iron Age phase 4 ditch at Segsbury Camp where a ditch cross section of 13.2 square metres together with a circumference of 1500 metres were used to obtain the volume of chalk removed at 19,800 cubic metres, slightly less than each individual ditch at Abingdon (Lock *et al.* 2003, 142-143). But removing chalk is more difficult than gravel and whereas Startin (1982b) assumes two people can move 36 cubic feet of gravel per hour, in chalk this is reduced to 27 cubic feet per hour (approximated to 0.8 cubic metres in Lock *et al.* 2003). Lock *et al.* (2003, 142) state that Startin suggests that "three people will excavate and move one cubic metre of chalk per hour over a working day, allowing for removing it from a deep ditch, moving it from the rampart and dumping it". This is incorrect. Rather, Startin (1982b, 153) suggests that "a team of a picker, shoveller, and an appropriate number of basketers could excavate 18 cu ft/hour" (for the Iron Age the figure is 27 cubic feet per hour). To calculate the appropriate number of basketers Startin discussed both walking basketers and basket chains. Indeed, Startin (1982a) assumed at Cassington that six people were required on average (one pick, one shoveller, four basketers). If a team of six

is required, rather than a team of three, this doubles the estimated man power required for Segsbury. These estimates are summarised below in table 6.3.

Site	Area (ha)	Section (m^2)	Length (m)	Volume (m^3)	m^3 per hour (for six people)	Total hours
Cassington	5	ca 20	ca 920	18,700	1.02 (gravel)	110,000
Abingdon	ca 30	12.5	1800	>45,000	1.02 (gravel)	>264,705
Segsbury Camp	10	13.2	1500	19,800	0.765 (chalk)	155,294

Table 6.3 – Volume of Enclosure Ditches and Estimate of Required Labour

As expected, the table above shows that the effort to construct the bank and ditch at Segsbury exceeds that at Cassington. Moreover, not included in the Segsbury figures is the effort required to obtain and move the timber for the box ramparts. If this is added to the Segsbury total, it may approach the figure for Abingdon. There is no indication that a timber rampart was present at Abingdon, although one cannot be excluded. The effort required for Dyke Hills is probably similar to Abingdon. Cherbury Camp is smaller than Cassington, but has multiple ditches and banks and evidence of stone revetting. The effort to construct Cherbury Camp may therefore exceed Cassington.

This suggests that the late Iron Age enclosures at Abingdon and Dyke Hills required more labour for their construction than the middle Iron Age ditch of Segsbury Camp. However, Segsbury also required considerable timber resources and the manpower to cut, transport and work it. The enclosures at Cherbury Camp and Cassington Big Ring required lesser, but still substantial resources. There is therefore impressive evidence for the ability to control substantial labour resources in the late Iron Age.

A second potential method to identify a community is through the distribution of late Iron Age inscribed coinage which began from about 40 BC. The Vale of the White Horse lies in an area of three overlapping coin distributions. From the east there is the influence of the Catuvellauni/Trinovantes (Cunliffe, 2005, 160, figure 7.9) with territorial oppida at Verlamion (St Albans) and Camulodunum (Colchester) while to the south are the Atrebates (Cunliffe 2005, 170, figure 7.16) with a territorial oppidum at Calleva (Silchester). The final influence is from the Dobunni in the west (Cunliffe 2005, 190, figure 8.10) with an oppidum at Bagendon. Indeed, Cunliffe's figure 8.10 shows the Vale of the White Horse as lying within the territory of the Dobunni.

There are many problems in constructing and interpreting coin distributions (Selwood 1984, 202-203; Creighton 2000, 222-227). These include if and whether they reflect political, economic or social distributions, the varying distributions produced by different coin denominations, uncertainty in dating the coins, and variation in detecting, collecting and recording patterns. Moreover, the coins may have continued in circulation after AD 43 and therefore their distribution may reflect early Romano-British conditions as much as the late Iron Age. However, with the large number of Celtic coins discovered by metal detectors over the past thirty years it is beginning to be possible to examine coin distributions in smaller regions and this is attempted in figure 6.8 and table 6.4.

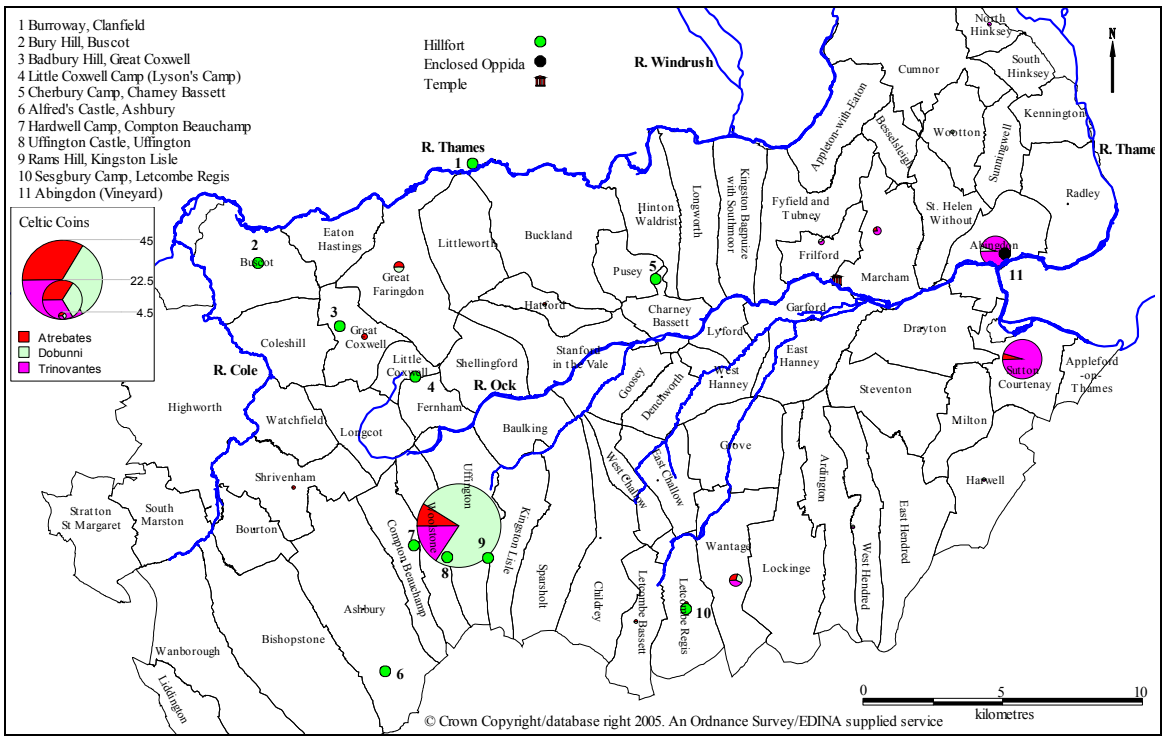


Figure 6.8 – Distribution of Tribal Coinage in the Vale of the White Horse (Celtic Coin Index © University of Oxford) (https://finds.org.uk/database/search/ironagenumismatics)

In table 6.4 the number of inscribed coins of three tribal groups is shown for Oxfordshire. For those coins which have a specified location a division has been made between north and south of the river Thames. The final row indicates those coins found south of the river Thames and within the Vale of the White Horse. There are similar numbers of Dobunnic and Trinovantian coins and about one third of these are located south of the Thames. The number of Atrebatic coins is much less and these are mostly found south of the Thames. The coins are not uniformly distributed across the Vale as is illustrated by figure 6.8. In the east, there are large numbers of coins from the parishes of

Abingdon and Sutton Courtenay and these are mostly Trinovantian. Further west, a very large number of coins has been found in Uffington and these are mostly Dobunnic. Atrebatic coins also tend to have a western distribution: Wantage, Uffington, Great Coxwell and Great Faringdon. This east-west difference is further examined in table 6.5 through the examination of a number of parishes including Dorchester-on-Thames.

	Atrebates	**Dobunni**	**Trinovantes**	**Uninscribed**	**Total**
Oxfordshire	51	184	193	12	440
Locatable	46	174	185	10	415
North of Thames	13	120	102	3	238
South of Thames	33	54	83	7	177
Vale of White Horse	31	53	69	7	160

Table 6.4 – Tribal Coinage in the Vale of the White Horse
(Celtic Coin Index © University of Oxford)
(https://finds.org.uk/database/search/ironagenumismatics)

Parish	**Total**	**Atrebates**	**Dobunni**	**Trinovantes**	**Uninscribed**	**Other**
Dorchester	27			23 (85.2%)		4 (14.8%)
Abingdon	18		1 (5.6%)	16 (88.9%)	1 (5.6%)	
Sutton Courtenay	23	1 (4.3 %)	5 (21.7%)	15 (65.2%)	1 (4.3 %)	1 (4.3%)
Marcham	6	1 (16.7%)		4 (66.7%)		1 (16.7%)
Frilford	3		1 (33.3%)	2 (66.7%)		
Hinton Waldrist	3			1 (33.3%)	1 (33.3%)	1 (33.3%)
Uffington	54	4 (7.4%)	34 (63%)	8 (14.8%)	4 (7.4%)	4 (7.4%)
Great Faringdon	6	3 (50%)	3 (50%)			
Total	140	9	44	69	7	11

Table 6.5 – Tribal Coinage in selected Parishes
(Celtic Coin Index © University of Oxford)
(https://finds.org.uk/database/search/ironagenumismatics)

The percentage of Trinovantian coins in Dorchester and Abingdon is over 80% of the total and it seems likely these coins are associated with the oppida at Dyke Hills and Abingdon. About two-thirds of the surprisingly large number of coins from Sutton Courtenay are Trinovantian. Again it seems reasonable to associate this cluster of coins with the oppidum at Abingdon.

Further west, the percentage of Trinovantian coins at Marcham and Frilford is also about two thirds but from a small number of coins. At Uffington the ratio of Trinovantian coins has fallen to less than 15%, with two thirds of the 54 coins being Dubonnic. It is hard to explain this large number of late Iron Age coins in Uffington and without detailed knowledge of the exact location of the coin finds it is tempting to associate them with

activities at Uffington Castle and the White Horse. It can also be seen from figure 6.8 that there does not appear to be any clustering of coins associated with Cherbury Camp. This may suggest it was no longer used by the late Iron Age when inscribed coins were circulating. Alternatively, this area may not have been subjected to the same degree of metal detecting as Abingdon and Uffington.

The small but noticeable number of late Iron Age coins found in Marcham and Frilford may be related to the recently excavated enclosure south of the Romano-British temple at the Noah's Ark Inn. This enclosure is clearly too small to be an oppidum but has features indicating it was more than just a farm enclosure. These include a significant enclosure ditch and possible palisades to the east and north. Given also the later history of the site this may indicate that the enclosure played an important role in the Iron Age, either as a ritual location or as a high status settlement. Therefore, as it may stand outside the general scheme of rural settlement it is discussed next before the investigation of rural Iron Age and Romano-British settlements.

6.2.3 The Enclosure at the Noah's Ark Inn

Aerial photography had demonstrated the existence of an enclosure to the south of the Romano-British temple at the Noah's Ark Inn as discussed in section 4.3. The enclosure was initially investigated by geophysical survey (Wintle 2007b; 2009; Wintle *et al.* 2010) and subsequently by three trenches as part of the 2008 and 2009 University excavations in Trendles Field (Kamash *et al.* 2009; 2010a). The geophysical survey results are illustrated in figures 4.9, 6.9 and 6.10 and the trench locations in figure 6.11. The excavations suggest the enclosure dates to the middle Iron Age but with preceding activity indicated by ditches and pits.

Of the enclosing ditches only the 70 metre northern ditch survives in its entirety. On the eastern side about 75 metres still survives, including an entrance, but only a short length of western ditch is still present. Much of the enclosure has been lost, possibly by erosion into the river Ock and its full size and shape remain unknown. A speculative symmetrical interpretation is shown in figure 6.9 but it is perhaps more likely to have had a boundary close to the river Ock, whose course in the middle Iron Age may not be the same as today.

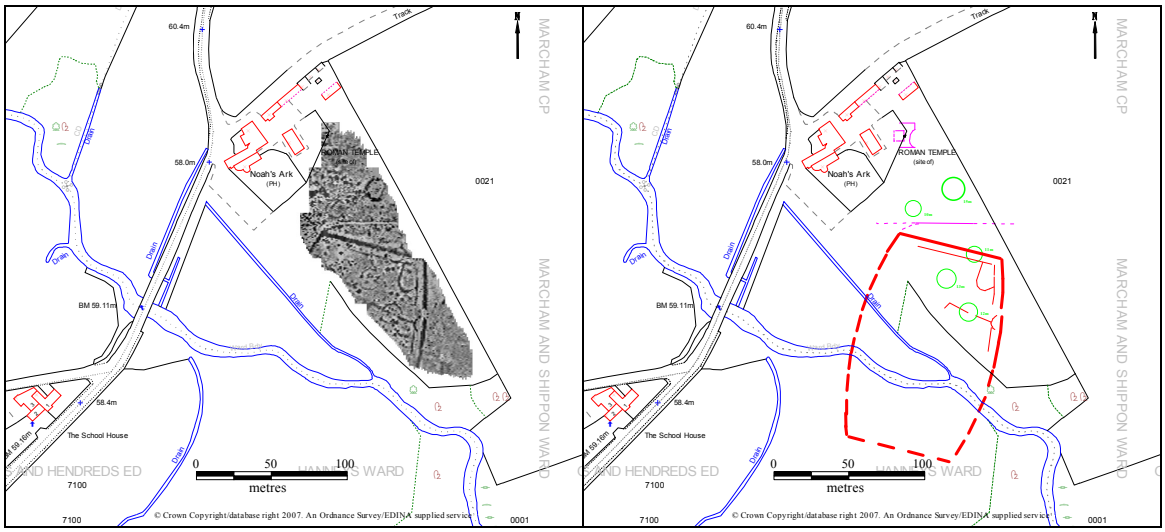


Figure 6.9 – Location and Interpretation of the Geophysical Survey

Adjacent to the northern and eastern ditches there appears to be a narrower internal ditch. The northern outer and inner ditches were examined in trench 2 where the outer ditch was found to have a stepped v-shape with a width of about four metres and a depth of two metres. The narrower, inner ditch was only 0.65 metres wide and two metres in depth with very steep sides and a flat base. Kamash at al (2009, 49) suggest this could represent a

palisade trench, either free standing or serving as a revetment for an internal bank. Although the internal and external ditches are likely to be contemporary this could not be demonstrated by the excavation.

The entrance and part of the interior of the enclosure were examined in trench 3. The profile of the outer eastern ditch was similar to, although smaller than, the northern ditch. The enclosure interior contained a range of features some of which may predate the enclosure ditches. A row of postholes leading west from the eastern entrance may divide the interior into two parts while further divisions inside the enclosure are suggested by intercutting groups of pits and/or postholes (Kamash *et al.* 2009, 50).

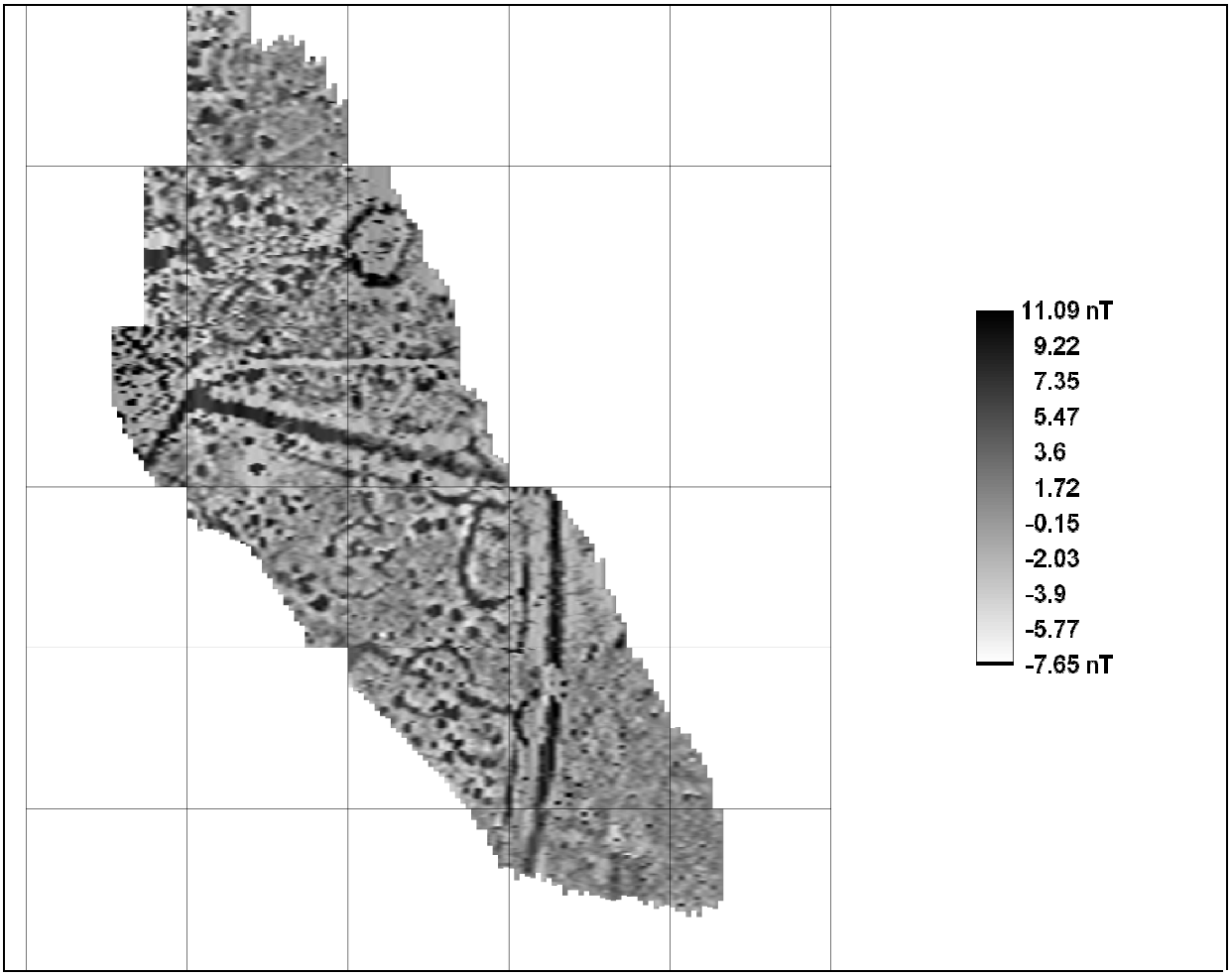


Figure 6.10 – Geophysical Survey of the enclosure at the Noah's Ark Inn
(Grids are 30 metre squares. North is at the top.)

The north-west corner of the enclosure was examined in trench 1. The northern outer ditch was very similar in profile and size to the ditch sections excavated in trenches 2 and 3 but the western ditch was markedly different. While still v-shaped, it lacked the step

and was only 1.8 metres wide and 1.4 metres deep. There is also no evidence of an internal ditch (Kamash *et al.* 2010a, 45). These differences may suggest the western ditch was not constructed at the same time as the eastern and northern ditches, or was not required to show the same impressive features of the northern and eastern approaches.

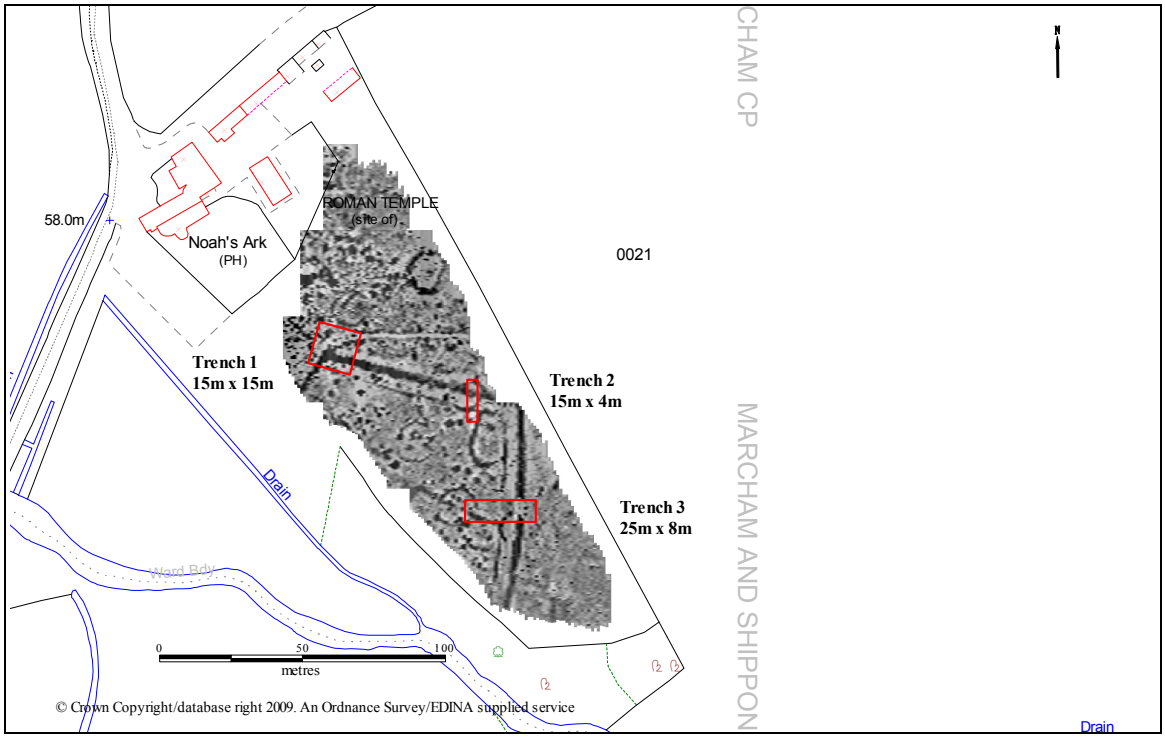


Figure 6.11 – Excavations at the enclosure at the Noah's Ark Inn

It is unclear when the enclosure was finally abandoned. Only trench 1 provided clear evidence of Roman activity with the upper fills of the ditches containing a large assemblage of late first century AD pottery, two late first century coins and three early Roman brooches. Further south in trench 3 there was no evidence of Roman material and Kamash *et al.* (2009, 52) suggest that by the Roman period the focus of activity had moved to the temple north of the enclosure. The enclosure may have been abandoned in the second or first century BC although the large assemblage of Roman pottery in the upper fills of the enclosure ditch as seen in trench 1 suggests the ditches were still open late in the first century AD.

It is probable that this enclosure is largely contemporary with Cherbury Camp and Abingdon and its possible date range is illustrated in figure 6.12. As at Cherbury Camp it may have ceased to be used in the late Iron Age.

6.2.4 Discussion

The evidence presented in section 6.2.2 suggests a settlement hierarchy within the Vale of the White Horse in the middle and late Iron Age, with Abingdon and Cherbury Camp exhibiting signs of status through multiple ditches and banks. Although the construction and maintenance of these ditches and banks required the exercise of power, it is not necessarily the case that the wealthy and powerful resided permanently within them. At Abingdon Romano-British activity continued on the same site and villas developed to the north and south. Cherbury Camp does not appear to have been occupied in the Roman period and although rural Romano-British settlement occurs outside Cherbury Camp there is no evidence for high status buildings or villas. This may suggest that Cherbury Camp had ceased to be a focal point of the community possibly from as early as the late Iron Age.

In section 6.2.3 it has been suggested that the much smaller enclosure at Marcham / Frilford also differs from normal Iron Age rural settlements. The form of the enclosure at the Noah's Ark Inn, together with the large, intercutting ring ditches to the east, suggest this was not a normal Iron Age farming settlement. Instead, the site appears to contain a range of ritual structures to enable ritual practices. From this, an unusual Romano-British religious complex was later to develop (Kamash *et al.* 2012, 83).

Despite the possible existence of this settlement hierarchy, there is little or no Iron Age burial evidence within the upper Thames Valley to indicate a social hierarchy (Allen 2000, 15). Abingdon, where finds include decorated and imported pottery with links to Wessex and the lower Thames (Allen 2000, 26), may be an exception to this general statement. It is probable that Abingdon, particularly in the late Iron Age, housed a diverse population with variations in wealth and social status, some of whom may have been engaged in craft production and trade.

Figure 6.12 summarises the approximate duration and continuity of Abingdon and Cherbury Camp together with Dyke Hills and the Iron Age enclosure at the Noah's Ark Inn. Only at Abingdon did Romano-British activity continue on the same site. At Dyke Hills the Roman town was built to the north on higher, drier ground. Similarly, at the Noah's Ark Inn the later temple was constructed on higher ground. Rural Romano-British settlement occurs near Cherbury Camp but not apparently within it.

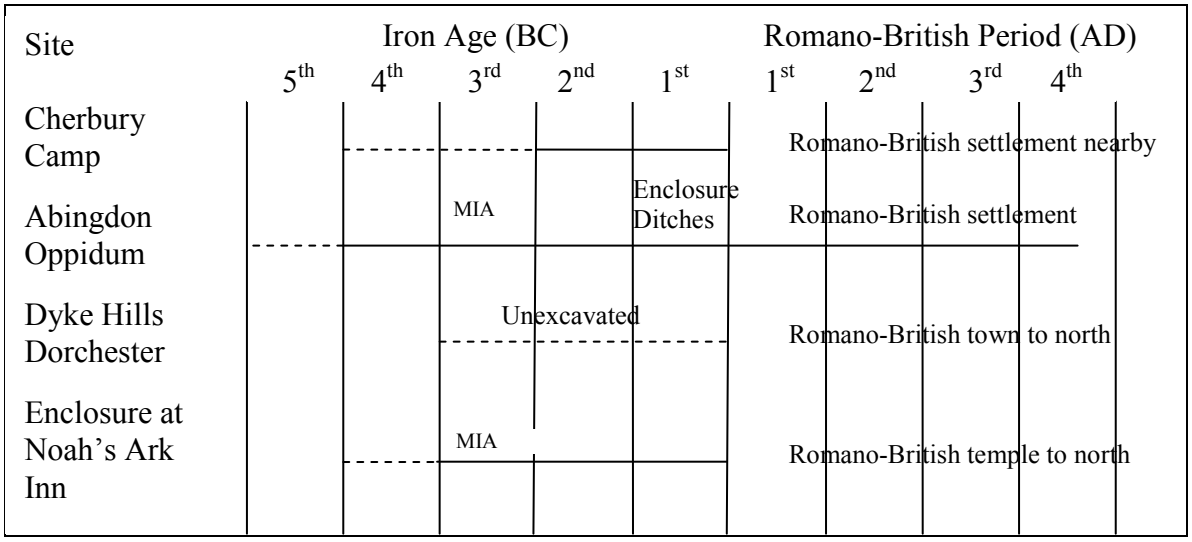


Figure 6.12 – Chronology of Valley Forts and Enclosed Oppida

6.3 Rural Settlements

Even if the special settlement forms of the middle and late Iron Age, such as hillforts, valley forts and enclosed oppida discussed in section 6.2, were densely or permanently occupied they would have contained only a small proportion of the total population. The majority of the Iron Age population lived either in small dispersed settlements of one or two families or in small villages (Allen 2000, 6). Such settlements exist in a wide variety of forms and much effort has been expended defining settlement typologies and attempting to relate these to chronological periods or social and economic structure (Hingley 1984; Hingley and Miles 1984; Taylor 2007, 2-3).

This type of settlement continued into the Roman period but settlement differentiation becomes more noticeable in the Roman period. At some, wealth was accumulated and spent on the construction of rectangular buildings with tiled roofs and heated rooms. At most, the inhabitants acquired Roman material culture in the form of pottery, metalwork and coins, but lacked either the wealth or the desire to construct villas. This suggests possible differences in how individuals viewed their identity as they each incorporated differing proportions of Roman and British attributes in forming a new Romano-British society.

Excavations in the upper Thames Valley have provided important evidence on Iron Age and Romano-British rural settlement which have been used in a number of economic and settlement models. This is considered first before a more detailed appraisal of the Vale of the White Horse. The themes considered include whether settlements were enclosed by a ditch and possible bank, changes in settlement form through time, the development of ditched field systems, and local settlement variation.

6.3.1 The Upper Thames Valley

In an important synthesis of Iron Age settlement in the upper Thames Valley, Harding (1972) identified two major areas of early and middle Iron Age settlement. The first lay near Dorchester-on-Thames and the second along the north bank of the Thames from Yarnton to Standlake. Using a reasonably simple settlement classification of multiple settlements, major settlements and minor settlements (1972, plate 1), he proposed that between Yarnton and Standlake there were multiple settlements at Stanton Harcourt and Cassington, which he termed the Lower Windrush multiple settlement and the Lower Evenlode multiple settlement respectively (Harding 1972, 9-10).

Subsequently, a series of significant excavations of Iron Age sites have taken place on the gravel terraces north of the river Thames and it is useful to consider a few examples from the Windrush Valley as illustrated in figure 6.13. Gravelly Guy in Stanton Harcourt is termed an open, pit cluster settlement by Lambrick and Robinson (2009, 105-108). The early and middle Iron Age settlement contained over 900 pits, numerous post-built structures, two groups of small enclosures with associated boundary ditches, all within an area 30 metres wide and 160 metres long (Lambrick and Allen 2004, 103). Possible subdivisions within the settlement suggest it may have contained five or six family households although given the length of occupation on the site they may not all be contemporary. The settlement is open in that it has no surrounding ditch but the settlement's linear form suggests it was constrained by other boundaries. This early to middle Iron Age settlement was superseded by a late Iron Age and Romano-British settlement located just to the north-east. Although also linear it occupied a larger area than the earlier settlement extending over 200 metres in length and up to 70 metres in width. It consisted largely of discrete features such as small rectangular enclosures and Lambrick and Allen (2004, 161) suggest a reduced density of settlement. Possibly four family blocks can be identified. There is no evidence that occupation continued beyond the second century AD and the only late features detected were two inhumation burials located away from the main area of activity.

Gravelly Guy forms an additional settlement within Harding's Lower Windrush multiple settlement with further open, pit cluster settlements at Beard Mill/Vicarage Field (Williams 1951; Thomas 1955; Case 1982a), Stanton Harcourt Aerodrome (Hamlin

1966), Linch Hill (Harding 1972) and a rectangular enclosure at Linch Hill Corner (Grimes 1944). Contrasting with these open settlements are the two nearby enclosed sites of Watkin's Farm (Allen 1990a) and Mingies Ditch (Allen and Robinson 1993). At the former a middle Iron Age enclosed settlement dating from about 250 BC to 50 BC contained at least four penannular enclosures which most probably represent roundhouse gullies. The main Iron Age enclosure was subsequently re-used in the late first and early second century AD (Allen 1990a, xiii). The similar site at Mingies Ditch contained a double ditched main enclosure with at least five roundhouses and was dated 380 BC to 110 BC with evidence for several stages of development (Allen and Robinson 1993, xv). Both sites have evidence for up to five houses although probably only one or two were in use at any one time, suggesting they represent farmsteads occupied by a single family. Both Mingies Ditch and Watkin's farm are low lying and, in contrast with the mixed farming of the higher gravel terraces nearby, the environmental evidence suggests extensive areas of grazed grassland.

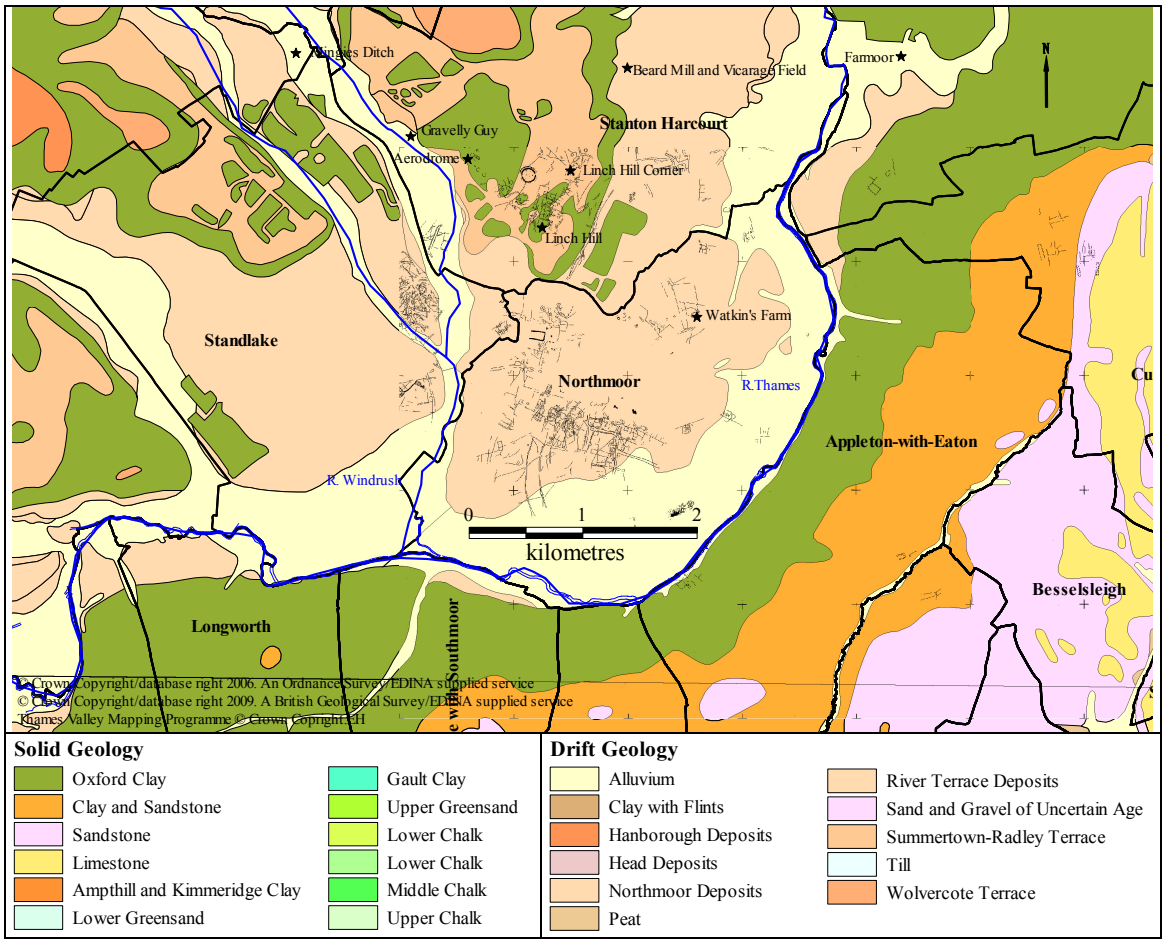


Figure 6.13 – Early and middle Iron Age settlements near Stanton Harcourt

These Windrush Valley sites are used in a number of economic and social models of the middle and late Iron Age. Harding commented on the linear nature of the pit alignments at the Stanton Harcourt settlements of Beard Mill, Stanton Harcourt Aerodrome and Linch Hill Corner and suggested they were aligned on a field boundary (not marked by a ditch). This led him to suggest these settlements lay on a boundary between pasture and arable with the rectangular enclosures constituting an arable infield with the arable outfield on the higher gravel terrace. Although animals would have grazed these areas after harvest, in the other seasons they would have been restricted to the floodplain meadows (Harding 1972, 18-19; Hingley 1988; 1989). An alternative landscape organisation is proposed by Lambrick and Allen (2004, 479-482) and Lambrick and Robinson (2009, 107) who interpret the interior of the gravel terrace, an area of Neolithic and Bronze Age monuments, as reserved for pasture with arable restricted to the edge of the gravel terrace. Hingley (1984, 78-82) contrasted the open, closely spaced settlements of the gravel terraces with the more isolated, enclosed settlements of the Oxford uplands and suggested communal control of the arable and pastoral resources of the former with individual control of the latter.

6.3.2 Excavation in the Vale of the While Horse

The thirteen recent excavations in the Vale of the White Horse discussed in section 5.3.1[1] are considered with these sites and models in mind. The results are summarised in table 6.6 and six sites, including Marcham / Frilford, are discussed as examples.

Of immediate relevance are the excavations on the second gravel terrace west of Abingdon at the Ashville Trading Estate (Parrington 1978) and Wyndyke Furlong (Muir and Roberts 1999). While Gravelly Guy lies adjacent to the river Windrush a short distance upstream from the Thames, the Ashville/Wyndyke settlement lies adjacent to the river Ock a kilometre upstream of the Thames. Within the area excavated in the 1970s there was no indication of any delimiting boundary ditch apart from an undated linear bank to the north of the excavation. Subsequent work in 1994 identified further early and middle Iron Age features including ditches dated to the middle to late Iron Age and a ditched trackway and field system dated to the first and second centuries AD. Although a

[1] Bibliographic references are summarised in Appendix 3.

possible settlement boundary ditch was located in the north-west, apart from this there is no evidence of a boundary ditch and the Iron Age settlement appears to be open.

There are several similarities between Gravelly Guy and Ashville/Wyndyke. As at Gravelly Guy the early and middle Iron Age settlement is denoted by pits and circular gullies while the final period of Iron Age settlement is represented by a series of linear ditches possibly defining small square fields. The recutting of these ditches suggests maintenance and modifications to the field system over time. Unlike Gravelly Guy the pits do not form a linear alignment but are instead distributed across the settlement so may not separate arable and pastoral zones. Nevertheless, the environmental evidence indicates intensive cereal cultivation as part of a mixed agricultural economy and therefore it is possible that the settlement location marks a boundary between pasture to the south and arable to the north.

Figure 6.14 – An Open Iron Age Settlement at Marcham/Frilford

Moving west from the gravel terrace at Ashville/Wyndyke to the Corallian ridge at Marcham/Frilford, there is a possibly similar, though smaller, open settlement. The Marcham settlement may also represent a boundary between pasture to the south adjacent to the river Ock and higher, drier, arable to the north. Illustrated in figure 6.14 are three separate clusters of pits and small circular or penannular enclosures possibly representing

roundhouse drip gullies ranging in size from 12 to 18 metres. Recent excavations have identified features dating from the late Bronze Age to the early Roman period (Kamash *et al.* 2011; 2012). The intercutting of features indicates continued, but not necessarily continuous use of the site. However, it has been argued that at least some of the Marcham/Frilford features do not represent domestic settlement (Kamash *et al.* 2011, 67; 2012, 83). The balance between domestic and ritual use is also uncertain for the area excavated in the 1930s beside the Noah's Ark Inn. Here more than forty pits were interpreted as representing an open Iron Age village[2], although a stake-circle hut and small penannular ditched enclosure were associated with ritual functions[3] (Bradford and Goodchild 1939). Subsequently, Harding (1987, 12) argued that domestic or agricultural functions for the enclosure and stake-circle cannot be excluded. There is a clear contrast between the open features in Trendles Field and adjacent to the Noah's Ark Inn, and the enclosed area discussed in section 6.2.3.

North of Marcham, at Tubney, recent excavations have located part of a pit cluster settlement dated to the second and first centuries BC. As no enclosure ditch was located it appears to be an open settlement (Simmonds *et al.* 2011, 112). The majority of the pits were within an area less than 10 metres wide and about 30 metres long suggesting a linear boundary similar to Gravelly Guy. There is no obvious geological or topographical feature to suggest this served as a boundary between arable and pasture. The pits are presumed to represent grain storage facilities and small quantities of barley, spelt wheat and chaff were recovered. Ditched field systems were established in the early Roman period but as no settlement was located it is not possible to say whether it was enclosed or not. A further series of enclosures linked to a trackway were laid out in the second or third centuries AD. This may suggest settlement within one of the enclosures but no structural evidence was found (Simmonds *et al.* 2011, 114-115).

Much further west on the Corallian ridge at Manorhouse Farm, Hatford, two periods of occupation have been identified: a middle Iron Age settlement followed by late Iron Age to early Roman activity which terminated in the early second century AD (Bourn, 2000). The middle Iron Age activity was defined by a circular gully, possibly a roundhouse, together with pits and ditches while the early Roman features included

[2] Bradford and Goodchild's site B.
[3] Bradford and Goodchild's sites A and C respectively.

enclosure ditches, pits and a trackway. Further excavations in 2003, a short distance to the north-west, produced similar dating evidence, with some features, possibly of the later middle Iron Age, overlain by ditches of a late Iron Age field system, apparently abandoned by the end of the first century AD (Booth and Simmonds 2005). As only relatively small areas were uncovered by the excavations it is unclear whether the settlement was open or enclosed. Evidence for the nature of the economy and its change over time is restricted by the limited bone and cereal assemblages recovered. Although the environmental evidence indicates open grassland, Bourn (2000, 65) suggests a mixed subsistence economy based more on arable than pasture, while Booth and Simmonds (2005, 352) suggest the development of permanent ditched boundaries may indicate a change in emphasis from pasture to arable.

In the west of the study area, two adjacent excavations at Coxwell Road, Faringdon, have provided evidence of a substantial, early and middle Iron Age open settlement (Weaver and Ford 2005; Cook *et al.* 2005). The settlement is primarily defined by several hundred pits whose volumes suggest they were for grain storage. Apart from the many pits, evidence for early Iron Age occupation in the southern part of the site was limited to five possible roundhouses defined by postholes. Other postholes which suggest three or four post structures may represent raised granaries. Continued activity in the southern part of the site is indicated by middle Iron Age and Romano-British pottery (Weaver and Ford 2005, 128-136). More positive evidence for early Iron Age occupation was provided in the northern part of the site where three roundhouses with associated pits and postholes were identified. By the middle Iron Age occupation had moved slightly to the west with evidence for two roundhouses. Late Iron Age and Roman activity on the site is much reduced although the large size of the late Iron Age and Roman sherds indicates a settlement was nearby. As at Hatford, the economy appears to contain both arable and pasture (Cook *et al.* 2005, 274-278).

In contrast to these apparently open middle Iron Age settlements, possible evidence for an early to middle Iron Age enclosed settlement comes from Watchfield (Scull 1993; Birbeck 2002; Heawood 2005). Initial excavations in 1983 and 1989 identified early to middle Iron Age ditches which suggested an enclosure of about two hectares (Scull 1993, 156). Subsequent excavation to the south exposed a set of intercutting ditches which formed the southern entrance and possible antenna ditches of an early to middle Iron Age

enclosure (Birbeck 2002, 228). Birbeck compared this settlement with the double ditched enclosure of Groundwell Farm further west on the Corallian ridge in Wiltshire (Gingell 1982). Like the enclosures at Mingies Ditch and Watkin's Farm, Groundwell Farm provides evidence of a series of roundhouses and is located in a damp environment. These three sites range in size between 0.2 and 0.5 hectares whereas the Watchfield enclosure is suggested to be two hectares (Birbeck 2002, 231). This may indicate the ditches of the southern entrance could relate to a large stock enclosure rather than a settlement enclosure.

This early to middle Iron Age settlement at Watchfield appears to have been abandoned in the second century BC and subsequently replaced in the late Iron Age by a fifty-five metre by thirty metre sub-rectangular ditched enclosure to the east. This late Iron Age enclosure, which may have formed part of a larger settlement, continued in use into the first or second centuries AD. Alterations to the ditches suggest at least two phases of use in the period AD 43 to 250 (Birbeck 2002, 232-240). Although there is evidence of cereal processing throughout the Iron Age and Roman period, Birbeck (2002, 288) highlights the importance of pastoral farming, particularly cattle. Further ditches dated to the late Iron Age and early Roman period detected to the north in a subsequent excavation are also viewed as stock management features (Heawood 2005, 315).

Eleven of the fourteen sites listed in table 6.6 have middle or late Iron Age settlement. Middle Iron Age settlements at Ashville Trading Estate, Coxwell Road, Farmoor, Marcham/Frilford and Tubney appear to be open. This may also be true of Appleford Field and Manorhouse Farm, Hatford. Enclosed settlements by and from the late Iron Age are suggested at Watchfield, Barton Court Farm and, possibly Bowling Green Farm. The evidence from these excavated sites tends to indicate a preference for open settlements in the middle Iron Age with a growing tendency for enclosure by the late Iron Age and early Roman period. Ditched field systems and trackways become more common from the early Roman period but it is not always clear whether individual farmsteads were enclosed. This is certainly the case at Appleford Sidings and Barton Court Farm but structural evidence for settlement is lacking at many sites.

Parish	Site	Quality	Geology	Middle Iron Age	Romano-British
Abingdon	Ashville Trading Estate[4]	Reasonable	Gravel Terrace	Open	Ditched trackway and enclosures. Possibly enclosed settlement.
Appleford	Appleford Field	Reasonable	Gravel Terrace	Unclear, possibly Open	Ditched trackway and enclosures. Possibly enclosed settlement.
Appleford	Appleford Sidings	Good	Gravel Terrace	N/A	Enclosed – First century AD double ditched enclosure.
Cumnor	Farmoor	Good	Alluvium / Clay	Open (both on the floodplain and gravel terrace)	Ditched droveway and small fields. Occupation area possibly enclosed.
Faringdon	Coxwell Road	Good	Lower Greensand and Corallian Beds	Probably open	N/A
Hatford	Manorhouse Farm	Reasonable	Corallian Ridge	Unclear, possibly Open	Enclosure ditches and possible trackway. Possibly enclosed settlement.
Kingston Bagpuize	Kingston Hill Farm	Limited	Corallian Ridge	Unknown – site defined by pottery scatters.	Unknown – possible villa site.
Marcham	Marcham / Frilford	Good	Corallian Ridge	Enclosure in west – open ditch complexes in east.	Open religious complex. Temple enclosed by temenos wall (at least in east)
Radley	Barton Court Farm	Good	Gravel Terrace	Late Iron Age enclosed farmstead.	Enclosed farmstead followed later by enclosed villa.
Stanford-in-the-Vale	Bowling Green Farm	Limited	Corallian Ridge	Unknown. Late Iron Age farmsteads.	Enclosed possible villa. Later village or small town.
Tubney	Tubney Wood	Reasonable	Corallian Ridge	Open	Unknown, ditched trackway and enclosures. Possibly enclosed.
Wantage	Denchworth Road	Reasonable	Upper Greensand	N/A	Trackway, ditches, possible villa. Site too small to indicate whether open or enclosed.
Wantage	Mill Street	Reasonable	Upper Greensand	N/A	Ditches, timber and stone buildings. Site too small to indicate whether open or enclosed.
Watchfield	Watchfield Triangle	Good	Corallian Ridge	Possibly two hectares enclosed (late Iron Age enclosure 55 m by 30 m)	Ditched field system.

Table 6.6 – Settlement Type

[4] Includes Wyndyke Furlong.

6.3.3 Aerial Survey and Field Survey in the Vale of the While Horse

These excavations provide important chronological and morphological detail on Iron Age and early Romano-British settlement forms but are relatively few in number. In particular they cannot provide the population required to construct and maintain the hillforts discussed in section 6.2. While they provide a representative view of rural settlement they clearly underestimate its density and interconnectedness. This can perhaps be addressed by considering the less chronologically precise, but relatively abundant, evidence from aerial survey, geophysical survey and fieldwalking. In particular aerial photography has played a significant role in identifying prehistoric and Roman rural settlement and has demonstrated that the landscape of the late Iron Age and Romano-British periods was well populated and organised. An example is the analysis of prehistoric and Roman settlement in the Solway Plain by Bewley (1994) which was based on a morphological study of over 300 cropmark features. The basis of his analysis was the cropmark shape (rectilinear, curvilinear, or linear) which he then subdivided into a range of subshapes. Such morphological analysis is not without its difficulties and Bewley required three basic but unproven assumptions to construct an archaeological interpretation. He assumed firstly that sites of similar size and shape, and therefore area, are functionally or chronologically similar, and secondly that cropmarks located within a limited geographical area may be of similar date and function. His third assumption was that sites of a similar size, shape and location may be part of a single cultural system (Bewley 1994, 25).

A second useful example is the aerial photographic survey of 450 square kilometres surrounding Danebury hillfort involving a three stage process of photo-interpretation, transcription and subjective archaeological interpretation (Palmer 1984). Like Bewley, Palmer considered a range of morphological forms such as simple enclosures, complex enclosures, unenclosed settlements and field systems which were then divided into more specific forms. Palmer's survey had the benefit of a subsequent excavation campaign where specific cropmarks were investigated and the interpretations could be tested. In reviewing the results of the Danebury Environ's project, Cunliffe (2000, 167-170) offers four types of early Iron Age settlements: enclosed farmsteads (Meon Hill, Suddern Farm), unenclosed farmsteads (Boscombe Down West), enclosed nucleated settlements (Houghton Down) and small farms (Nettlebank Copse). These differ from later Iron Age

settlements such as Old Down Farm, Woolbury and Houghton Down which consist of small ditched enclosures, termed clustered enclosure settlements by Cunliffe (2000, 188).

Palmer's work at Danebury was influential in the design and methodology of later National Mapping Programmes such as the Salisbury Plain Training Area (Crutchley 2000). Here the survey of 675 square kilometres mapped over 600 Iron Age and/or Romano-British sites and was later supplemented by field survey, earthwork survey, geophysical survey and fieldwalking which identified field systems, settlements and Romano-British villages (McOmish *et al.* 2002). A different approach was taken by Taylor (2007) in his nationwide survey of HER data of Romano-British settlements. This data varied in quality and terminology from county to county and is based on a diverse range of sources including antiquarian investigations, chance finds, fieldwalking, aerial survey and excavation. Ultimately Taylor (2007, 19) was forced to rationalise this diversity of settlement evidence into only three types of settlement: enclosed, open and linear.

The cropmarks of the gravels of the upper Thames Valley have been mapped twice (Benson and Miles 1974; Fenner 1994). More recently 78 square kilometres of the eastern Vale of the White Horse has been mapped as part of the Thames Water Abingdon Reservoir proposal (Winton 1999). This area extends from Drayton and Steventon in the east to Goosey and eastern Stanford-in-the-Vale in the west with a small overlap with the earlier Thames Valley project in the north. The aerial survey area is illustrated in figure 6.15 and the mapped cropmarks in figure 6.16. The first stage in the analysis of this survey are the 168 cropmark features listed by Winton (1999, Appendix 2). Features which were clearly or almost certainly not prehistoric or Roman were removed, leaving 115 cropmarks as summarised in table 6.7. The dates which Winton (1999) has assigned to the cropmarks are primarily based on their morphology and likeness to other known dated sites. However, many sites are assigned more than one date either because the same form of cropmark could have existed in both the Iron Age and Roman period, or because the site was multi-phase and was probably occupied in both periods. In the following figures a simple three-fold chronological scheme is used to indicate the cropmark's probable date: red circles represent sites assigned a Roman (and possibly other dates), blue circles indicate sites assigned a Prehistoric, Iron Age and other dates (excluding Roman), while black circles indicate sites of other dates or undated.

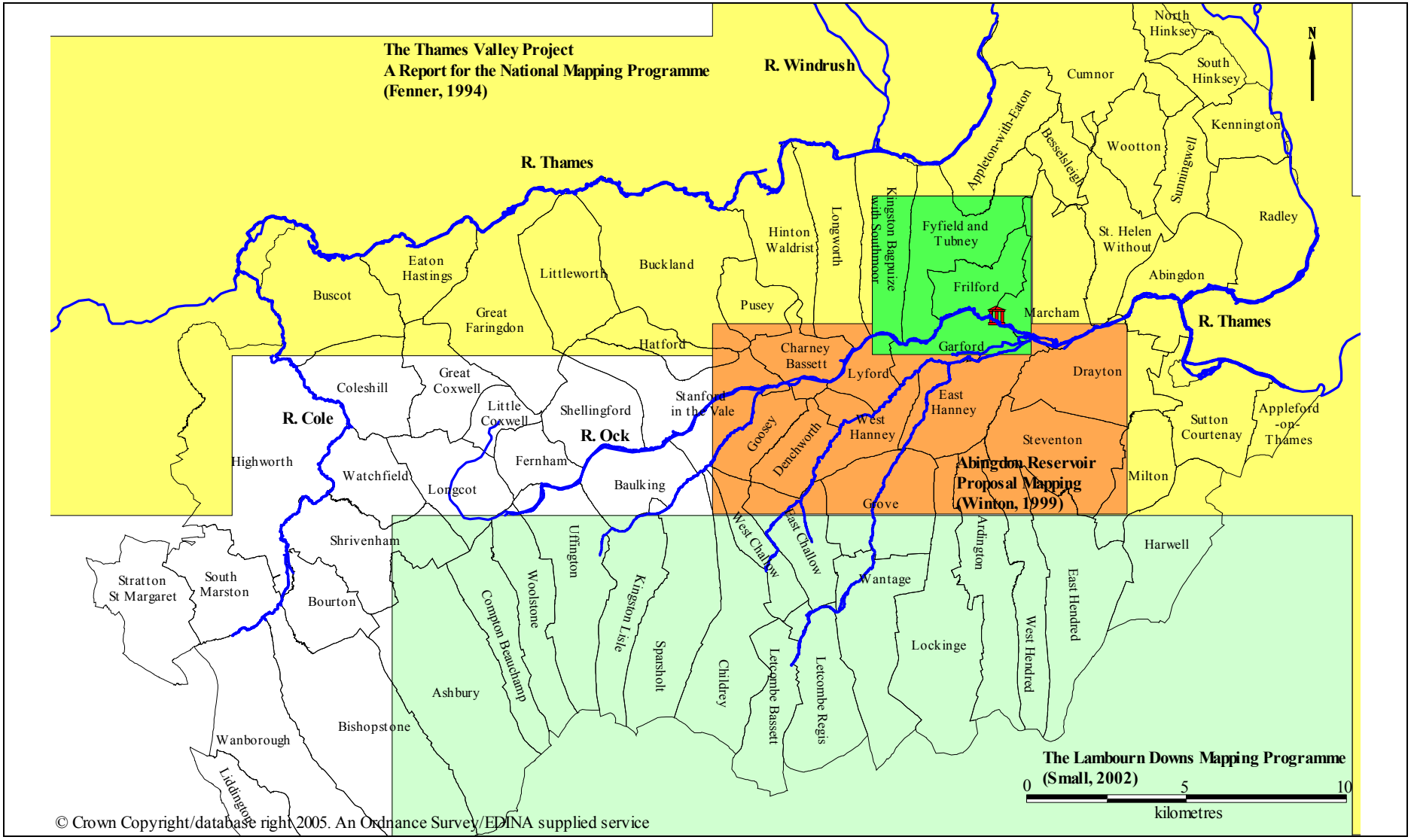


Figure 6.15 – Aerial Photographic Mapping in the Vale of the White Horse

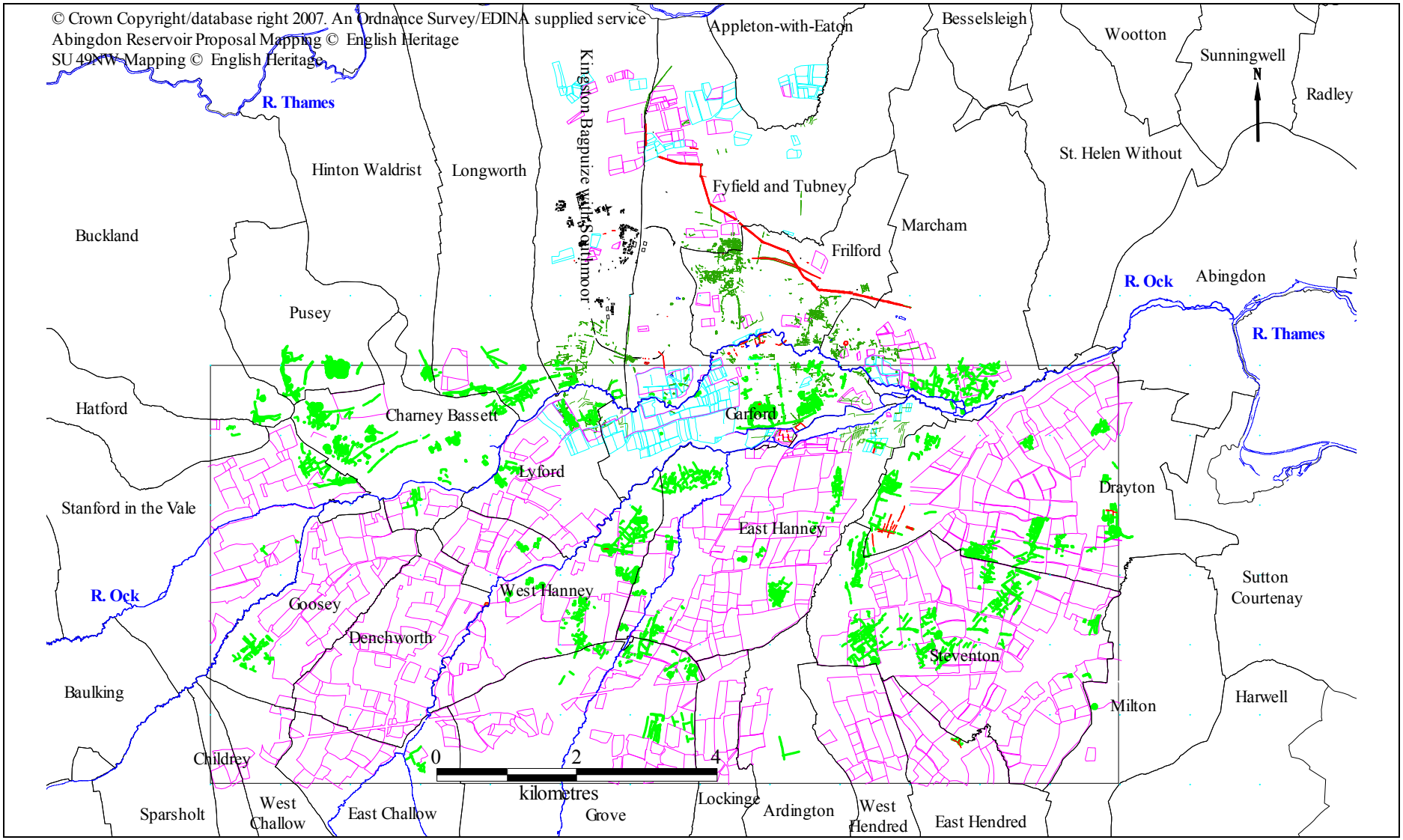


Figure 6.16 – Abingdon Reservoir Proposal Mapping (Winton 1999)

Date	Count	Map Representation
Roman only	5	Red
Roman and Iron Age	7	Red
Roman and Prehistoric	56	Red
Roman and Undated	3	Red
Prehistoric only	19	Blue
Prehistoric and Iron Age	2	Blue
Prehistoric and Bronze Age	3	Blue
Prehistoric and Undated	3	Blue
Iron Age only	1	Blue
Bronze Age only	0	
Undated only	16	Black
	115	

Table 6.7 – Dating of presumed Iron Age and/or Romano-British cropmarks[5]

Table 6.7 indicates a total of 71 sites believed to have a Romano-British phase. For a survey area of 78 square kilometres this produces an average of 0.9 Romano-British sites per square kilometre (0.009 sites per hectare); and agrees well with the assumptions made in section 5.2 regarding site density. Nevertheless, this average conceals considerable local variation. The two parishes with the greatest number of these 115 cropmarks sites are Charney Bassett with 21 and Garford with 19; also significant are West Hanney (15), East Hanney (10), Drayton (10), and Pusey (7).

The ability to detect prehistoric and Romano-British features through aerial photography depends on the nature and use of the soil. Modern arable farming across much of the Vale assists the detection of cropmarks, parch marks or soil marks. Cropmark visibility is greater on the light, well drained soils of the sand and limestone of the Corallian ridge than on heavy clay soils as in the southern part of the Vale of the White Horse. To compensate for this the Thames Water Abingdon Reservoir survey also included geophysical survey and fieldwalking to identify additional settlements on the clay. However, the following discussion will focus mainly on the aerial survey mapping.

[5] The dates are based on Winton (1999, Appendix 2) but with some modifications based on subsequent excavation.

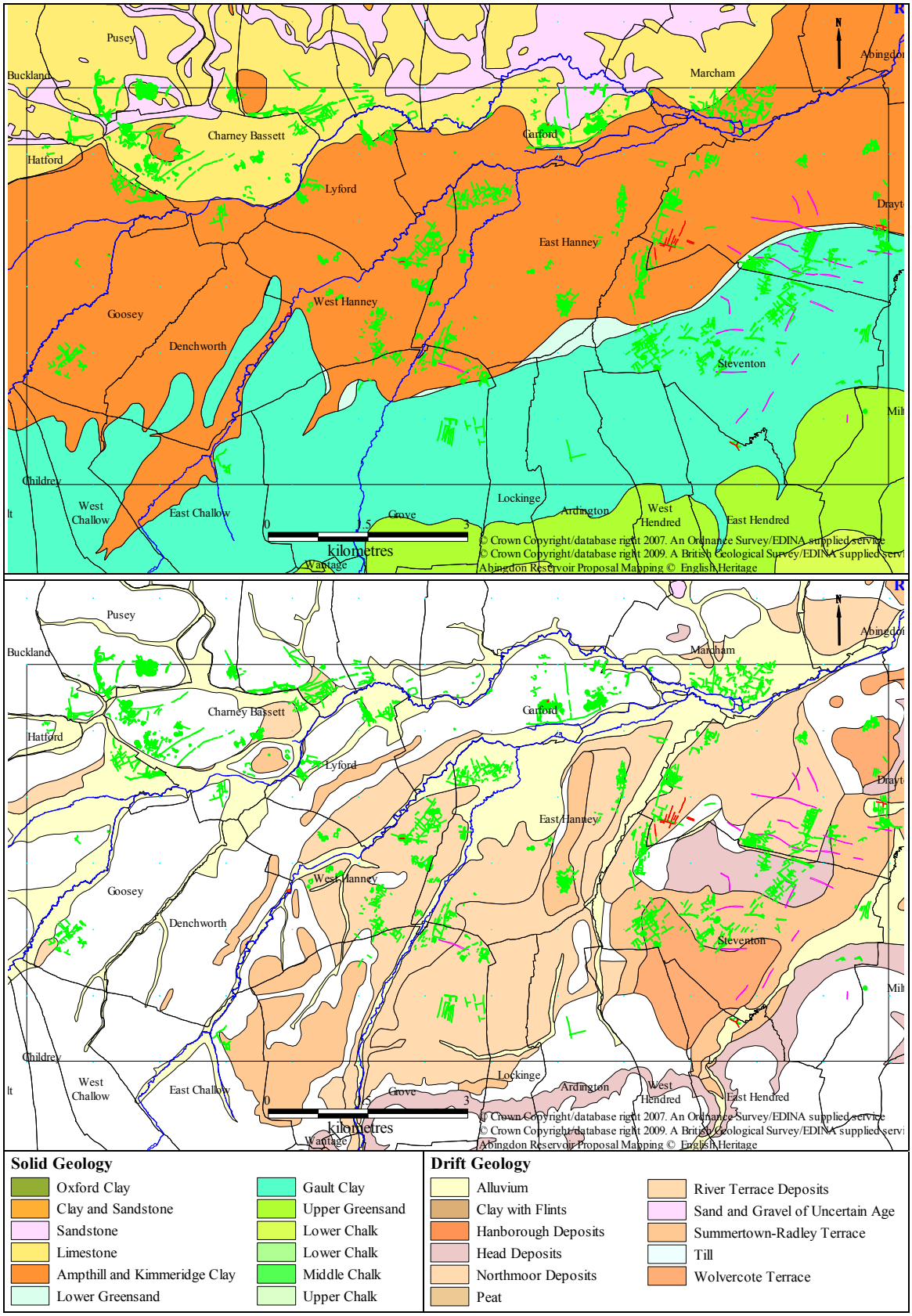


Figure 6.17 – The Geology of the Abingdon Reservoir Proposal Mapping
Solid Geology (Top) – Drift Geology (Bottom)
(Excluding Ridge-and-Furrow)

Table 6.8 and figure 6.17 summarise the solid geology of the surveyed area. In the north-west are the sandstones and limestones of the Corallian ridge while to the south are the extensive bands of Kimmeridge and Gault Clay separated by a narrow band of Lower Greensand. Upper Greensand is present in the south-east. The table demonstrates the uneven distribution of these 115 cropmark sites. Whereas the limestones and sandstones cover only 12.3% percent of the area but contain about 50% of the sites, the Gault Clay covers 30% of the area but has only 12.2% of the sites.

Solid Geology	Area (sq km)	%	Sites	%
Kingston Limestone	0.50	0.6	4	3.5
Stanford Limestone	7.73	9.9	48	41.7
Kingston Sandstone	1.37	1.8	6	5.2
Kimmeridge Clay	41.29	52.9	43	37.4
Lower Greensand	1.08	1.4	0	0.0
Gault Clay	23.79	30.5	14	12.2
Upper Greensand	2.13	2.7	0	0.0
	77.89	99.9	115	100.0

Table 6.8 – Distribution of presumed Iron Age and/or Romano-British cropmarks with respect to the solid geology

The gravel terraces of the river Thames cover much of the eastern part of the Vale of the White Horse and these together with alluvial and head deposits represent 62.5% of the mapped area. Just under half of the recorded sites, fifty-five, lie on these drift deposits as shown in table 6.9.

Drift Geology	Area (sq km)	%	Sites	%
Alluvium	14.87	19.1	7	7.0
Head Deposits	2.96	3.8	2	1.7
First Terrace	19.74	25.31	37	32.2
Second Terrace	7.87	10.1	7	6.1
Third Terrace	3.27	4.2	2	1.7
	48.72	62.5	55	48.7

Table 6.9 – Distribution of presumed Iron Age and/or Romano-British cropmarks with respect to the drift geology

In his study of Roman rural settlements Taylor (2007, 18) defined three basic settlement forms: enclosed, unenclosed (open) and linear systems. In doing so he omitted, usually because of a lack of data, a large number of potential settlements which could not be fitted into this classification system. Only 45% of recorded sites within England were therefore classified, and in the south-east this fell to only 25% as shown in table 6.10.

Taylor's approach has been applied to the 115 sites within the Abingdon Reservoir survey area where only 32 (28%) of the sites can be fitted to one of these classes. Sites such as trackways and field systems are not necessarily settlements and are excluded from tables 6.10 and 6.11.

	South East		South West		England		Abingdon Reservoir[6]	
Classified	1104	25.5%	2414	58.5%	12625	45.3%	32	27.8%
Unclassified	3232	74.5%	1712	41.5%	15266	54.7%	83	72.2%
Total	4336	100.0%	4126	100.0%	27891	100.0%	115	100.0%

Table 6.10 - Settlement Classification (Taylor 2007, 21, Table 3.3)

Enclosed settlements are the most common: in England they account for 88% of settlements, in the south-east 80%, and 72% for the Abingdon reservoir survey. Least common are open settlements. The number of open settlements may be underestimated as they are difficult to identify but even so there appear to be few of them. They may also be more a feature of Iron Age than Romano-British settlement (Taylor 2007, 27). Linear systems are slightly more common in the south-east than the south-west. Table 6.11 shows that more linear systems have been classified using the Abingdon Reservoir survey data than expected and this may be due to differences in subjective interpretation.

	South East		South West		England		Abingdon Reservoir[7]	
Enclosed	885	80.2%	2182	90.4%	11102	87.8%	24	75.0%
Linear System	173	15.7%	117	4.8%	1014	8.0%	7	21.9%
Open	46	4.2%	115	4.8%	526	4.2%	1	3.1%
	1104	100.0%	2414	100.0%	12642	100.0%	32	100.0%

Table 6.11 Settlement Types (Taylor 2007, 23, Table 4.1)

The grouping of all enclosed settlements into one class simplifies the analysis but ignores an important part of Iron Age and Romano-British settlement data which is the sheer variety of enclosure forms. This is illustrated in figure 6.18 from four geophysical surveys near Marcham/Frilford, one of which contains a small villa. Enclosed settlements may be further subdivided by the enclosure form to include rectilinear, curvilinear, polygonal and D-shaped. But chronological problems soon intervene as initially open settlements may have been enclosed by a ditch at a later date. The variation in form of

[6] Sites from Winton (1999, Appendix 2), site classification by author.
[7] As above.

enclosed settlement types as illustrated in figure 6.18 may therefore reflect one or more of chronological, economic and social differences and these may be difficult to disentangle.

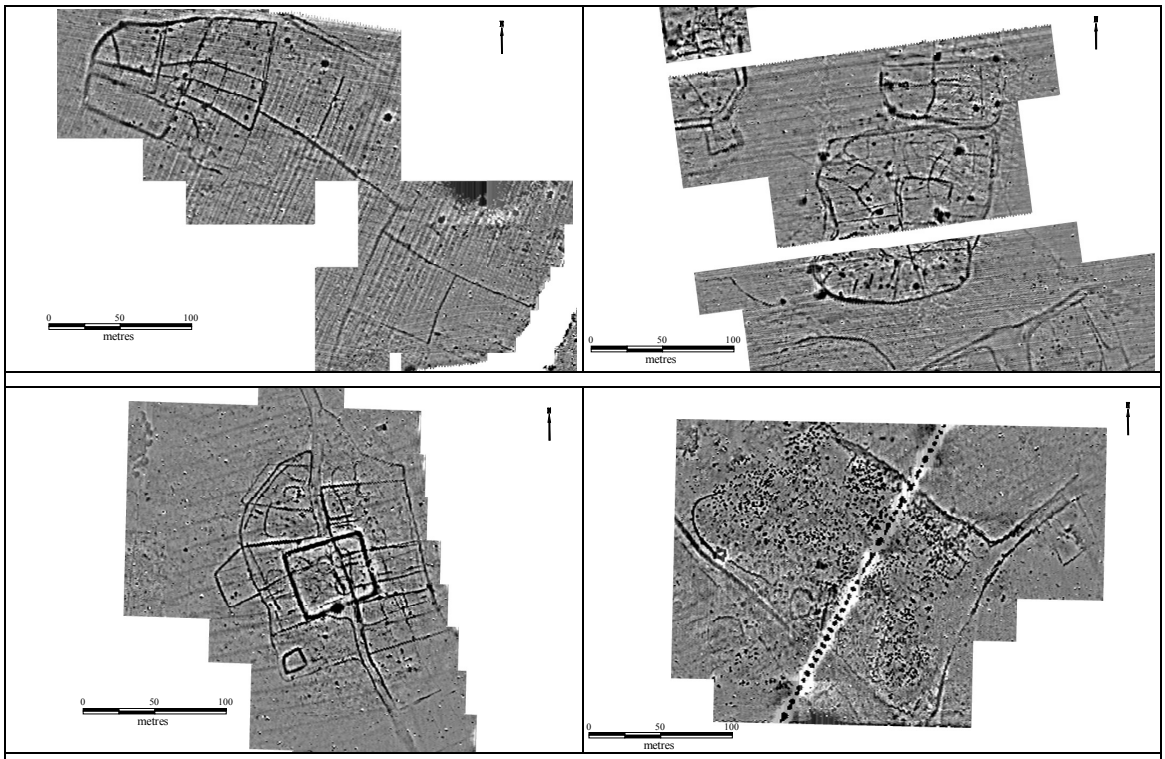


Figure 6.18 – Variation in Rural Settlement Enclosures
Top Left – Millett's Farm (Frilford) **Top Right – Ham Field (Frilford)**
Bottom Left – Lovell's Court Farm (Hinton Waldrist) **Bottom Right – Cow Lane (Marcham)**

To demonstrate some of this additional detail present in settlement data, and neglected by Taylor, table 6.12 shows the Abingdon Reservoir data where field systems, trackways and a non-enclosed villa have been separated from the unclassified data. In addition, enclosed settlements are distinguished as rectangular, trapezoidal or other. The number of classified forms has thereby increased from 32 to 54.

Total	Unclassified	Field System	Trackway	Villa	Open	Linear System	Rect-angular	Trapez-oidal	Other
115	61	7	15	1	1	7	15	4	4

Table 6.12 – Abingdon Reservoir Proposal Cropmark Analysis

The discussion starts in the west on the Corallian ridge at Charney Bassett and Pusey and moves eastwards to the gravel terraces overlying clay between West Hanney and Drayton. The number and distribution of cropmark sites in Charney Bassett and Pusey is of interest because of the proximity of Cherbury Camp, a middle and late Iron Age valley fort discussed in section 6.2.1 and illustrated in figure 6.5. Figure 6.19 illustrates the

seven sites in Pusey which are all dated by Winton (1999) to be prehistoric or Roman. Also present in the figure is the Thames Valley Mapping (black), three HER references and NMR Pastscape references based on the Thames Valley Mapping Programme.

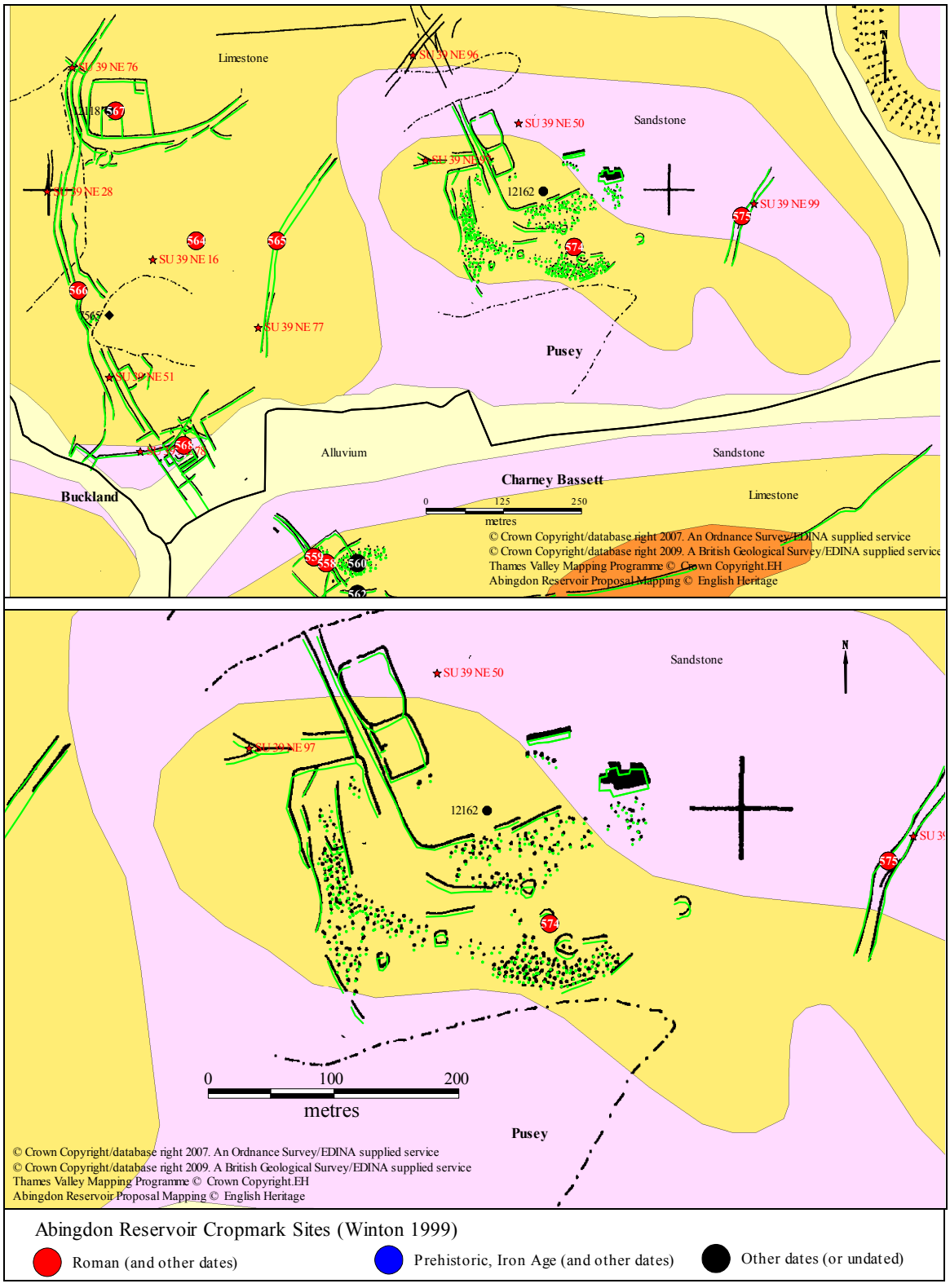


Figure 6.19 – Cropmarks in Pusey
South-west of Cherbury Camp (Top) Detail of site 574 (Bottom)

6.3.3.1 Pusey, Charney Bassett and Hinton Waldrist

There has been little archaeological investigation of Pusey apart from a limited survey by Hingley (1983a, 123) who argued that the area represented by site 574 (HER 12162) was most likely an early/middle Iron Age open settlement. His dating was based on the large number of pits together with a few pennanular gullies. Both mapping programmes suggest an enclosure ditch on at least part of the settlement site although the relative dates of the pits and enclosure ditch cannot be established. The settlement is not linear but there are clear similarities with Gravelly Guy and also with Ashville/Wyndyke. The location may also hint at a division between a wetter, pastoral area to the south and a drier, arable area to the north. A smaller, but similar, area of pits is located to the south-west in Charney Bassett at site 560 although Winton was unsure whether they were archaeological.

Pusey also contains a network of trackways whose dates are uncertain but are perhaps more likely to be Romano-British than Iron Age. Leading north-west from site 574 is a track with two regular, rectangular enclosures to the east while to the west are two further trackways: sites 565 and 566. The northern part of this latter trackway forks or meets another trackway at site 567 which Winton suggests may be a settlement enclosure measuring 90 by 95 metres, with a smaller enclosure inside. This Y-shaped junction is similar to the trackway at Appleford Field where a Romano-British trackway and ditch system was superimposed on an earlier Iron Age landscape (Hinchliffe and Thomas 1981, 62). To the south of site 566 the track leads to a possible settlement at site 568 defined by a series of enclosures and a triple ditched enclosure. As at Appleford, the Pusey landscape appears to be structured by trackways linking individual settlement enclosures located at intervals along them.

A further set of trackways is present to the east of Cherbury Camp, part of which is shown in figure 6.20. Here a north-west to south-east trackway appears to continue in an east-west direction through Longworth and into Kingston Bagpuize. To the south of this trackway are two enclosures while in Longworth (and the eastern part of Charney Bassett) the track appears to pass through a field system. Elements of irregularity suggest this field system is of more than one phase, or has grown rather haphazardly.

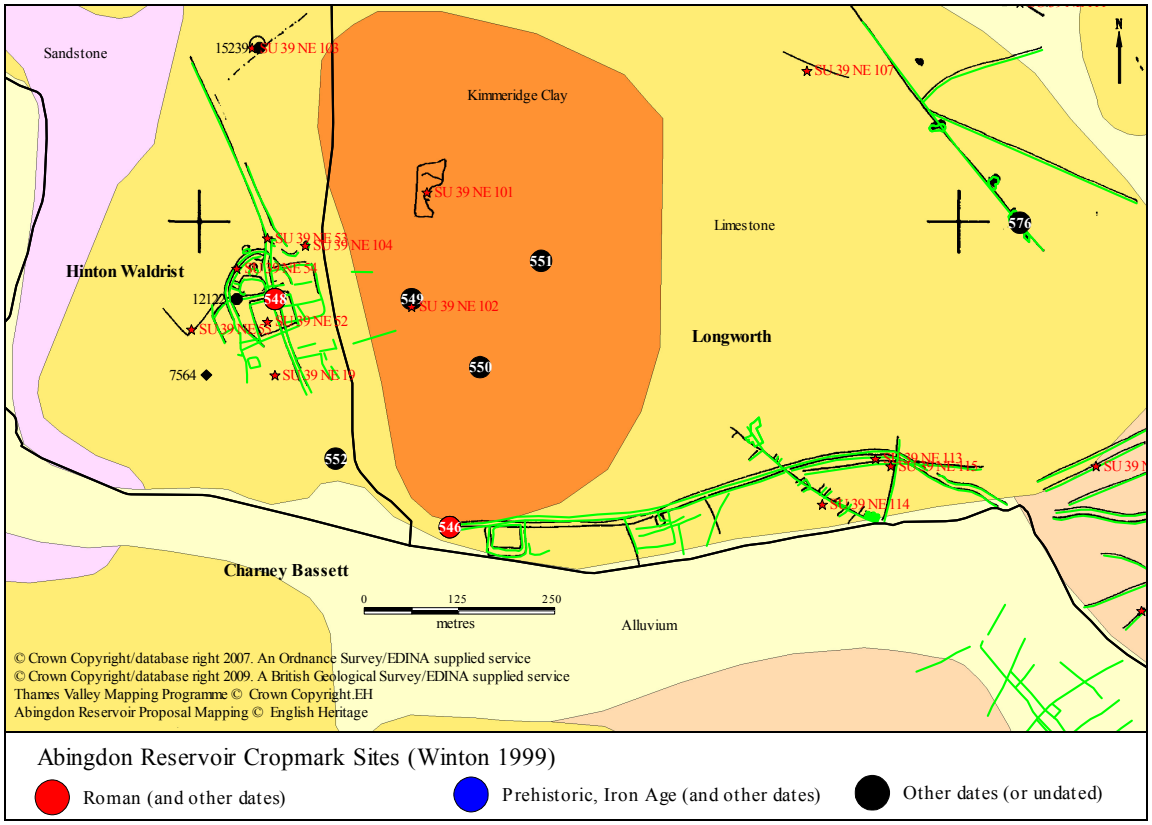


Figure 6.20 – Cropmarks in Hinton Waldrist and Longworth (south-east of Cherbury Camp)

Site 548 was discussed earlier in section 5.2.2.4 and is illustrated in figure 6.21. The geophysical survey at Hinton Waldrist provides increased confidence in the suggestion of a Romano-British date for the surrounding cropmarks of trackways and enclosures in Longworth and Pusey. The morphology of site 548 indicates the difficulties of settlement classification: should this be assigned to Taylor's enclosed or linear class?[8] Although the relatively small scale of the settlement indicates an enclosed rather than a linear settlement, the nature of the trackways and field systems suggests some form of local linear planning.

Thus, although it is not possible to refine the chronology or assess the contemporaneity of the features, the cropmarks appear to indicate an extensive and populated Romano-British landscape to the south-west and south-east of Cherbury Camp. Moreover, this landscape was preceded by an early and/or middle Iron Age settlement to the south-west of Cherbury Camp.

[8] Classified as Enclosed (Other).

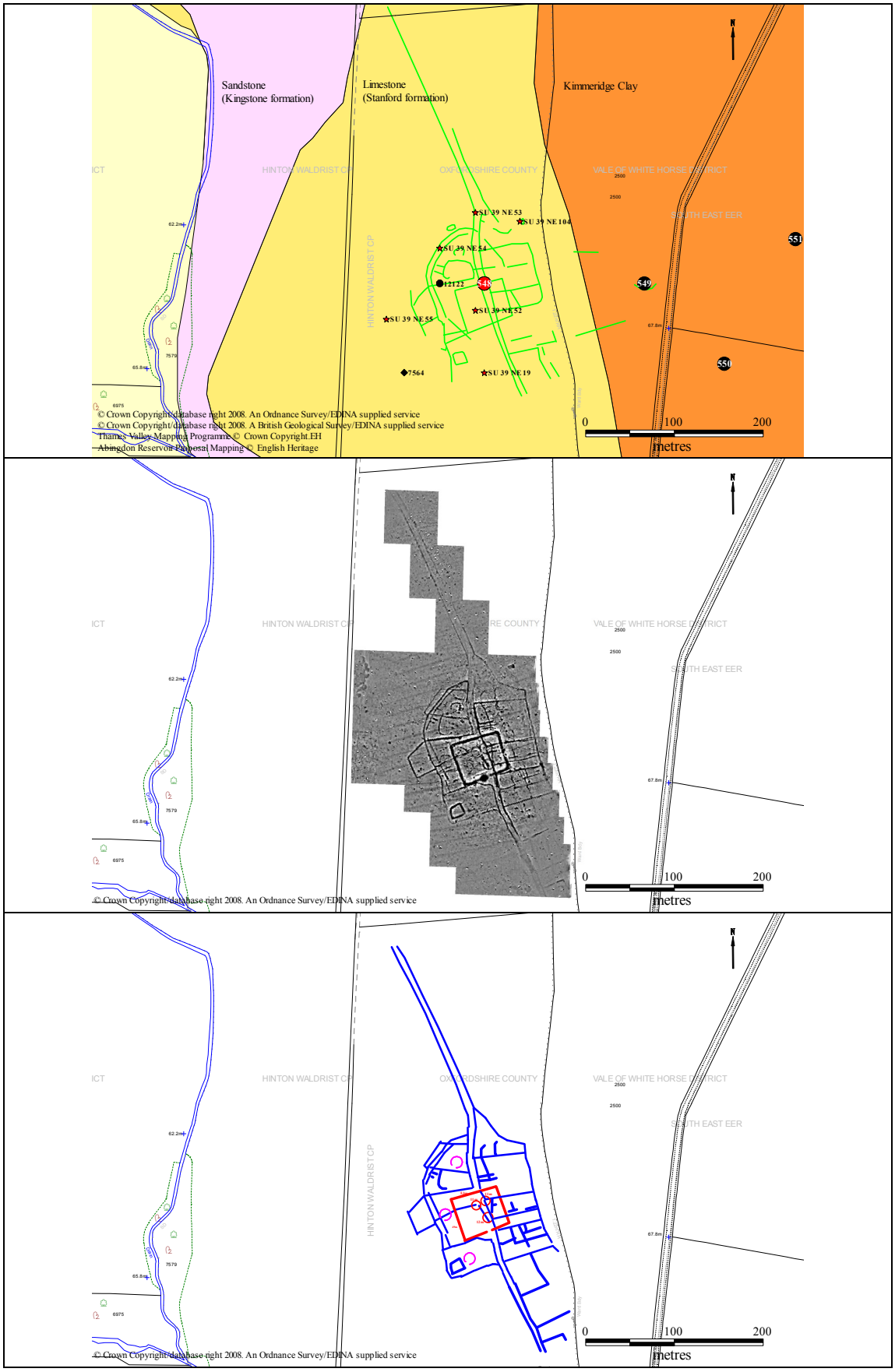


Figure 6.21 – A Romano-British settlement in Hinton Waldrist
The aerial photographic, HER and NMR evidence (Top) : The geophysical survey evidence (Middle)
The geophysical interpretation - Phase 1 in red and Phase 2 in blue (Bottom)

6.3.3.2 West Hanney

Unlike Pusey, Charney Bassett and southern Hinton Waldrist on the Corallian ridge, West Hanney lies on the Kimmeridge and Gault Clays to the south of the river Ock. Important to the visibility of the fifteen cropmark sites are the relatively thin Northmoor deposits of the first terrace, which cover much of the centre and north of the parish as illustrated in figure 6.22. The NMR reference SU49 SW 30 refers to the cropmarks of two small enclosures possibly representing a prehistoric enclosed settlement and this is the same as site 626, described as three small enclosures. Three further sites nearby are shown in figure 6.23 of northern West Hanney between the Childrey and Letcombe Brooks. One of these, site 624, is either a linear system or field system[9], and to the north of this are further elements of a field system extending into East Hanney as sites 625, 650 and 651. A further element of a field system is site 623 to the south. All three field systems appear to have a dominant axis aligned north-east to south-west and they may therefore form part of a larger, organised landscape. Further south is another set of enclosures or field system associated with site 616 and its subsidiary sites 646 to 649 where, again, the main axis is north-east to south-west. Winton (1999) has suggested a prehistoric date for all these field systems.

Cutting across the grain of this north-east to south-west alignment in the north is an east-west trackway, site 628, which Winton (1999, 52) suggests might have a Roman date, and adjacent to this trackway at site 627 is a possible Roman building. If Winton's dating is correct, then in contrast to Pusey and Charney Bassett, the prehistoric landscape of West Hanney appears to be more visible than the Roman. Although there is little or no excavation evidence with which to confirm or refute these dates, in recent years an extensive metal detecting rally has been held in south-eastern West Hanney, northern Grove and south-western East Hanney in the vicinity of site 616 which has recovered seven pieces of Iron Age metalwork as listed below in table 6.13 and three hundred Romano-British metal and ceramic artefacts. The approximate distribution of these finds is illustrated in figure 6.24.

[9] Classified as a Linear System.

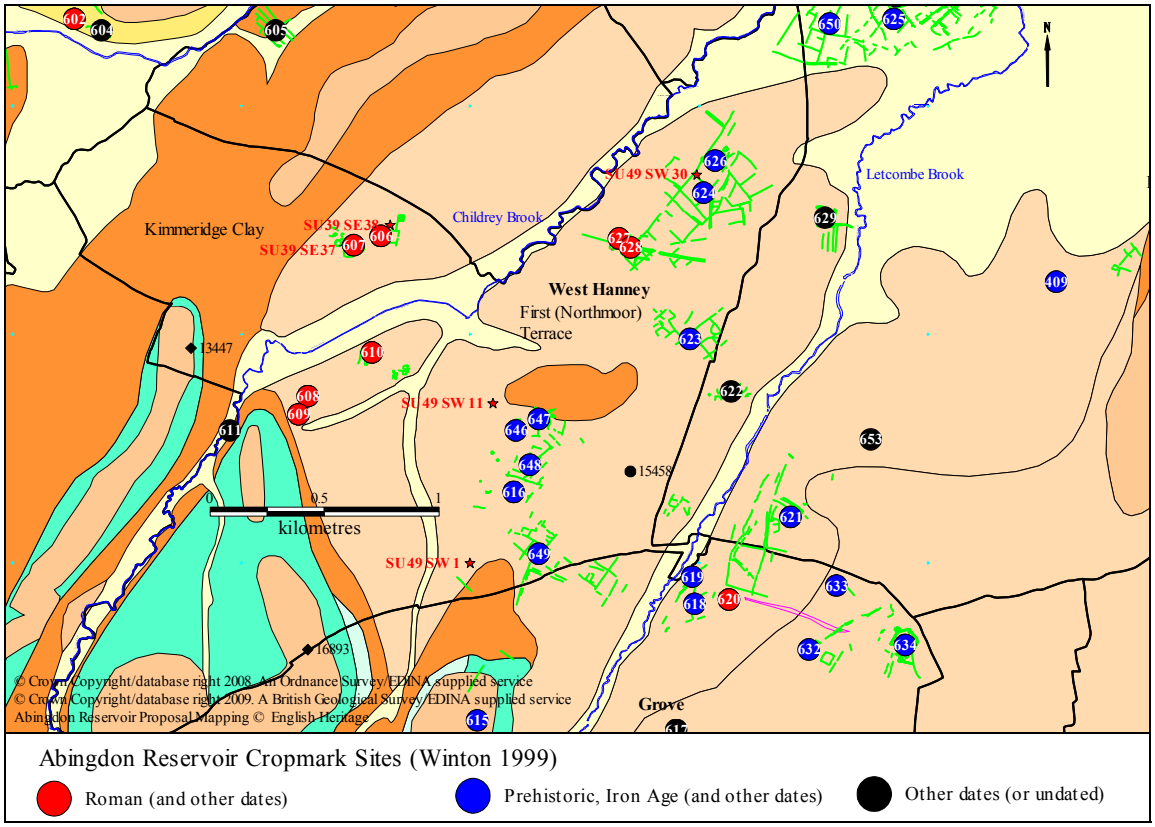


Figure 6.22 – Cropmarks in West Hanney

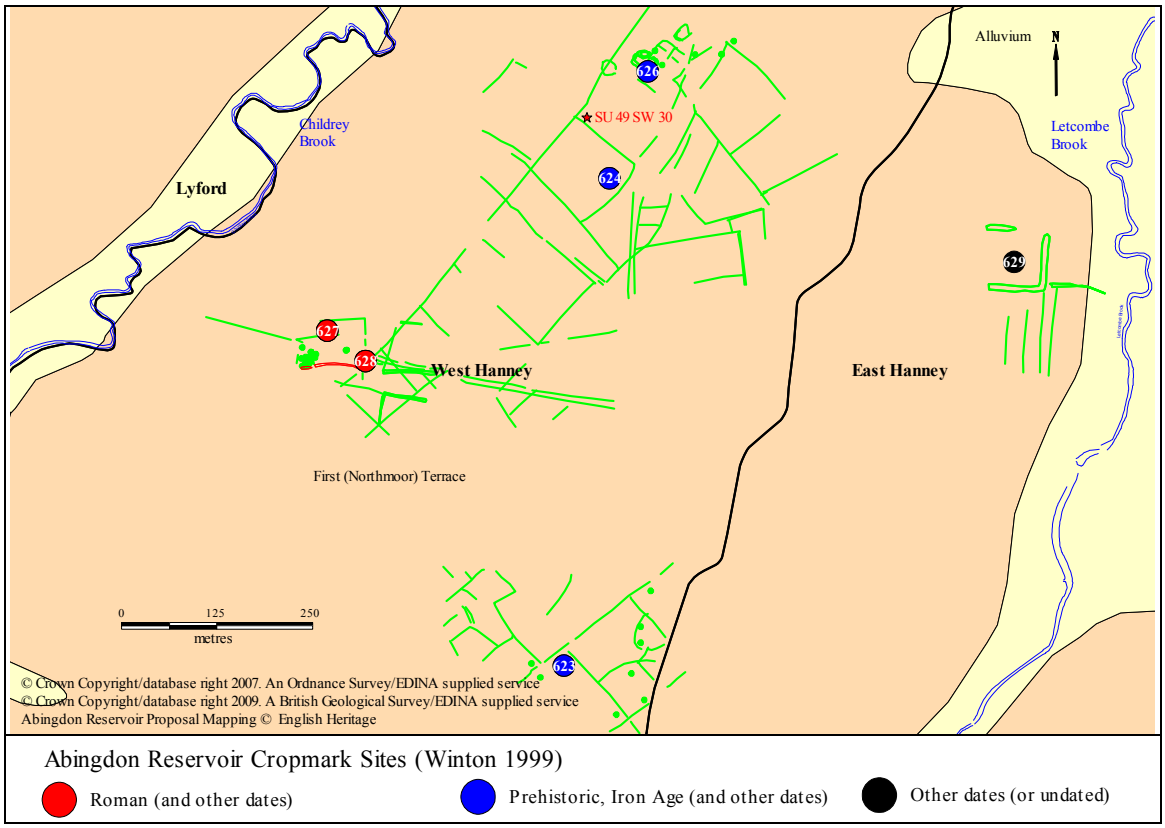


Figure 6.23 – Cropmarks in northern West Hanney

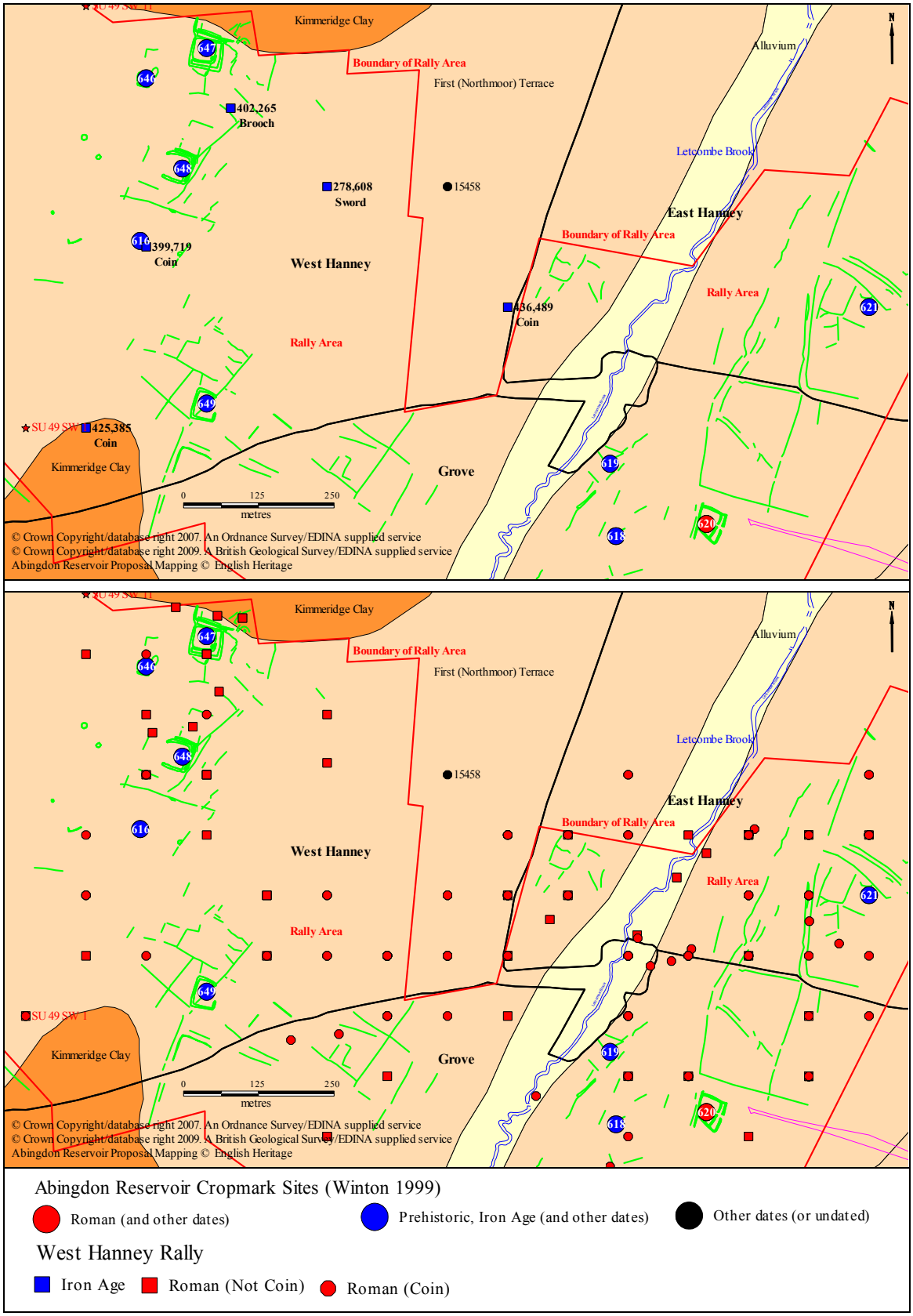


Figure 6.24 – West Hanney Metal Detecting Rally
Iron Age (Top) Romano-British (Bottom)
(Source: The Portable Antiquities Scheme / The Trustees of the British Museum, http://finds.org.uk/database)

Identifier	Object	Date Found	Description
278608	Sword	20/09/2009	Cast copper alloy La Tene chape dating to the early Iron Age.
399479	Fob	19/09/2009	A copper alloy late Iron Age or Early Roman fob
399719	Coin	19/09/2009	A silver Iron Age unit of Cunobelin dating from circa AD 10 - 40.
402265	Brooch	19/09/2009	A twisted cast copper alloy Late Iron Age / early Roman brooch.
425385	Coin	19/09/2009	A gold Iron Age Stater in very good condition, of the Trinovantes king Cunobelin (c. AD 10-40).
430312	Coin	19/09/2009	A worn copper alloy Iron Age coin, possibly circa AD 10 to 40 and possibly of the Trinovantes.
436489	Coin	19/09/2009	A silver Iron Age Unit, issued by the Iceni of East Anglia and dating to the mid-1st Century A.D.

Table 6.13 – Iron Age Metalwork from West Hanney Rally (Source: The Portable Antiquities Scheme / The Trustees of the British Museum, http://finds.org.uk/database)

Four of the seven Iron Age finds are coins: three Trinovantian and one, dating to the early post-conquest period, from East Anglia. This coin distribution, indicating influence from east of the Thames, is consistent with table 6.5 and the discussion in section 6.2.3. Coins form nearly 80% of all Roman period finds at West Hanney and this is very nearly identical to the distribution for Oxfordshire and the Vale of the White Horse as listed below in table 6.14. The artefact type distributions for Oxfordshire, the Vale and West Hanney are broadly similar but perhaps slightly more brooches were found at West Hanney than might have been expected.

Type	Oxfordshire		Vale of White Horse		West Hanney Rally	
	Count	%	Count	%	Count	%
Total	2387	100.0	1046	100.0	300	100.0
Coins	1835	76.9	848	81.1	235	78.3
Vessel	234	9.8	72	6.9	11	3.7
Brooch	142	5.9	68	6.5	30	10.0
Finger Ring	18	0.8	9	0.9	7	2.3
Bracelet	15	0.6	9	0.9	3	1.0

Table 6.14 – Romano-British Metalwork from West Hanney Rally (Source: The Portable Antiquities Scheme / The Trustees of the British Museum, http://finds.org.uk/database)

Although there is no obvious correlation between the cropmarks and the metal detecting finds, the amount of Romano-British material strongly suggests this area of West Hanney was inhabited throughout the Romano-British period and perhaps suggests the cropmarks may relate to a Romano-British field system, although one which may have begun in the late Iron Age.

6.3.3.3 East Hanney, Drayton and Steventon

Further east, the extensive linear settlement at East Hanney has been discussed in sections 5.2.2.3 and 5.3 and its villa is discussed in chapter 7. This type of linear settlement does not appear to be restricted to East Hanney and similar examples are found in Steventon and Drayton as illustrated in figures 6.25 and 6.26. The high proportion of settlements classed as linear systems in the Abingdon Reservoir Proposal data has already been commented upon, with the proviso that different criteria may have been used by Taylor and the author. Charney Bassett, West Hanney and East Hanney each have one linear system while Drayton and Steventon have two. This distribution appears to indicate a preference for linear systems on gravel terraces overlying clay. It remains unclear whether this distribution reflects real differences in Romano-British settlement or is an artefact of survival or recording bias.

The alignment of these linear systems in East Hanney, Drayton and Steventon is north-east to south-west as shown in figures 6.25 and 6.26. The field systems and potential linear settlement in West Hanney also share this alignment. Significantly, the evaluation excavations undertaken at sites in East Hanney, Drayton and Steventon as part of the Thames Water Abingdon Reservoir Proposal provide important dating evidence on these linear settlements[10].

In East Hanney, to the west of Cow Common Brook, the linear settlement consists of sites 196, 110 and 416 (north to south). East of Cow Common Brook, in Drayton and Steventon, is a further set of cropmarks which appear to define a similar linear settlement at sites 126 North, 126 South and 407. Site 126 North, discussed in section 5.3.3, consists of a series of enclosures and trackways representing a late Romano-British settlement defined by a series of ditches, metalled surfaces, post holes and walls. The recutting of ditches suggests continuing occupation and maintenance of the site (Weaver 1998a). The majority of the excavated pottery assemblage dates to the later Roman period and evidence for earlier Roman activity on the site is limited to residual first and second century AD sherds. Similarly, no prehistoric contexts were identified although the presence of residual pottery indicates some previous Bronze Age and Iron Age activity. Saxon pottery suggested two of the ditches could date to this period (Timby in Weaver 1998a, 7; Weaver 1998a, 14).

[10] Bibliographic references are summarised in Appendix 4.

Site 126 South is a less well defined set of cropmarks extending southwards and apparently on a similar alignment to Site 126 North. Excavation produced a pottery assemblage containing middle Iron Age, Roman, Saxon and Post-medieval material (Weaver 1996). The bulk of the assemblage is late Roman, particularly from the fourth century AD, although a few sherds, including Samian and some grey wares, suggest activity from the second century AD. The Iron Age pottery, recovered from a single trench, dated from the fifth to the third century BC. Also present were five Saxon sherds, four of which came from the same vessel (Timby in Weaver 1996, 8).

Features and artefactual material dating from the second to the fourth century AD were located in the two trenches closest to Site 126 North. One of these contained two roughly parallel foundation trenches containing large limestone blocks which may have formed the base of timber framed structures. Additional structural evidence included a few wattle and daub fragments and a small number of tegulae. The trench containing the middle Iron Age pottery was further south (Weaver 1996, 11). The lack of material between the middle Iron Age and the late Roman period indicates the occupation of this specific area was not continuous, although late Iron Age and early Roman settlement may have been nearby.

Site 407 in Steventon may be a southern continuation of Site 126. The cropmarks extend over 750 metres and contain enclosures varying in size from 10 metres to over 100 metres. The smaller enclosures lie towards the middle of the cropmark and the larger towards the north and south as shown on figure 6.25. The site was initially investigated by fieldwalking and then by eleven evaluation trenches (Barber and Thomas 1998). Trenches near the centre of the cropmark revealed a cluster of postholes, gullies and pits containing middle Iron Age pottery while late Romano-British pottery was found over much of the cropmark complex. As at site 126 South, occupation seems to have occurred in two distinct periods: in the middle Iron Age and from the second to fourth century AD. Evidence for late Iron Age and early Romano-British occupation is limited.

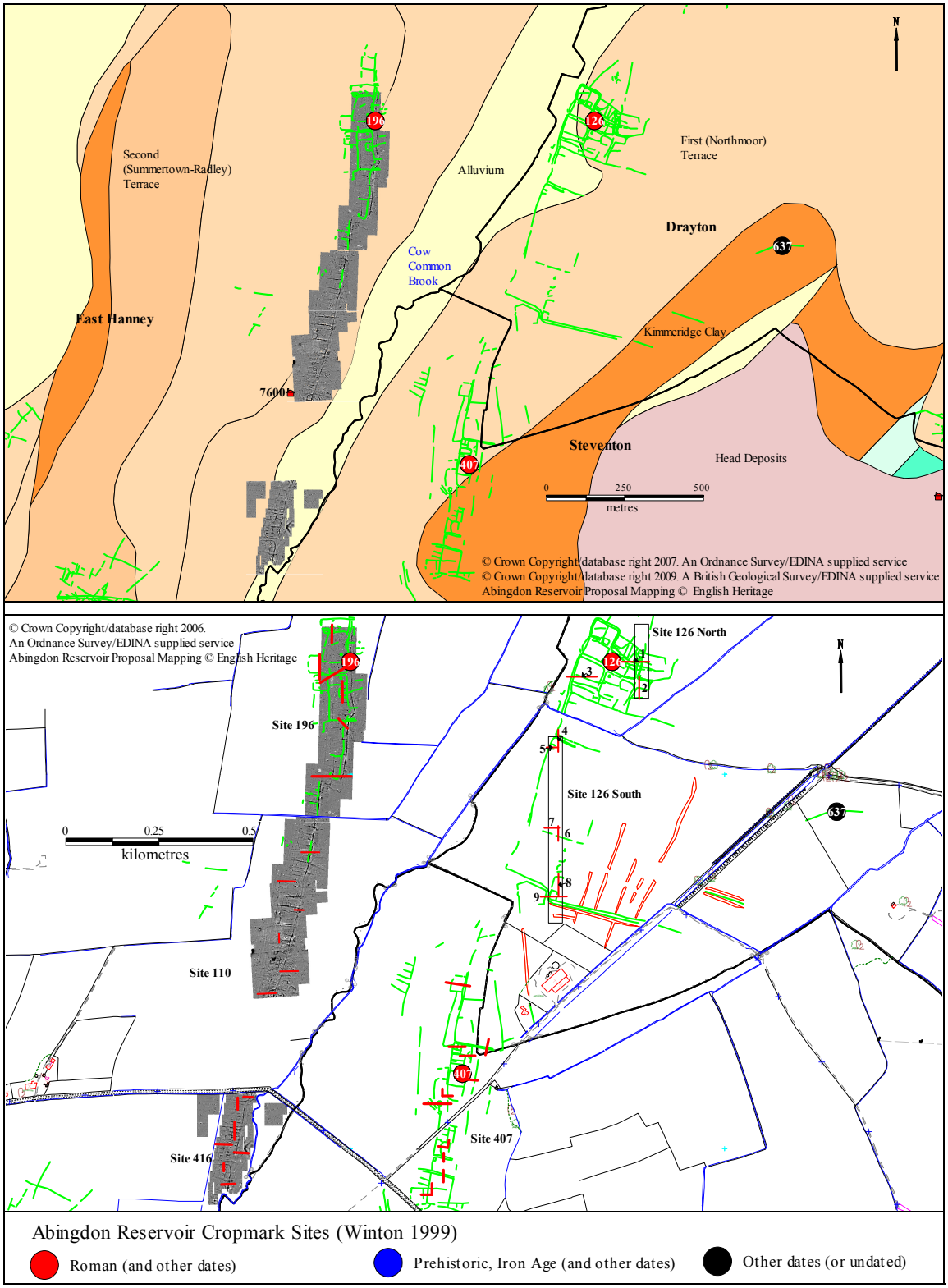


Figure 6.25 – Linear Settlements at Sites 196, 110, 416 (East Hanney), Sites 126 North and South (Drayton) and Site 407 (Steventon) Cropmarks and Geology (Top) Cropmarks and Trench Locations (Bottom)

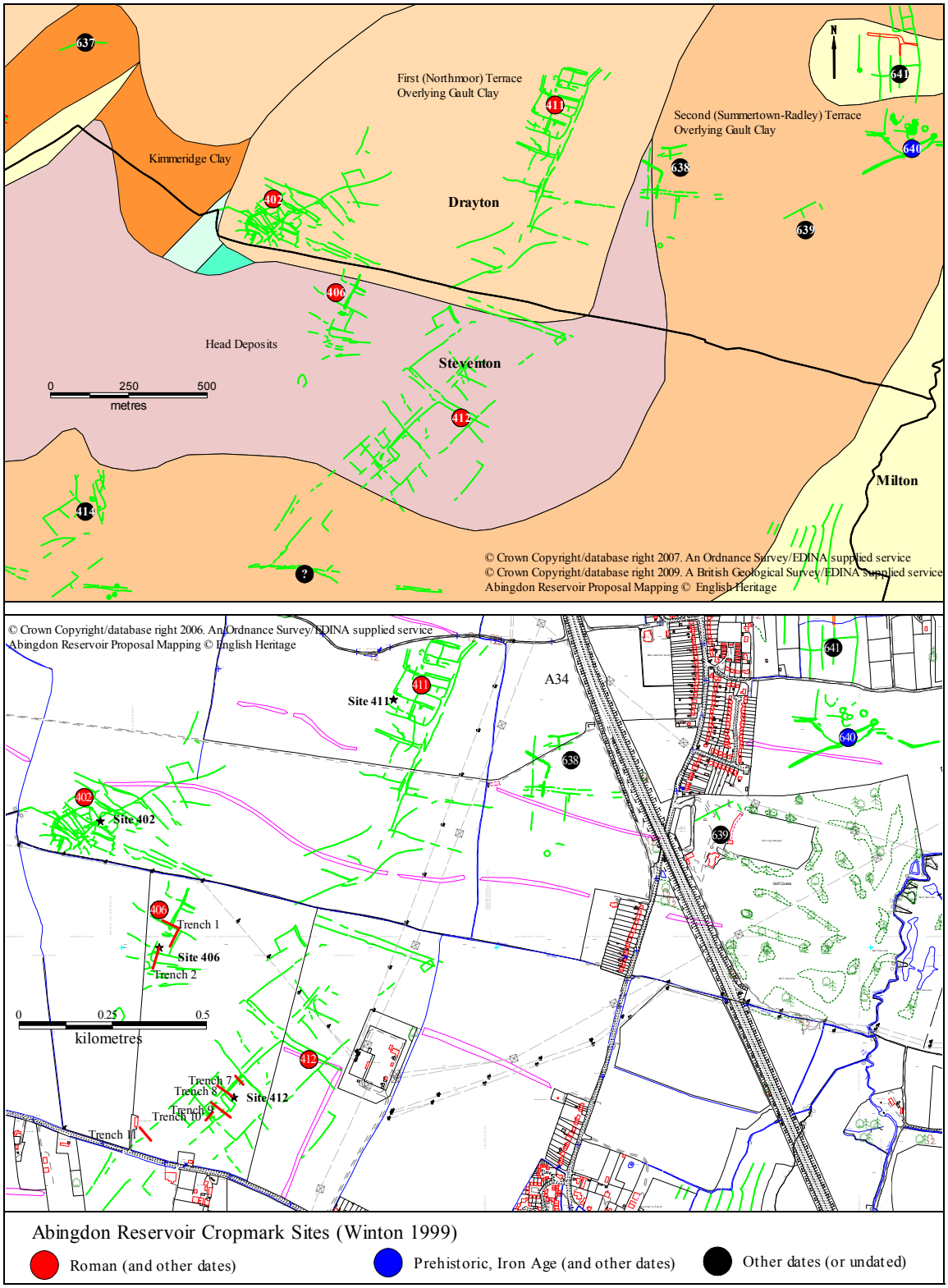


Figure 6.26 – Linear Settlements at Site 411 (Drayton) and Site 412 (Steventon)
Cropmarks and Geology (Top) Cropmarks and Trench Locations (Bottom)

Early Romano-British occupation is attested at site 411 in Drayton, where figure 6.26 shows a co-axial field system aligned in a north-east to south-west direction, and a double ditched trackway at least 500 metres long to the east. The limited pottery assemblage contained some middle Iron Age sherds but consisted mainly of early Roman material of the first to mid second century AD (Oxford Archaeology 1998, 80). This evidence of first and second century AD Romano-British settlement lies in the north of the site (Oxford Archaeology 1998, 54) with middle Iron Age activity in the south. There were no indications of settlement continuity between the two periods. The general lack of features and the small amount of material recovered suggest the actual Romano-British settlement associated with the field system and trackway was not located and its site remains unknown.

Further south in Steventon, site 412 is defined by a cropmark about 300 metres by 200 metres in size, representing the remains of an organised, rectilinear field system defined by ditches and a possible settlement (Barber 1998). The site appears to be of two phases, the first dating from the middle to late Iron Age and the second from the late Iron Age to the early Roman period.

6.3.4 Discussion

Section 6.3.2 considered a range of excavated Iron Age sites in the Vale of the White Horse and the results were summarised in table 6.6. This table demonstrates a very clear difference between middle Iron Age and Romano-British settlements: the majority of the former are open and the majority of the latter are enclosed and many have associated trackways and field systems. The trend towards enclosure, trackways and field systems is apparent from the late Iron Age as seen at Barton Court Farm and Watchfield and becomes more common in the early Roman period. As structural evidence for settlement is lacking at many sites it is not always clear whether individual farmsteads were enclosed but this is the case at Appleford Sidings and Barton Court Farm. This trend towards enclosure may indicate greater management and control of the land to enhance agricultural productivity, or may indicate social difference.

Section 6.3.3 considered the evidence from cropmark sites mapped as part of the Thames Water Abingdon Reservoir proposal. Although many cropmarks could not be classified, table 6.12 highlights field systems, trackways and enclosures. In western

parishes such as Pusey, Charney Bassett and Hinton Waldrist, a network of trackways appears to link possibly isolated settlements and field systems. These field systems and trackways have not been excavated but geophysical survey at site 548 and the dating from Drayton, East Hanney and Steventon suggest a Romano-British rather than Iron Age date.

Further east, larger co-axial or linear field systems are more apparent. Although these share a common north-east to south-west alignment there is no evidence to suggest they were connected to form a larger continuous field system. Trackways are visible within or adjacent to these field systems, but apart possibly from the two long linear systems east and west of Cow Common Brook, there are no obvious trackways linking them together.

In Drayton, East Hanney and Steventon, dating evidence has been provided by excavation and was summarised in figure 5.22. A feature of this area are the linear settlements. The two smaller linear systems, sites 411 and 412, appear to date from the late Iron Age and to continue into the early Roman period. The two linear settlements either side of Cow Common Brook, sites 110, 196, 416, 126, 407, date from the second to the fourth century AD but have evidence for earlier activity. Figure 6.27, based on figure 5.22, provides an overview of the dating of these linear settlements.

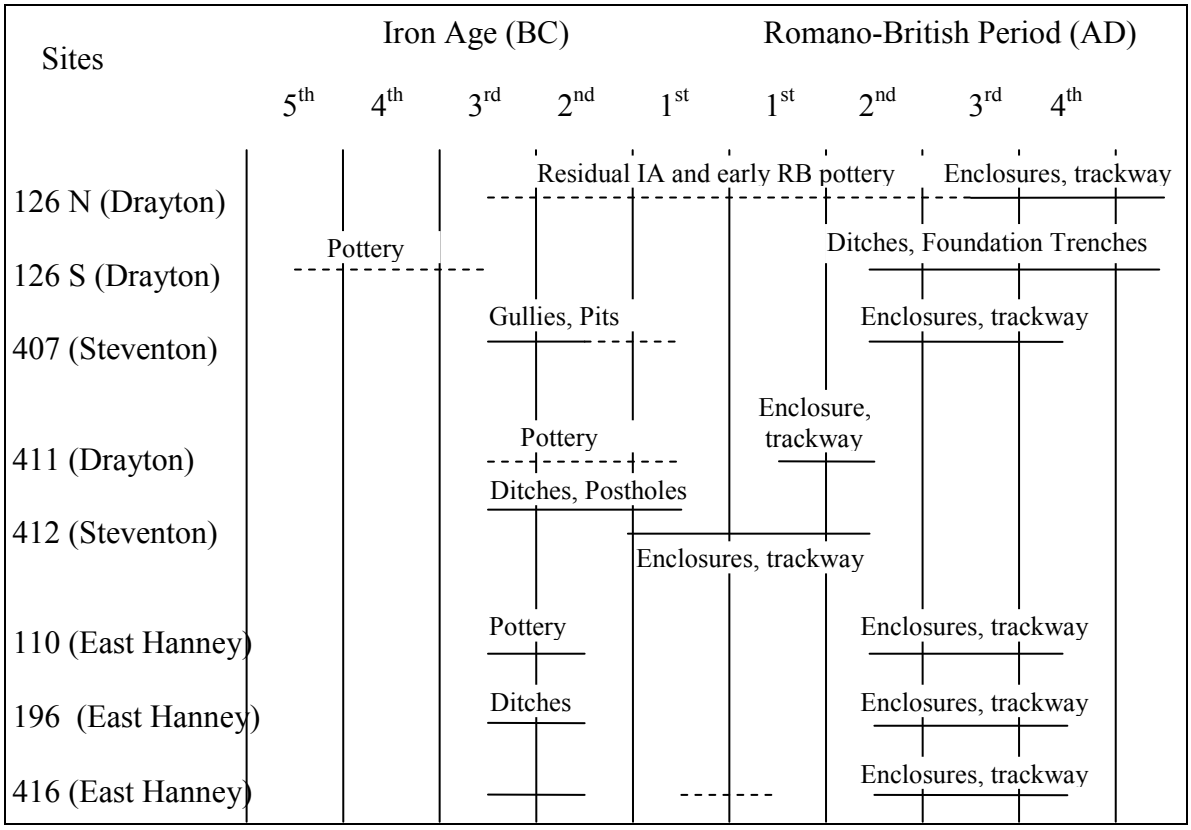


Figure 6.27 – Chronology of Linear Sites in Drayton, East Hanney and Steventon

6.4 Conclusions

This chapter has examined a number of themes in the Iron Age and Romano-British landscape of the Vale of the White Horse. Firstly, large enclosures of the middle and late Iron Age such as Cherbury Camp, Abingdon and Dyke Hills were discussed for their roles in creating and maintaining a community identity. This was achieved by considering the resources required to construct the large banks and ditches defining the enclosed settlement. It was suggested that the small enclosure at the Noah's Ark Inn also fell outside the range of normal Iron Age rural settlement.

Secondly, the evidence for Iron Age and Romano-British rural settlement was evaluated using published excavations and cropmark evidence from aerial survey. It was observed that settlements, usually open in the middle Iron Age, tended to be replaced by enclosed settlements by the late Iron Age. Enclosed settlements are the dominant form in the Roman period. Additionally it was observed that ditched field systems and trackways become more common in the late Iron Age and continue to develop in the Roman period. In the second century AD two extensive linear settlements formed on either side of Cow Common Brook in the east of the Vale.

A number of slightly different Iron Age landscapes in the upper Thames Valley are distinguished by Hey (2007), who suggests these differences may derive from earlier Neolithic and Bronze Age settlement patterns. In the lower Windrush Valley, discussed in section 6.3.1, long lived, open settlements predominate on the higher gravel terraces and enclosed settlements are found on the floodplain. The central area, containing Neolithic and Bronze Age monuments, appears to have been managed as communal grazing. Pressure to increase arable cultivation in the late Iron Age is suggested by settlement relocation, as seen at Gravelly Guy. Similar open settlements are found further east on the edge of the second gravel terrace at Cassington and Yarnton. At Yarnton, agricultural intensification by the late Iron Age is suggested by the expansion of the fields onto the floodplain, but without major settlement relocation. Although there are settlements on the floodplain at Cassington, none were located at Yarnton. Hey (2007, 165) argues the Cassington, Yarnton and Port Meadow settlements appear to be independent, with no common land management. This may be related to the lack of a major Neolithic or Bronze Age ceremonial focus.

South and west of the river Thames, Neolithic monuments are found north and south of the river Ock: at the Abingdon causewayed enclosure and at the Drayton cursus respectively. Nearby are the two large and open Iron Age settlements at Ashville Trading Estate and Abingdon, with smaller settlements on the floodplain. Hey (2007, 162) suggests similarities with the lower Windrush Valley, with the older monument areas remaining grassland and arable fields set between them. In the late Iron Age the field system at Ashville was re-organised and Abingdon developed into an enclosed oppidum.

The middle and late Iron Age landscape of the Vale, including Ashville and Abingdon, has many similarities with the settlements at Cassington, Yarnton, and the Windrush Valley. Table 6.6 demonstrates middle Iron Age open settlements on the Corallian ridge at Tubney, Coxwell Road and Hatford. Enclosed settlements such as Mingies Ditch and Watkins Farm are not present, but use of the floodplain is known from Farmoor (Lambrick and Robinson 1979) and Thrupp Farm (Everett and Eeles 2000). Despite these similarities in settlement during the Iron Age, the Vale of the White Horse differs markedly from the adjacent gravel terraces of the Oxford Clay Vale to the north in the Roman period. It develops into a region of small villas and local centres and this is discussed in the next chapter.