

CHAPTER 1: INTRODUCTION

by Gill Hey

SITE LOCATION

The Yarnton-Cassington study area lies in the Upper Thames Valley, 8 km north-west of Oxford, between the villages of Yarnton and Cassington (SP 4711; Fig. 1.1, Plate 1.1). It is situated on the north bank of the Thames where the river flows around the Corallian ridge, 1 km east of its confluence with the river Evenlode. The area investigated lay partly on the Second (Summertown-Radley) Gravel Terrace overlooking the floodplain of the river, but mainly on the floodplain itself (Figs 1.1 and 2.1).

The modern landscape is fairly flat and featureless, but this is a product of millennia of environmental change. Tree clearance and subsequent intensification of arable agriculture led to the deposition of flood silts which buried the braided river system of this part of the floodplain and the small, low islands which lay between the water courses. Colluvial deposition on the edge of the floodplain, caused by ploughing on the higher terraces, has also contributed to the level topography apparent in Plate 1.1. Geology, soils and topography are described in greater detail in Chapter 2.

The A40 Oxford-Cheltenham road forms the southern boundary of the area of detailed investigation, and the Oxford-Worcester railway line lies to the north-east (Plate 1.1; Fig. 1.2). A branch line to Witney and Fairford used to cross the area, and this has been utilised as a haul road by the gravel company. Routes from Oxford north to Warwick and Evesham, through Woodstock, pass nearby.

The early settlements of Yarnton, Cresswell Field and Worton lie within the study area. In addition, reference in the text will be made to sites within the immediate locality of Yarnton.

This is defined as the land between the river Evenlode to the west, a former course of the river Cherwell to the east, and the Thames to the south (Fig. 2.1). The settlements of Purwell Farm, Cassington Mill, Sandy Lane Yarnton, Begbroke and the hillfort of Bladon were located in this area.

[Fig. 1.1]

[Pl. 1.1]

BACKGROUND TO THE PROJECT

In the mid 1980s ARC Ltd (now Hanson Aggregates) gained planning permission to extract gravel from an area of 140 ha between the villages of Yarnton and Cassington, in an area that had been designated for mineral extraction (Fig. 1.2). Previously these fields had been under arable cultivation. No archaeological conditions were imposed on the developer as part of the planning consent. This was partly because much of the threatened area was on the Thames floodplain which was not generally thought, at that time, to have been suitable for occupation. The north and north-east of the extraction area lay on gravel terrace, however. ARC were required to give the Oxford Archaeological Unit (OAU), now Oxford Archaeology (OA), three months' notice of commencement of work, which they duly did in the summer of 1989.

[Fig.1.2]

In the early 1960s Professor St Joseph took a series of air photographs of this area, in the days before Dr Beeching axed the Oxford to Fairford branch line. Plate 1.2, taken in 1962, shows a cropmark site in one of the fields scheduled for gravel extraction. Unfortunately, these photographs were overlooked and never added to the Oxfordshire SMR, and it was only in the

months before the field was to be quarried that the photographs came to light, prompting emergency action.

[Pl. 1.2]

In September 1989, OAU funded a rapid evaluation of the western 2 ha of the field, the only area then available and under immediate threat (Fig. 1.3, trenches to the west of the Yarnton Excavations field). This field, in common with all the land in the extraction area, had been under the plough in recent years. Nine trenches were excavated by machine (representing 3% of the available area) to coincide with cropmarks seen on the photographs, and to assess parts of the site apparently buried beneath colluvium below the edge of the gravel terrace to the south of the field. A range of features was examined by hand. The density of archaeological remains was such that it proved difficult to locate undisturbed ground, and only a sample of deposits was examined. The presence of an Iron Age and Roman settlement, with evidence of occupation throughout those periods, was clearly demonstrated and was of sufficient importance to persuade English Heritage to fund the rescue excavation of 1 ha of the most densely occupied area (Fig. 1.4, Site 20). English Heritage later provided more extensive funding, as the project grew from an individual excavation into a landscape study.

[Figs 1.3 & 1.4 facing landscapes]

No Saxon deposits or finds were discovered in the evaluation, although it was known that a Saxon cemetery had been found just to the north of the site during railway construction in the 19th century (Fig. 1.2; see below). When Site 20 was stripped in March 1990, Saxon features, in particular a sunken-featured building, were exposed in the south-east area of the site. Subsequent topsoil stripping of 1 ha to the east by ARC in May 1990 (in an area that had not been possible to evaluate and was not, therefore, designated for excavation) revealed the presence of more extensive Saxon settlement, mainly sunken-featured buildings, but also post-built structures, pits and graves (Fig. 1.4, Salvage area). These were intermixed with Iron Age

and Roman features, including kilns and a cemetery. Limited time and finance meant that this area was dealt with very rapidly, and none of the deposits received the attention they merited. The southern part of this salvage area was machine-stripped deeply with a toothed bucket by ARC; this work was not carried out to archaeological standards. The northern part was cleaned more carefully.

In autumn 1990, following harvesting of the crop, the eastern side of the field was stripped of topsoil (Fig. 1.4, Site 23). The presence on the St Joseph air photograph of the north-west corner of a substantial enclosure, initially believed to be late Roman (Plate 1.2), and the nearby discovery of Saxon settlement, led to a grant from English Heritage to examine a further 2.5 ha. This excavation uncovered the remains of the middle Saxon settlement, overlain by late Saxon features, which forms the bulk of the evidence for this report. This includes the excavation of timber hall buildings. The term ‘hall’ is used in this report to denote a substantial timber structure rather than a high-status building.

During these excavation seasons, a fieldwalking survey was undertaken in arable fields, both within the gravel pit area and just beyond, mainly to look for Roman manuring scatters in fields ploughed from the excavated settlement. This exercise also recovered scatters of prehistoric material and medieval pottery which has contributed to our knowledge of settlement and land use for these periods. Evaluation in 1990 on Cresswell Field, to the west of the Yarnton excavations, and in 1991 in three fields on the floodplain to the south of this site revealed the extent of early settlement on all topographies in the gravel extraction area.

The 1989–92 discoveries led to the evaluation, in 1993, of the remaining area threatened with gravel extraction, and 340 trenches and 51 test pits were excavated (Fig. 1.3; Hey 1994a). In order to fully understand the settlement and landscape context of the sites within the gravel pit, the study area was redefined to include the adjacent site at Worton which lies just beyond the limit of extraction to the north-west, and the land around both the Yarnton and the Worton

settlements, although investigation has always been limited to small-scale evaluation on non-threatened sites.

The research design that was adopted following this work (Hey 1994b) entailed large-scale excavation (a further 10.5 ha) and observation work (5 ha), mainly on the floodplain, but also including a substantial site on the gravel terrace (Cresswell Field). More systematic collection of environmental evidence over the area and methodological studies, particularly of the use of geophysical survey in alluviated areas, was undertaken. The research design also allowed for more detailed evaluation of a potential Saxon structure at Worton that was not threatened with development (Fig. 1.3, 1996 trenches). On the basis of the evaluation evidence, none of the open-area excavations were expected to reveal Saxon activity, but those in Cresswell Field, the one site located on the gravel terrace, provided evidence of Saxon occupation in that area (Fig. 1.3).

Other developments have had an impact on the study area over the years that the project has been underway. In 1990, Yarnton manor applied for a grant for tree planting under the Forestry Commission's woodland scheme, in order to screen the manor house from the gravel extraction works. The proposed 60–100 m belt of trees lay over the site of the Saxon cemetery discovered during the construction of the railway line in the 1850s, and an archaeological evaluation was requested by the Oxfordshire County Archaeological Service before the grant was considered. OAU conducted an augur survey at 50 m intervals, followed by machine excavation of 18 trenches of varying lengths (Fig. 1.3). This work showed that gravel quarrying had been extensive (below, Chapter 11), as is suggested by air photographs (Plate 1.2), and supported by the magnetometer survey (Hey 1991a; Linford, Chapter 12).

In the early 1990s, a proposal to turn the A40 between Witney and Oxford into dual carriageway prompted archaeological evaluation of this route, funded by English Heritage. As part of this work a new access road was planned for Cassington along the west edge of the study

area from a roundabout junction on the south-west corner (Fig. 1.3). The archaeological investigation was undertaken by OAU in 1991 and 1992 (Hey 1993a), although the scheme has never been adopted.

The creation of a recycling plant within the gravel pit, north-west of the Yarnton excavation area, by Worton Farms Ltd provided an opportunity to assess the limits of Saxon settlement and the burial area to the north (Fig. 1.3; Bell 1997).

PREVIOUS WORK ON THE SITE AND IN THE LOCALITY

Introduction

The Upper Thames Valley has a long tradition of archaeological investigation, including the pioneering work of J Y Akerman and Stephen Stone in the 1850s on the Saxon cemetery at Brighthampton (Akerman 1857; 1858; Stone 1858; 1864) and E T Leeds in the 1920s on the Sutton Courtenay Saxon settlement (Leeds 1923; 1927). More recently, increasing land development has led to the discovery of numerous Saxon sites, and has highlighted the apparently early settlement of this area, especially around Dorchester-on-Thames (Blair 1994).

The archaeology of the Thames/Evenlode confluence area is particularly rich. Important sites from the Neolithic to the Saxon period have been found within a small area, including the large late Iron Age enclosure at Cassington Mill (Benson and Miles 1974, 52–3; Case 1982) (Fig. 2.1). However, over the last century many of these sites have been destroyed by gravel extraction, road and railway construction and house building with, at best, only limited and piecemeal recording having taken place (Benson and Miles 1974, 84–7). For this reason, the nature of the archaeology is unclear, and much of the work remains unreported.

Discoveries in the study area

Yarnton

The earliest known archaeological discoveries at Yarnton attracted the attention of 19th-century antiquaries. The Oxford to Worcester and Wolverhampton line, lying on the north-east of the study area (Fig. 1.2), was built in the early 1850s and opened in 1853 (MacDermot 1969, 169). It and the Yarnton Loop, which connected it to the GWR Oxford to Bletchley line in 1854, sat partially upon gravel embankments. The fields north-east of the line, and south-west of the church, were quarried to provide ballast, and during this time human skeletons were encountered (Dawkins 1862, 145). Boyd Dawkins, later professor of Natural History at Oxford, visited the site in 1860, and observed an extended inhumation in a cutting for the branch line to Witney and Fairford. From the shape of the skull and the date of a sherd of pottery found nearby, he surmised that this individual was ‘of the Anglo-Saxon race’, in contrast to that of the skeleton he found crouched in a pit the following year (*ibid.*, 145–7). He also noted numerous, probably Iron Age, pits with pottery and quantities of animal bone. He commented on burials found a few years earlier and reported that ‘Unfortunately, all the skeletons and bones have been lost, or scattered among private collections’. All associated finds suffered a similar fate, with the exception of one urn which was given to the Ashmolean Museum (*ibid.*).

Professor Rolleston visited the site on several occasions in the 1870s when gravel was being quarried from the same fields for railway works in the area. He reported on further burials and two ring ditches that were exposed (Rolleston 1884), and on one of the visits Sir Henry Dryden drew a measured plan of the visible remains (Dryden 1876). Notes made by Rolleston were published after his death (Rolleston 1884, 942–4) and inhumations found at a later date were added to Sir Henry’s plan by the Reverend Lukis. It is often unclear from the descriptions

which burials were Saxon and which prehistoric (see below, Chapter 11). A few finds were deposited with the Ashmolean Museum, mainly by Rolleston (Dickinson 1976, 235–6). It is assumed that the 8th-century Chinese seal found in the adjacent garden of Yarnton manor in the 17th century did not come from this source (Hammond and Xiao-hui 1998)!

Amongst the material collected by Rolleston were late Saxon vessels, which Professor Jope recognised as being of St Neot's and shelly late Saxon Oxford Ware. He collected similar material from the surface of these fields and from a service trench dug just to the north of the bridge under the railway line (pers. comm.; Fig. 1.2), and published these together as a group (Jope 1945).

A skeleton was reported to the Oxfordshire SMR in 1972, found 'a little while ago' by workmen digging foundations of a barn at Mead Farm at SP 4786 1146 (Oxon SMR PRN 5536; Fig. 1.2). The head and shoulders of the individual were found, and the body was lying on its back with the head to the north. No finds were recorded, but there was 'vague mention' of a sword. Although this burial was on the opposite side of the field to the known area of the Saxon cemetery, it could represent a continuation of it.

Worton and Cassington

In 1928 seven north-south burials came to light in the south of Tuckwell's Pit, on the west edge of the study area, to the south-west of Worton (Fig. 1.2). They were in a north-south row, and a small collection of Saxon metalwork was retrieved from them (Dickinson 1976, 67). A further Saxon burial was found in a back garden on the other side of the adjacent Bell Lane in 1930 (Meaney 1964, 206). This site is sometimes referred to as Cassington III.

Other discoveries in the locality

Cassington Mill

Extensive gravel workings took place around Cassington Mill between 1930 and 1952 (Case 1982, 120), and the Oxford Northern Bypass (now the A40) was constructed through this area in the early 1930s. A sunken-featured building was discovered north of the road in Partridge's Pit, along with Iron Age occupation features and a Roman cemetery (Fig. 2.1; Leeds 1940, 11; Harding 1972, pl. 27). Prehistoric features, including the large late Iron Age enclosure, Roman and Saxon settlement and burials were found in gravel workings south of the A40, including 'some half dozen houses' of Saxon date (Leeds 1935, 5–6; Fig. 1.2). The precise location of these is uncertain, but Leeds does mark Saxon features on the west side of Tolley's pit in his plan of the Beaker flat-grave cemetery, three of which resemble sunken-featured buildings, and pits in the same area on a later plan (Leeds 1934, pl. 32; 1940, fig. 1). Finds are described as 'as usual scanty', but included bone weaving equipment, a minute fragment of a glass beaker and a string of ten fired clay loomweights (Leeds 1935, 6). A sunken-featured building was certainly uncovered in Tolley's pit in 1938, and dug by workmen, probably in the position in the north-west of the area suggested by Leeds in 1940 (Leeds 1940, fig. 1; Fig. 1.2). A quantity of decorated and plain pottery, an iron knife and a heddle stick and bone spindlewhorl were retrieved (Leeds 1938, 165). When the large Iron Age enclosure ditch to the west was being dug away, Saxon pottery was recovered from its upper fills, on its north side (Atkinson and Crouch 1945, 94; Case 1982, 121).

Saxon inhumations were also found, mainly by workmen digging gravel (Fig. 1.2). An uncertain number of graves were disturbed in 1940 on the east side of Smith's Pit II, and objects were acquired for the Ashmolean Museum, including a fine conical glass vessel (Harden 1940, 163; Leeds and Riley 1942, 61 and pl. V, a). In 1944, Saxon graves were found in the same pit just to the south of the large late Iron Age enclosure and south-west of the previous discoveries,

and nearby three unusual burials were examined by Humphrey Case in 1950 which were probably late Romano-British in date (Leeds and Atkinson 1943–4, 196; Kirk and Case 1950, 104–6; Dickinson 1976, 67). These remains suggest an extensive cemetery (Dickinson 1976, 66).

The longevity of the settlement record at Cassington has struck many researchers. W G Hoskins suggested that Cassington offered great possibilities for finding Romano-British settlements continuing into the Anglo-Saxon period (Hoskins 1959, 42).

Purwell Farm

Salvage work in the 1940s and 1950s at Purwell Farm, in the northern part of Cassington parish, revealed a Saxon settlement (Fig. 2.1). Six sunken-featured buildings were excavated in 1957 c 100 m north-east of Purwell Farm, and approximately 150 m further east, 10–14 ‘huts’ were found along with two features identified as pottery kilns (Case 1958, 130; Arthur and Jope 1962–3). The intervening area was intermittently inspected by Humphrey Case who reported no Saxon finds (*ibid.*, 3), and it was suggested that these foci of occupation may be of different dates because of (unspecified) differences in the pottery assemblages.

Saxon burials were found in the earliest phase of gravel working to the south-west of the farm (Fig. 2.1), 13 of which were dug up by workmen before their existence became known to archaeologists. They were reported to have been supine with heads to the west or south-west and were buried with fine grave goods, including brooches and two necklaces (Leeds and Riley 1942). Further work by Oxford University Archaeological Society (OUAS) exposed eight burials on the south edge of the quarry (*ibid.*, 62–4). Sixth- and early 7th-century dates are suggested for both the settlements and cemetery (Arthur and Jope 1962–3, 2), but further work on the assemblages is needed to understand the occupation deposits.

Sandy Lane, Yarnton and Begbroke

To the north-east of Yarnton, near the Sandy Lane railway crossing, gravel extraction in the 1920s revealed the presence of Iron Age and Roman occupation (Anon. 1936, 201), and contemporary material was found just to the north on fields of the Weed Research Station at Begbroke (Sturdy and Case 1963, 87; Fig. 2.1). No Saxon discoveries have been reported in this area.

Eynsham

Rescue excavation in advance of gravel extraction at New Wintles Farm, north of Eynsham (Fig. 2.1) uncovered extensive remains of Saxon settlement (Hawkes and Gray 1969; Gray 1974; Hawkes 1986, 83–4, fig. 10). These were believed to be of 6th- to early 8th-century date (Berisford 1973), but the results have never been published. It may be that, like Yarnton, they have later elements which are hard to date because finds were so sparse. This site provides the nearest parallel to the middle Saxon settlement features excavated in the Yarnton-Cassington area. Nearby, at City Farm, Saxon graves were uncovered amongst Iron Age features which may be associated with the New Wintles settlement (Case *et al.* 1964–5). More recently, OAU has uncovered the remains of early Saxon settlement, and the middle Saxon origins of the monastic site at Eynsham (Hardy *et al.* 2003).

Air and field survey within the study area

Aerial photography by Major G W G Allen in the 1930s revealed cropmarks of a ring ditch, rectangular enclosures, pits and possible sunken-featured buildings west and south-west of Worton (Plate 11.1). He also found and photographed the cropmarks at Cassington Mill, particularly the large late Iron Age enclosure. On some of these photographs possible sunken-featured buildings can be seen (for example those taken in 1934, Allen Collection Book 8, nos 25 and 26 (258–9), Ashmolean Museum). As already mentioned, the Yarnton settlement site was discovered from the air by St Joseph in 1962 (Plate 1.2). An earlier flight by St Joseph led him to believe there was a villa south of Yarnton (1961, 134), though this may be a site location error. He may have been referring to large rectangular buildings situated to the south of Purwell Farm Saxon cemetery (Oxon SMR PRN 8351). St Joseph also took the photographs which indicated the extent of Saxon settlement and possible rectangular structures at Worton (eg Plate 1.3).

[Pl. 1.3]

More recently, the RCHME has photographed the area, and provided clearer coverage of the cropmarks at Worton (Chapter 11; Fig. 10.1). In the summer of 1990, cropmarks were visible in Cresswell Field north-west of the Yarnton excavation area, and photographs taken by R A Chambers of OAU indicated the presence of a small rectangular enclosure as well as pits and larger enclosures (archive held by OA).

The OUAS undertook some fieldwalking over the cropmark site west of Worton in 1970 and found Romano-British pottery on the gravel terrace (Oxon SMR PRN 3746). A little further to the south-west, near the field boundary, Jane Randall of Cassington recovered Saxon chaff-tempered sherds during the digging of a sewage main (Oxon SMR PRN 12933).

Mick Aston, then of Woodstock Museum, observed house platforms and a hollow way of the medieval village of Worton in the area south of the farm during field investigations in 1972 (Oxon SMR PRN 5539).

Concurrent research work in the area

Several research projects on relevant subjects have been underway in the area during the life of the Yarnton-Cassington project. A botanical study of hay meadow and hedgerows is being conducted by Dr Alison McDonald of the Oxford University Department of Plant Sciences, particularly focused on Port Meadow and the adjacent parish of Wolvercote (Fig. 2.1).

The Institute of Hydrology has been studying the hydrology of this area, and monitoring water levels within the ARC gravel extraction area, in order to ensure that hay meadows with SSSI status on the south side of the A40 are not being dewatered by pumping in the gravel pit.

The recent Victoria History of the Counties of England for Oxfordshire (VCH 1990) covers this area and details the manorial and economic history of the parishes of Yarnton and Cassington.

PROJECT OBJECTIVES AND METHODS

Objectives

The original research design for the project (Hey and Miles 1989) recognised the rich archaeological resource of the Evenlode confluence area, including the significance of Saxon occupation in this area, and stressed the importance of understanding changing settlement patterns from the Neolithic to the Saxon period. The ARC gravel extraction pit offered an opportunity to investigate these issues over a large area, on a range of topographies. However, in the first two seasons of work, Anglo-Saxon occupation sites were not anticipated and so specific

research questions about Saxon settlement were not explicitly addressed. These had to be formulated during fieldwork, even though they fell within the general aims of the project.

Following the early work, the investigation of Saxon settlements and landscape, and the development of the medieval landscape became one of the major objectives of the project. Assessing the potential for further work was built into the 1993 evaluation exercise, and the resulting research design articulated the project objectives for these periods of occupation (Hey 1994b).

The objectives of the project were developed to take advantage of the opportunity to work on a large scale, on a variety of geologies and topographies. In addition, the presence of a long settlement record represented by a wide range of feature types, and a full and varied environmental sequence encouraged the adoption of aims with a broad rather than a particular scope. It allowed us to study changing settlement patterns through time, and to glean information on the environment from a wide range of sources. The two main aims for the Saxon and medieval periods were:

1. Understanding the choice of Saxon settlement location, its development and changing settlement patterns, and comparing contemporary adjacent sites. Extensive investigation rather than detailed excavation was to be used to examine these aspects of the archaeological record.
2. Reconstructing the landscape in which these settlements were established, understanding changing land use strategies from the end of the Roman into the medieval period and assessing human impact on the environment.

Settlement

Within the long time trajectory of settlement in this area, the project has significant potential to investigate periods of transition and processes of change. The character of settlement in Britain at the end of the Roman Empire, and the nature of Anglo-Saxon settlement have been major research issues over generations. Recent publications have re-evaluated the evidence (eg Esmonde Cleary 1989), and some authors have suggested controversial ideas on the limited extent of Anglo-Saxon immigration from the continent into England (Higham 1992). As both late 4th-century Roman occupation and 5th-century Anglo-Saxon settlement were present in the study area, a major aim of the project was to investigate and compare the location and character of habitation and study changing land-use patterns through this period.

No rural middle Saxon settlements had previously been excavated in the Oxford region although, as mentioned above, Saxon settlement at New Wintles Farm may have continued into the middle Saxon period. Excavation in the Yarnton-Cassington study area was therefore of importance for beginning to understand this period of occupation. Was there a shift in site location in the middle or late Saxon period, as had been observed particularly for sites in the Lower Thames Valley (Hamerow 1991)? At what stage did the dispersed and loosely-structured settlements of the 6th and 7th century become nucleated and planned? The appearance of the medieval village is well researched, but its development from early Saxon settlements is poorly understood. It was hoped to shed some light on this by comparing the middle Saxon settlement with what is known about medieval Yarnton, and other medieval villages.

Landscape

A key objective of the project was to use the wide range of environmental evidence, from both settlements and the wider landscape, to enhance our understanding of changing landscape and

land use during the Anglo-Saxon period. Considerable strides had been made in the region in the previous decade in understanding Iron Age and Roman agricultural systems (Lambrick 1992, 88–103; Robinson 1992a, 56–9). The transformation of the landscape from the small Roman fields to the large open fields of the medieval countryside was, however, poorly understood. Investigation in the Yarnton-Cassington study area had the potential to provide good information from the late Roman to the medieval period in this locality. Saxon landscape studies have enjoyed some attention since the project was initiated, highlighting the importance of this issue (Rackham 1994; Hall 1995; Lewis *et al.* 1997; Hooke 1998). Martin Bell has suggested the use of environmental sequences preserved in off-site contexts as a good way of examining landscape evolution over a long time perspective (Bell 1989, 269–70).

Two more specific research aims of the project in relation to the environment were:

1. The investigation of the origin of hay meadow on Oxey Mead, in view of its importance as part of the type site of *Alopecurus pratensis* – *Sanguisorba officinalis* grassland, Mesotrophic Grassland 4 of the National Vegetation Classification (Rodwell 1992, 56–9). There has been debate amongst botanists as to how long such floristically diverse vegetation takes to develop.
2. It was hoped that the work at Yarnton would enable further refinements to be made to the palaeohydrological and alluvial sequences which have been constructed for the Upper Thames basin. In particular, it was intended to look for any evidence for an episode of reduced alluviation on the floodplain after the end of the Roman period and before later Saxon agricultural expansion, as it had been postulated that there was reduced sedimentation in the early Saxon period as a consequence of the collapse of the villa system in the Cotswolds (Robinson and Lambrick 1984). Support for this

hypothesis came from magnetic dating of an alluvial sequence over the Drayton Cursus (Robinson 1992b, 201; Clark 2003) which showed sedimentation rates between AD 400 and AD 800 to be less than half of those for the Roman and late Saxon to early medieval periods.

Methodologies

The size of the project area and its varied topography provided the opportunity to investigate the merits of different evaluation techniques for locating archaeological sites. Saxon settlements can be extremely difficult to find, partly because of the character of the occupation features, and partly because of the small quantities of material present on them in many parts of the country (Hamerow 1992, 39). How can these elusive settlements be most effectively recovered in advance of development?

Methods

Evidence for Saxon settlement and landscape in the Yarnton project area is drawn from four main sources: area excavation, evaluation trenching, field survey and environmental sampling within old river channels which once crossed the floodplain area. In all cases, priority has been given to extensive over detailed investigation.

Excavation

The Saxon sites at Yarnton and Cresswell Field were investigated in open-area excavation (Fig. 1.3), and the features were found amongst Iron Age and Roman remains. In total, the Yarnton

excavation area was 4.5 ha in size, the Saxon features being spread over nearly 4 ha (Fig. 1.4). The Cresswell Field excavation area was 1 ha in size (Fig. 9.1). Time and money were limited in both cases, but a decision was taken to expose as large areas as possible and sample features revealed, rather than totally excavating much smaller areas. A three-phase approach was adopted to the excavations with periods of review built in:

1. Stripping ploughsoil under archaeological supervision (except on the salvage area), cleaning and planning the site. This was followed by an initial hand-dug sample of a range of features to provide an interpretable site plan and a rudimentary understanding of basic phasing, the extent of settlement, the degree of planning in settlement layout and the range of structural elements.
2. Excavation priorities were then established for investigating stratigraphic and spatial relationships. Consideration was given to excavating a representative sample of features and also a spatial spread of deposits to allow finds-distribution patterns to be assessed. Sampling provided a more detailed structural sequence for the site, some understanding of date, intensity of occupation, economy and organisation within the settlement.
3. A programme of more detailed work on selected structural features and feature groups was devised to create an understanding of life on the site, involving more work on physical relationships of features and targeting features for finds recovery to provide sizeable assemblages which could be more confidently dated.

The extent of excavation in each fieldwork season varied according to time available and research priorities. The small group of Saxon features in the 1990 Yarnton Iron Age and Roman

site (Site 20) was fully excavated, but in the adjoining salvage area the proportion examined dropped to 25–50% for the structural features and only single sections for some of the shallow linear gullies. The 1991 excavation area of the middle Saxon settlement at Yarnton (Site 23) was much larger. Here 100% of the features associated with the identified hall buildings were excavated, between 50% and 75% of the other structural elements, *c* 20% of the pits (following the practice adopted on the Iron Age and Roman site) and *c* 15% of the linear features, concentrating on intersections to develop a stratigraphic sequence for the site. Although there were fewer time constraints on the Cresswell Field site, Saxon features were entirely unexpected and the funding had been allocated for sampling the Iron Age features that were known to be present and which were numerous. On this site only the large sunken-featured building in the centre of the site was fully excavated, otherwise *c* 50% of the other structures were examined, and around 20% of the fencelines and other linear features. Metal detectors were used on site during machine stripping and to monitor finds retrieval during hand excavation.

Site visits at regular intervals by Mark Robinson of the Oxford University Museum, allowed an appropriate environmental sampling strategy to be devised, and general palaeoenvironmental observations to be made about the context of these samples. Waterlogged deposits were found in two wells, and bulk samples were retrieved from these for sorting in the laboratory. Mollusca were also present in some of the deeper ditches on the lower part of the site. In general, however, the only surviving botanical remains were charred plants. Care was taken to develop a strategy which sampled the range of features and dates present, as well as targeting those deposits which were particularly charcoal-rich. Postholes of the structures were not very productive in terms of quantities of material, but their sampling was seen to be important in order to provide material contemporary with the use of the structure (Reynolds 1995). In particular, the retrieval of samples suitable for radiocarbon dating was vital in the absence of other diagnostic finds.

These sites lay in fields which had been cultivated since the medieval period, all had experienced truncation, and no floor or ground surfaces survived. They were stripped by mechanical excavators under archaeological supervision. In general, modern ploughsoils overlay gravel and the features which cut into this deposit were visible with only minimal cleaning. However, most of the 1991 middle Saxon settlement at Yarnton, and parts of the salvage area, overlay a brown silt deposited as glacial outwash in the Devensian (Chapter 2), and features were extremely difficult to distinguish from this material. In addition, more intensive ridge-and-furrow cultivation over this part of the field, and consequent colluvial deposition on its lower half, resulted in the interface between early ploughsoil/ploughwash and glacial silt being very hard to detect. The disturbed upper fills of features, especially those with distinctive charcoal-rich fills, became visible before all the ploughsoil had been removed, as ploughing had not been sufficiently thorough to fully mix the soil. In some places, particularly the southern half of the main enclosure, too little ploughsoil was removed mechanically. Later machine-trenching revealed the plan of some of the features here, but insufficient time remained to resolve all relationships.

Even where colluvium was not present, smaller features were not readily seen. The timber hall building within the large enclosure on Site 23 (Fig. 1.4) was only identified by three postholes when the site was first cleaned, and its plan was only fully revealed after it had been trowelled three more times. Obviously there was a limit to the area that could be hand-cleaned with such care, and only key locations which had good potential were selected for further work. It is certain that other timber buildings would have been found if it had been possible to hand-clean the 2.5 ha area more extensively. It is suggested that several concentrations of postholes observed in plan are possible sites of buildings, and that some of the timber structures where postholes are sparse were probably more substantial than the evidence indicates.

Evaluation trenching

Evaluation trenching was employed to illuminate the character of Saxon settlement in the study area in two ways:

1. Trenching was undertaken to reveal the extent of settlement of different periods, and assess its character and state of preservation. Trenches were laid out in a grid array, exposing 2% of the area threatened by gravel extraction, road building and other development schemes (Fig. 1.3). In this exercise, negative evidence was as important as the recovery of features for an assessment of the limits of settlement for particular periods. Over the course of the project, 393 evaluation trenches, usually 30 m x 2 m in size, have been excavated in the threatened areas. Trenches were generally placed on the Ordnance Survey grid in the first instance, but additional trenches of varying shapes and sizes were then excavated to answer particular questions raised during the evaluation process.
2. Evaluation has also been used to investigate Saxon sites in the study area that are not currently threatened by development. This has enabled us to examine a post-in-trench building to the south-west of Worton. It is an appropriate method for recovering very specific information about features, for example their date and stratigraphic relationship with intersecting features.

Where Saxon features were revealed in evaluation trenches, 50% of the contexts were usually excavated, and recording methods were those employed on the main excavation areas.

Samples were also taken for charred plant remains and waterlogged material where these were present, in order to gain an understanding of the wider environment.

In addition to the evaluation trenches, test pits were dug in three transects across the study area in order to provide information on ploughsoils, buried soils and colluvium, and the extent of finds movement in the ground. Fifty-one pits were dug by hand, 1 m x 1m in size and spaced at *c* 20 m intervals, and the soil was sieved through a 10 mm mesh. Finds were separated by layer, and by 0.10 m spits where layers were thicker than this.

Field survey

Non-intrusive field survey was an important tool for finding settlement sites and establishing their extent, and in detecting activities that take place away from habitation.

Air photographs were scrutinised for occupation sites, and cropmarks at Worton, which include Saxon structures, were plotted (Dyer and Featherstone, Chapter 11). Air photographs were also used to establish the extent of medieval ridge-and-furrow cultivation.

A fieldwalking survey was undertaken in 18 fields within the extraction area and just beyond it, and 182 ha was surveyed in total (Fig. 1.3). This was undertaken partly to look for sites indicated by spreads of finds on modern cultivation surfaces, but also to examine land use by identifying manuring scatters. The method of finds collection is described in further detail below (Chapter 11).

Geophysical survey undertaken by Archaeometry Branch of the Ancient Monuments Laboratory (AML) has covered 33 ha of the study area (Linford, Chapter 12). Unfortunately, it was not possible to survey the Yarnton Saxon sites in advance of excavation, but Saxon features were detected on Cresswell Field. Geophysical survey was employed to pinpoint the position of the Worton post-in-trench structure, enabling the careful targeting of features in evaluation

trenching. However, it was used to particular effect in areas where it has not been possible to trench. Magnetometer survey was the method most frequently used over this area. Details are discussed by Neil Linford in Chapter 12.

Inhumation cemeteries are particularly difficult to locate by non-intrusive survey methods (David 1994, 19). As a supplement to magnetometry, metal detecting was undertaken on a controlled grid over both areas where cemeteries had been located in the study area, in the hope that burials with metalwork might be found.

Palaeochannel trenching

A conscious effort was made to retrieve environmental data from the wider landscape. Sampling sections dug through palaeochannels on the Yarnton floodplain was of vital importance in this regard. Within the waterlogged silts of the channels, pollen, waterlogged seeds, invertebrate remains and mollusca have been preserved, providing information on the conditions within the channels, land use in the fields on either side and the vegetation of the wider landscape.

Radiocarbon determinations and optical stimulated luminescence (OSL) analysis (Chapter 13) have been used to date the sequences of deposits present in these locations.

A note on context recording

When excavations in the study area commenced, OAU used a context recording system which numbered cut features sequentially, subdividing sections dug through them by letter, and layers found in each section of each feature by number. Hence, finds recovered from the earliest of seven fills found in the second section excavated across ditch 3573 would be labelled 3573/B/7. All contexts from the Yarnton excavations were numbered in this way. Since 1992, single-

context recording has been in use on the project, and so each deposit excavated has been given a unique number. Single-context recording was also employed on the several machine-trenched evaluations, but in these cases numbers were prefixed by the trench number and began at 1 within each trench (eg 278/7 was the cut of a plough furrow in Trench 278; Fig. 11.6). Due to the difficulties encountered on the Yarnton site during work on the Salvage area few levels of features above OD were recorded here.

EXCAVATING AND EVALUATING SAXON SITES: THE LESSONS

The results of fieldwork on Saxon settlement remains always exceeded our expectations. The extent of settlement and the variety of feature type and period present was entirely unexpected, and their recovery only came about because of the scale of the investigations conducted in the study area. In particular, the decision to expose the entire Iron Age and Roman site threatened, rather than selectively examine a smaller part, revealed the first Anglo-Saxon features and led to more extensive examination of the Yarnton Saxon site. The generally ephemeral remains of Saxon occupation and the low levels of material culture would not have attracted attention in themselves if they had not been positively sought, or discovered in the course of other work.

Excavation

A balance must be struck in any programme where funds and time are limited, between detailed investigation allowing a fuller reconstruction of some aspects of the social life of the inhabitants, and extensive excavation to understand the broader context of settlement. The nature of the

surviving archaeological remains at Yarnton seemed most appropriate to the latter, examining settlement location, changing settlement patterns and comparing different periods of occupation.

More detailed work on the Yarnton settlement would undoubtedly have exposed further timber structures, for example, and more complete excavation of enclosure ditches near to structures may have revealed interesting finds-distribution patterns, shedding light on activities taking place there and the manner of refuse disposal. It is unfortunate that such a small proportion of the pits was excavated; one area of pits south-east of the buildings was barely investigated at all because it was under water throughout most of the winter-time excavations. On the other hand, the circumstances of the Yarnton site did not always merit a detailed approach. The extent of truncation by ploughing, and the character of the soils has meant that the kinds of constructional detail recovered elsewhere, for example Cowdery's Down on chalk (Millett 1983), did not survive here (see Chapter 3). The search for finds-distribution patterns would have been impeded by the low quantities of finds, the extent of cultivation and the problems of intrusive material inherent on uncompacted soils subject to drought and subjected to the plough. Many of the diagnostic finds were recovered from the ploughsoil and presumably once came from ground or floor surfaces (see unstratified finds in Chapter 15).

Field survey and evaluation

Evaluation of Saxon sites in the Yarnton-Cassington study area has had very mixed results. In general terms, Saxon settlement, particularly middle Saxon settlement, has proved to be the most difficult of all periods to locate by evaluation, a similar conclusion to that reached by a recent pilot study of 11 other sites in south-east England (Hey and Lacey 2001). However, there have been some striking successes in the Yarnton project area. This can be illustrated by comparing the results of two of the sites in the area, Cresswell Field and Worton.

Cresswell Field

Features on Cresswell Field have never shown up well from the air. The only cropmarks known of the site were photographed by Richard Chambers, then of OAU, in 1990 and none of these were obviously of Saxon date. Fieldwalking over the site in 1990 produced only Iron Age and later medieval pottery, and trenched evaluation in the same year failed to locate any of the sunken-featured buildings that were later exposed in the excavations. Three postholes of a Saxon timber structure were exposed in one trench, but none of these produced finds, and as they were encountered among a plethora of Iron Age features, they were assumed to be of that date. Magnetometer survey did not find post-built structures, but was more successful at detecting sunken-featured buildings (Linford, Chapter 12). This technique was only conducted immediately before excavation began, and so did not inform the research design for the project. The undetected posthole structures that were subsequently exposed when the site was stripped, however, have considerably extended our understanding of the extent and character of Saxon settlement in this area.

Worton

Sunken-featured buildings and a post-in-trench building are visible on air photographs of the Worton site, although these anomalies were not certainly of Saxon date and can only be interpreted with hindsight. The sunken-featured buildings at Worton were at first thought to be large pits belonging to the Roman settlement (Benson and Miles 1974, 52). Fieldwalking over the site in 1990–91 produced a scatter of Saxon, mainly chaff-tempered, pottery of a density of around 40 sherds per hectare. It was this discovery that led to a re-examination of the cropmark

evidence (Dyer and Featherstone, Chapter 11; Fig. 10.1). Trenched evaluation in a grid array only took place on the southern edge of the settlement (Fig. 1.3), but two sunken-featured buildings were located in the 2% sample. These results were of sufficient interest to encourage further investigation, particularly of a rectangular anomaly visible from the air which was of similar dimensions to timber halls previously excavated at Yarnton. Magnetometer surveys of the site have produced particularly informative results, locating the post-in-trench building with precision and enabling targeted evaluation of this structure to take place (Linford, Chapter 12). They also detected adjacent structures suggesting an organised settlement layout of several buildings.

It is apparent that some Saxon sites are highly visible, but others are very difficult to locate unless they are actively sought. This may bias recovery towards early sites which are more finds-rich and contain a higher proportion of the characteristic sunken-featured buildings, but militate against the discovery of middle Saxon sites with fewer finds and more posthole structures.

Timber structures constructed of earthfast individual posts, which characterise much of the middle Saxon settlement in this area, will never be seen easily from the air, although in good conditions buildings with post-in-trench foundations may be visible. Sunken-featured buildings are, however, quite distinctive and these structures were present for all periods of Saxon occupation at Yarnton, although not necessarily immediately adjacent to timber halls. Post-in-trench buildings may be more common than has been recognised and there may be some merit in re-examining the air coverage of the Upper Thames in the light of the Worton evidence, and the recently increased coverage of the region. Air photography was also an effective tool for locating ridge-and-furrow ploughing and thus enhancing a knowledge of medieval agriculture in the area.

The quality of the air photographic coverage of the Yarnton project area was variable, however, depending on the character of the soils into which features were cut, and subsequent soil movement/deposition. Gravel is generally conducive to the production of good cropmarks, except where it is sealed by alluvium and/or colluvium, as at the southern edge of the Yarnton settlement (Plate 1.2). In addition, the eastern part of the Yarnton site, and part of Cresswell Field, was constructed on silt, not gravel, and no cropmarks have been detected on this soil. Plate 1.2 demonstrates the different susceptibilities of these two geologies.

Fieldwalking can be an effective technique for locating Saxon settlement and it has been used to particular effect in parts of East Anglia (cf. Newman 1992) and, nearer to hand, south of North Stoke village, Oxfordshire (Ford and Hazel 1990). As already seen, the extent of Saxon settlement at Worton was apparent because of the recovery of surface sherds. However, it seems probable that this was the fortuitous result of recent deep ploughing over the site bringing newly-disturbed sherds to the surface. It is uncertain how much would now survive if this field had continued to be cultivated (it is now paddocks); the average sherd weight in 1990 was only 4 g (see below, Chapter 11). Fieldwalking over the Cresswell Field site yielded no Saxon pottery at all. However, as only four sherds were recovered from hand excavation this is not surprising, and the low level of pottery usage on the Yarnton site suggests that, even if we had been able to walk over the area before extraction, no Saxon pottery would have been found. It is possible, therefore, that early Saxon occupation, which is relatively finds-rich in this region, can be found by fieldwalking though possibly only when ploughing has been deeper in the recent past. On the other hand, middle Saxon settlement in this region will not be detected by these means as there are so few durable finds on the sites themselves. Lack of evidence for occupation from surface deposits was noted at Cowdery's Down (Millett 1983, 249), and the problems of detecting sites in the east midlands with few finds, friable pottery and timber buildings was highlighted by Lewis *et al.* (1997, 86). It is interesting to note that Ford and Hazel's surface sherds at North

Stoke were mainly of earlier Saxon pottery, with a little late Saxon St Neot's Ware (Ford and Hazel 1990). Does the absence of middle Saxon pottery in these fields really indicate the absence of settlement of this date?

Magnetometry has been the only method of geophysical survey which has been applied successfully to Saxon features in the study area (Linford, Chapter 12). It has been effective for locating sunken-featured buildings, buildings with trench footings and enclosure ditches, and has added immeasurably to our understanding of Saxon settlement. Andrew David has highlighted the importance of the strategic use of geophysical survey in site location for this period (David 1994, 22) and at Yarnton this method has effectively complemented the results from the excavations. It was particularly useful for investigating areas where intrusive trenching was not possible, as at Mead Farm, Yarnton, and to the north of the Cresswell Field excavations. It was important for pinpointing the position of structures in advance of machining at Worton. Finding buildings with only individual postholes surviving will probably never be successful, however.

Once again the success of this technique is partly dependent on the underlying geology. Saxon settlement seems to have been located on higher ground in this area, on gravel geologies responsive to geophysical survey, but features on the floodplain have consistently proved difficult to locate (Linford, Chapter 12).

It has been suggested that metal detecting might be an appropriate method for locating graves containing finds such as knives and swords, of the type previously recovered from the Yarnton and the Worton cemeteries (David 1994, 19). Metal detecting at Yarnton and Worton (below, Chapter 11) failed to reveal anomalies suggesting graves, but it seems probable that both of these cemeteries have been largely destroyed over the last 150 years.

The success of evaluation trenching for locating Saxon sites was mixed, with no contemporary features found on Cresswell Field, but two sunken-featured buildings at Worton. Sampling at a level of 2% is unlikely to locate dispersed settlement of the type which

characterises early Saxon settlement in the area, except by chance (Hey and Lacey 2001). Once features have been detected by other means, trenched evaluation to retrieve evidence of the character of occupation features, their date and state of preservation can be very effectively undertaken by evaluation trenching.

Environmental sampling

The opportunity was taken at Yarnton to retrieve evidence of the wider environment by sampling away from sites, and the presence of waterlogged deposits of this date on the floodplain have proved invaluable for reconstructing the landscape, and also changing land use patterns over this period of time (see below, Chapter 2).

Perhaps the greatest challenge has been linking the settlement and the landscape evidence, and this has been achieved because a wide range of features was sampled, both on and off site. Evidence of site activities can be found in features at a distance from habitation, and evidence of the wider landscape is retrieved from the settlement site. An excellent illustration of how apparently diverse strands of information from different locations can combine to provide important evidence of social activity is provided by middle Saxon flax. Charred flax remains from the settlement indicate that the inhabitants grew flax and occasional finds, such as loomweights and bone weaving tools, show that textile production was carried out. The flax crop was brought to the site where it was bundled into beets and beaten, and the dispersed seeds found their way into adjacent wells. The beets were taken to ponds on the floodplain where they were retted (soaked) to separate their fibres, a smelly process which may have been conducted away from the settlement. Some of the bundles were never retrieved and lay in sediment within which beetles and plants collected, and these were recovered during sampling in 1990. The environmental remains indicate that, at this time, the adjacent field of Oxey Mead was used as

hay meadow for the first time. Hay continued to be grown here until the construction of the A40 road in the 1930s, and attracted the attention of early ecologists (Baker 1937). A radiocarbon sample from the flax bundle provided part of the dating evidence for the origin of hay meadow in Oxy Mead (OxA-3643; Table 13.1), and the creation of meadow at this date, in conjunction with other data, provides evidence for changing agricultural practices in the middle Saxon period.

CHRONOLOGY AND PHASING

The main Saxon site at Yarnton provides the key for phasing in the study area. It has been the most extensively examined of the occupation sites and is most clearly understood, and it has produced the largest number of finds, environmental remains and radiocarbon determinations (Chapters 13–19). Even so it is very difficult to provide definitive dating and clear-cut phasing for the Saxon sequence of occupation.

The site was ploughed from the medieval period (see below, Chapter 11) and the only layers which survived were those which had slumped into the tops of ditches. It was not possible, therefore, to link most of the features stratigraphically; the remains were spread across the settlement, and there was little superimposition of deposits. An exception to this was the location of a Saxon smithy over the top of a middle Saxon enclosure ditch; in this case the radiocarbon dating demonstrated later Saxon use of this structure (*smithy*; Fig. 13.4). The dating was valuable for placing the smithy within the context of the later enclosures which had cut across the earlier settlement.

The majority of features were discrete. Occasionally, however, features intercut, for example a sunken-featured building in the north of the site was constructed after the posts of a

granary had been removed (Chapter 6), but this only related two features in one small area of the site. A small number of boundary and enclosure ditches also intersected and these provided some information on site development, but the area over which the stratigraphic links could be followed was very limited. As a result, these relationships seldom provided a clear guide to the sequence of changes within the settlement as a whole. It would be entirely possible for enclosures in the south-west of the site, for example, to have been modified and redefined many times over a short period, and have no chronological relationship with any other phase of activity represented on the site. Some sunken-featured buildings may have been in use for a short period of time, and others have survived over much of the life of the settlement, for example those for which there is evidence of recutting.

The problems of phasing the Yarnton site were compounded by the paucity of finds recovered from it. Only 117 sherds of early and middle Saxon pottery were found (Blinkhorn, Chapter 14), a significant proportion of which came from two of the early Saxon sunken-featured buildings (26% by number, but 35% by weight). The entire assemblage is smaller than that from some individual sunken-featured buildings at Mucking, for example (Hamerow 1993, 22–3, table 5). Indeed, it is proposed below, on the basis of the Yarnton evidence and that from other sites in the region, that there was a hiatus in pottery production in the middle Saxon period in this area (Blinkhorn, Chapter 14; 2003); it would seem that no locally produced pottery was in use at Yarnton throughout much of the middle Saxon period. The early to mid Saxon pottery that was recovered was not very diagnostic, and Paul Blinkhorn assigns a date of AD 450–850 to the majority of this material. A vessel with stamp decoration (Fig. 14.1.1) and a fragment of a footstand base (Fig. 14.1.4) are probably 5th or 6th century in date; both sherds came from the sunken-featured buildings mentioned above.

A small quantity of Ipswich Ware was brought onto the site during the time when no pottery was being produced locally, and this can be dated with some confidence to the period AD

725–740 to 850 (Blinkhorn, Chapter 14; forthcoming a). This provides some of the best dating evidence from the site, but unfortunately only nine sherds were found and most of these came from later contexts. Two sherds of middle Saxon shelly ware were also recovered.

Production of pottery in the later Saxon period is more clearly understood (Mellor 1994). Late Saxon Oxford Shelly Ware, St Neot's Ware and Cotswold-type Ware all began to be produced at the end of the 9th century. At Yarnton, this material was found in the late enclosure ditches cutting the middle Saxon features and in the smithy, though in small quantity. None was recovered from middle Saxon deposits, with the exception of one sherd near the top of a large posthole of a granary in the north of the site. Two sherds were retrieved from the top fills of the large enclosure ditch, but as this would still have been a hollow when the late Saxon smithy was in use, such finds are not surprising. Later medieval sherds and a 14th-century strap end came from the same context (Chapters 14–15). It seems probable that the introduction of later Saxon wares post-dates the occupation of the middle Saxon site.

Other categories of finds from the settlement are also rare, and seldom closely datable. Niedermendig lava quernstone, imported from the Rhineland, is often found on middle Saxon sites in the Thames Valley (Roe, Chapter 15), but cannot be closely dated. A (presumably) redeposited 6th-century glass bead (Fig. 15.1.1) came from a sunken-featured building dated to the 8th or 9th century, and a middle Saxon pin (Fig. 15.1.2) was found in a well. The majority of diagnostic Saxon finds came from the ploughsoil (Chapter 15).

Radiocarbon determinations have provided the most useful guide to dating the Yarnton site. Initially, inappropriate samples were selected for submission, and the results led to a belief that the large timber buildings were 6th- and 7th-century in date (see below, Chapter 13), in line with some well-known parallels, for example Cowdery's Down (Millett 1983). More critical choice of material has enabled a more accurate assessment of the date ranges of occupation features. This has not been achieved without difficulty. The presence of earlier activity on the

site has resulted in residual material being selected in a few cases, and the droughty nature of the soils, leading to cracking during summer months, combined with intensive cultivation over hundreds of years, has allowed the introduction of more recent material. These problems are discussed in detail below (Chapter 13). Nevertheless, 28 radiocarbon determinations are considered to be contemporary with the Saxon settlement.

Although the radiocarbon results have been invaluable for determining the chronology of the site, there are limitations to their usefulness. The calibration curve for this period, particularly for the 8th to 10th centuries, is fairly flat, and this means that the date ranges of the features sampled are wide. Even with high-precision dating on three skeletons, giving an error term of ± 19 – 20 , these individuals can still only be assigned to a 115–165 year period at 95% confidence (Chapter 13). Material suitable for dating was both small and scarce and, therefore, Accelerator Mass Spectrometry (AMS) was used in most cases, giving much wider error terms. Mathematical modelling has allowed us to restrict date ranges in some cases, and the methods used and results obtained are discussed in detail in Chapter 13.

Fifteen individual structures, features or skeletons on the site have been dated, but even with such an extensive radiocarbon programme, this only represents a small percentage of the features examined. As it is so difficult to relate features stratigraphically, the dated deposits usually stand in isolation amongst the spread of undated features.

Analysis of spatial patterning provides the only effective way of phasing the vast majority of the excavated features. Buildings, ancillary structures, pens, enclosures and fields would seldom have been laid out randomly across the landscape, but positioned to take advantage of the natural topography and to be accessible from other contemporary features. On a settlement, for example, it would be reasonable to propose that the inhabitants would not build their storehouses or hen coops at a distance from their houses, nor would they be likely to dig a well in the middle of their main route to the neighbouring village. On a site which has been

occupied over some time, however, modifications would be made to the layout and, in practice, it is not easy to distinguish early from later features. In addition, it is not necessarily the case that changes would be effected at the same time across the entire site. It is more probable that alterations would be constantly undertaken, but at different times and rates in different parts of the area. The larger the settlement, the more difficult it is to make spatial links between feature groups.

In practice, analysis of the archaeological remains on rural sites is a complex process which integrates all the methods of dating and phasing outlined above, and provides a 'best fit' for the deposits encountered. In the case of the Yarnton Saxon site, stratigraphic relationships have been used as the foundation for providing the phasing for the site but, where features are discrete, their spatial relationship to other features and similarities/differences in deposit character have been used to develop a phase plan. This has been undertaken in conjunction with dated material. Absolute dating, from finds recovered or radiocarbon assays, have provided the chronological framework around which the phasing has been developed. The limitations of the phasing arrived at by this method are readily acknowledged.

The early Saxon settlement features at Yarnton (Phase 1; Fig. 1.5) lay in two discrete areas of the site, and they appear to be chronologically distinct from the later phase of occupation (Chapter 13). There seems to have been two episodes of occupation, one in the late 5th/early 6th century, and another in the 7th century (Chapter 5).

[Fig. 1.5, landscape]

The middle Saxon site provides a greater challenge, and its occupation has been split into two phases (Phases 2 and 3; Fig. 1.5). Its settlement layout and dating indicates an organic development over time, and there is no way of providing a definitive plan of its appearance at any given moment. What the phasing attempts to do is indicate visually those features which seem likely to belong to an earlier phase within the life of the settlement, and those which seem

to be later. It is placed within a general context of a shift in site location from west to east over time, from the Roman settlement to the medieval village. This is supported in general terms by the finds and radiocarbon evidence, and the apparent coherence of changes in the organisation of site layout through time. However, the evidence for some features is reasonably good but for others is done on spatial grounds or prejudice alone; it is important to realise the limitations of this method.

Radiocarbon dates suggest that the middle Saxon settlement was laid out sometime in the second half of the 7th century or, more probably, in the 8th century AD (*start_23*; Fig. 13.3). The presence of apparently contemporary handmade wares early in this phase, but their absence by the end, would tend to support a start date around the turn of the 7th/8th century (Blinkhorn, Chapter 14). The presence of a single Ipswich Ware sherd in an enclosure of this phase with little other pottery suggests that it was in use after the first quarter of the 8th century. This enclosure was cut by a ditch which contained human burials within its fill, dated to the 9th century (UB-3781; Table 13.1). In general terms, this phase of occupation seems most likely to date to the 8th century, and the radiocarbon dates would not contradict this view.

The end of the Phase 3 middle Saxon settlement can be estimated on radiocarbon grounds to have occurred between *cal AD 790–920* (*end_23*; Fig. 13.3). The presence of a very small quantity of Ipswich Ware and a middle Saxon shelly ware sherd, and the apparent absence of other contemporary pottery would indicate a later 8th- to 9th-century date. The general absence of late Saxon wares from these features is, however, more indicative, suggesting its occupation beyond the late 9th century is unlikely. This phase of occupation seems broadly to date, therefore, to the 9th century.

Phase 4 features cut across or overlay the middle Saxon settlement features (Fig. 1.5). Radiocarbon dates show that the smithy was in use sometime between *cal AD 910–1160*

(*smithy*; Fig. 13.4), and the pottery suggests a pre-Conquest date. Pottery from plough furrows and ploughsoil over the site is 11th to 14th century in date (Chapter 11).

Dating the other Saxon occupation sites that have been examined, on Cresswell Field (Chapter 9) and Worton (Chapter 10), has been achieved largely by radiocarbon assays. Cresswell Field yielded only four sherds of pottery, and this absence in conjunction with radiocarbon results suggests a late 7th- or 8th-century occupation date (Fig. 13.5; Table 13.1). A bone comb from a timber hall was probably made in the 7th or 8th century (Fig. 15.8.23; OxA-7372; Table 13.1). Radiocarbon results indicate that material found in one sunken-featured building was slightly earlier in date than that recovered from the hall and another sunken-featured structure sampled, and that the cattle skulls from which these dates derive were placed there in the 7th century (*last_7395*; Fig. 13.5). No pottery was found within it. This building appears to form part of the same settlement layout as other Saxon features identified, and its earlier date is a surprise, especially as it yielded no early to middle Saxon pottery. It emphasises the point that the radiocarbon dates provide *termini post quem* for these sunken-featured buildings only. It has been decided to treat Cresswell Field as a single phase of settlement that probably dates to the (earlier) 8th century. Its relationship to the Yarnton Phase 2 settlement is discussed below (Chapter 2).

The Worton site was only evaluated, but a stratigraphic sequence of events was uncovered (Chapter 10). A sunken-featured building contained early to middle Saxon pottery which had also found its way into later contexts. Two other, probably contemporary, sunken structures lay further to the east. The pottery was mainly chaff-tempered and undiagnostic, but included a stamp-decorated 6th-century vessel (Chapter 14; Fig. 14.1.1). A post-in-trench building cut through one of the sunken-featured buildings, and a pit cut the wall trench of the building. Both the post-in-trench building and the pit seem to be middle Saxon in date, and are overlain by plough furrows and a ploughsoil which incorporates late Saxon pottery. The post-in-

trench building yielded only five very small, and probably residual sherds of pottery (Chapter 14) and a single radiocarbon date indicated a mid 7th- to mid 9th-century date for its use (OxA-7140; Table 13.1). The apparent absence of contemporary pottery and the probability distribution of the radiocarbon date (Fig. 13.6) would support a date in the 8th century.

Radiocarbon and OSL have dated two environmental sequences from palaeochannels on the floodplain, which provided good environmental evidence for the Saxon period. In these cases it has been possible to constrain the date ranges of the results by incorporating the relative dating evidence provided by stratigraphy, using statistical modelling (see below, Chapter 13). These sequences have been correlated with dating from the Yarnton settlement, where this is possible.

THE DOCUMENTARY EVIDENCE

by Julian Munby

The recent *Victoria County History* volume on Wootton Hundred (VCH) provides a detailed account of the village, manor and economic history of Yarnton that makes a full treatment here unnecessary, but the more significant evidence for the history of the landscape will be discussed in outline. The earliest known documentary reference to Yarnton is a grant of ten hides in *Ærdintune* amongst other estates to Eynsham Abbey in 1005 AD (*'x mansionibus terrae communis'*; 'ten hides of common land'). This ultimately unsuccessful gift (which may well refer to arable land held in common) was probably too late to have any bearing on the origins of the village, though Gelling has remarked that no bounds are given in the charter for Yarnton 'where the land was in the open fields' (Gelling 1979, 139). If, as seems likely, the 1005 grant was the occasion of the refoundation of the abbey, it is just possible that an historic minster

estate was being returned to its former owner (Blair 1994, 63, 68, 114). The ten hides granted to Eynsham were represented in Domesday (1086) as *Hardintone*: 9½ hides held by Bishop Remigius of Lincoln, and half a hide of Bishop Odo of Bayeux (of which no more is heard thereafter) (see below, Chapter 11, for further details). The land seized from Eynsham by Remigius eventually passed to the family of the tenant Roger d'Ivri, and so to the Earls of Cornwall and the great feudal honor of St Valery, which has resulted in the survival of some information about the 13th-century manor (VCH, 476–7). In 1281 Edmund Earl of Cornwall founded Rewley Abbey in Oxford in memory of his father Richard 'King of the Romans', and gave it his suburban manor of North Oseney in west Oxford, and the manor of Yarnton, which was to form almost its only endowment until it was dissolved in 1536. Rewley was a joint Cistercian abbey and college, which fell on hard times in the later Middle Ages, and there are almost no surviving monastic records, so consequently little is known of their lordship.

One shaft of light is thrown by the Hundred Rolls survey of 1279, which for Oxfordshire preserves a very detailed manorial survey (see below, Chapter 11, for further details). The earl's manor is described as having 3 carucates (or ploughlands) in demesne, 31 tenants with a virgate or yardland, and 7 half virgaters, ie peasant tenants of the abbey with substantial holdings. A peasant virgate or yardland was probably about 25 acres, and would have included rights of common and pasture, in addition to strips in the open fields (*Rot. Hund.* 1818, 855). Some earldom accounts from the 1270s are also illuminating about the nature of demesne farming (VCH, 479–80). The only information about Rewley is the allegation of their enclosure of some land in the late 15th century, resulting in the disappearance of six houses and three cottages, and the demesne was mostly enclosed by 1536. At the Dissolution, the manor was bought by Henry VIII's physician, George Owen, and passed to his son's brother-in-law John Chamberlain who sold off land in the 1570s to make farms prior to selling the whole manor. This was a typical example of speculation in monastic land, but was, for Oxfordshire, an unusually early example

of enclosure, as was long ago demonstrated by Gray's account of the later parliamentary enclosure of the county (Gray 1915, 109–37, app 4). The result of this fundamental reorganisation of the land was to create individual farms in the open fields, and a whole new regime of land uses which has effectively obscured the medieval landscape, and left Yarnton with fewer clues to its historic land use than other parishes which survived with open fields until the 18th or 19th centuries. Only the extensive pasture was to preserve the ridge and furrow indicative of former arable.

The century following the 1580 purchase by the Spencer family brought some stability. 'Under the Spencers, who were the first recorded resident lords, Yarnton comprised a large, directly managed manor farm flanked by smaller freehold, leasehold, and copyhold farms' (VCH, 481). A new manor house was built in *c* 1611, and a park was created round the new mansion house (it is not shown in Speed's atlas of 1610, but appears on Morden's map of Oxfordshire in 1695). Further changes at Yarnton took place after the 1685 dispersal of the Spencer estate among tenants, when more new farms appeared. This landscape, described in farm title deeds, and illuminated overall for the first time in the 1840 tithe survey, was to survive until the present century, when gravel became so valuable.

The landscape history of Worton, in Cassington parish, is rather easier to determine, since the open fields were not enclosed until after 1800 (VCH, 47). Its early descent is of interest, being held in 1086 from Earl William FitzOsbern by Robert D'Ivri and Robert D'Oilly; as a consequence half passed to the Honor of St Valery (but not, it seems to Rewley Abbey), while the other half went to Oseney Abbey, and so to Christ Church, Oxford. The Rectory, once divided between Eynsham, Cogges, and Oseney, passed to Christ Church after the Dissolution, until Rectory Farm was sold in 1954 (VCH, 43). The fields of Worton were operated separately from, but alongside those of Cassington, and the long narrow profile of the township extended from Worton Heath at the north end to Worton Mead beside the Thames. The three arable fields

lay north of Worton, and a large area of common pasture, Worton Cow Common, lay between the village and the Meads (VCH, 44–9, map at 38).

Place names

All three settlements within the study area have Old English *tun* suffixes, ‘enclosed piece of ground, homestead, village’ (Gelling 1954, 469). Such names are sparse in documents predating the early 8th century, but become quite common thereafter (Cox 1999, 225). Yarnton comes from a personal name, Earda, ‘Earda’s farm’. Cassington and Worton both have prefixes describing vegetation in those localities, ‘*tun* where the cress grows’ and ‘herb or vegetable enclosure’ (Gelling 1954, 252–3). There are records of some early field names in these parishes, for example *Francwordy* near to Purwell Farm (Chapter 2), but the majority of known names are of post-enclosure date. Where they shed light on land use they are discussed below (Chapters 2 and 11).