

# Chapter 1 – Introduction

The river Thames has iconic status in the British (and particularly English) consciousness. There are numerous substantial studies of its history and natural history and it is a familiar theme in literature and art, particularly from the 19th century onwards. None of the many accounts of the Thames takes a specifically archaeological view of the development of its landscape, however. This is surprising because the Thames offers an almost unparalleled resource of archaeological information for both prehistoric and historic periods. The processes that resulted in the formation of the valley created substantial deposits of sands and gravels, which survive in terrace formations along the valley sides. The topography and soils of these terraces have made them attractive places for human settlement from early prehistory onwards. Over the last 200 years, the gravels and sands of the Thames Valley have been increasingly exploited to provide materials for construction, and the physical remains of early human settlement that are frequently revealed by this process have excited curiosity ever since. As the scale of gravel extraction has expanded, an ever more systematic response to the recording of archaeological remains has developed correspondingly. This has resulted, particularly in the last genera-

tion, in the accumulation of a vast body of evidence. The purpose of the present volume is to summarise the part of that body of evidence that relates to the 1st millennium AD, with a particular emphasis on bringing to a wide audience the results of new excavations, old work still to be published in detail and new thinking about the archaeology of the gravels.

## THE STUDY AREA (Figs 1.1, 1.2)

The area of this study covers the whole of the Upper and Middle Thames Valley, from the source of the river just south-west of Cirencester to the start of the tidal zone at Teddington Lock, a short way downstream from Kingston upon Thames. From this point onwards the character of the river changes, and the story becomes very largely that of London. In broad terms we have focused on the archaeology of the valley floor and the lower terraces, where aggregate extraction is at its greatest extent. Thus, in later historical terms, the main study area extends for roughly the depth of one parish back from each side of the river. However, the nature of this overview does not call for rigid boundaries. The lower reaches of most of the main tributaries of the Thames are included, as

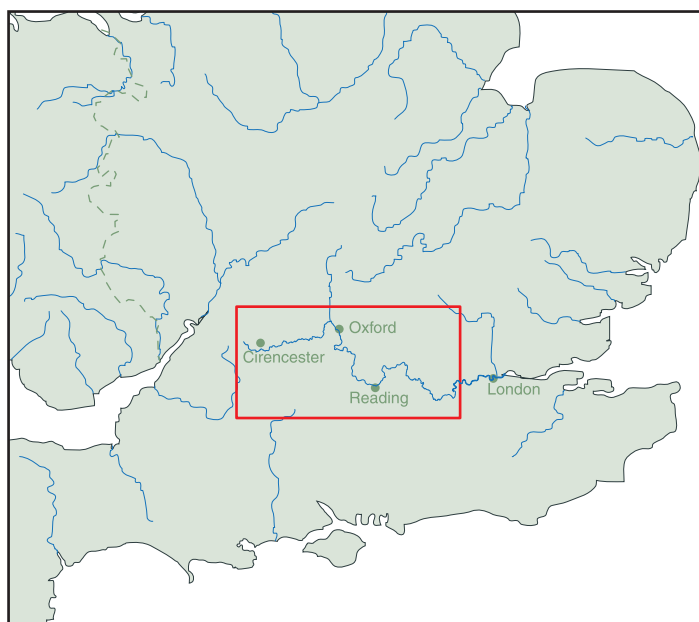


Fig. 1.1 The project area



The Cotswolds

■ CIRENCESTER

CRICKLADE

■ LECHLADE

Berkshire Downs

North Wessex Downs

Eynsham

■ OXFORD

ABINGDON

■ DORCHESTER

WALLINGFORD

■ Goring

River Ewer

River Glyme

River Chertwell

River Ray

River Quorn

River Windrush

River Leach

River Coln

River Ock

River Thames

River Kennet

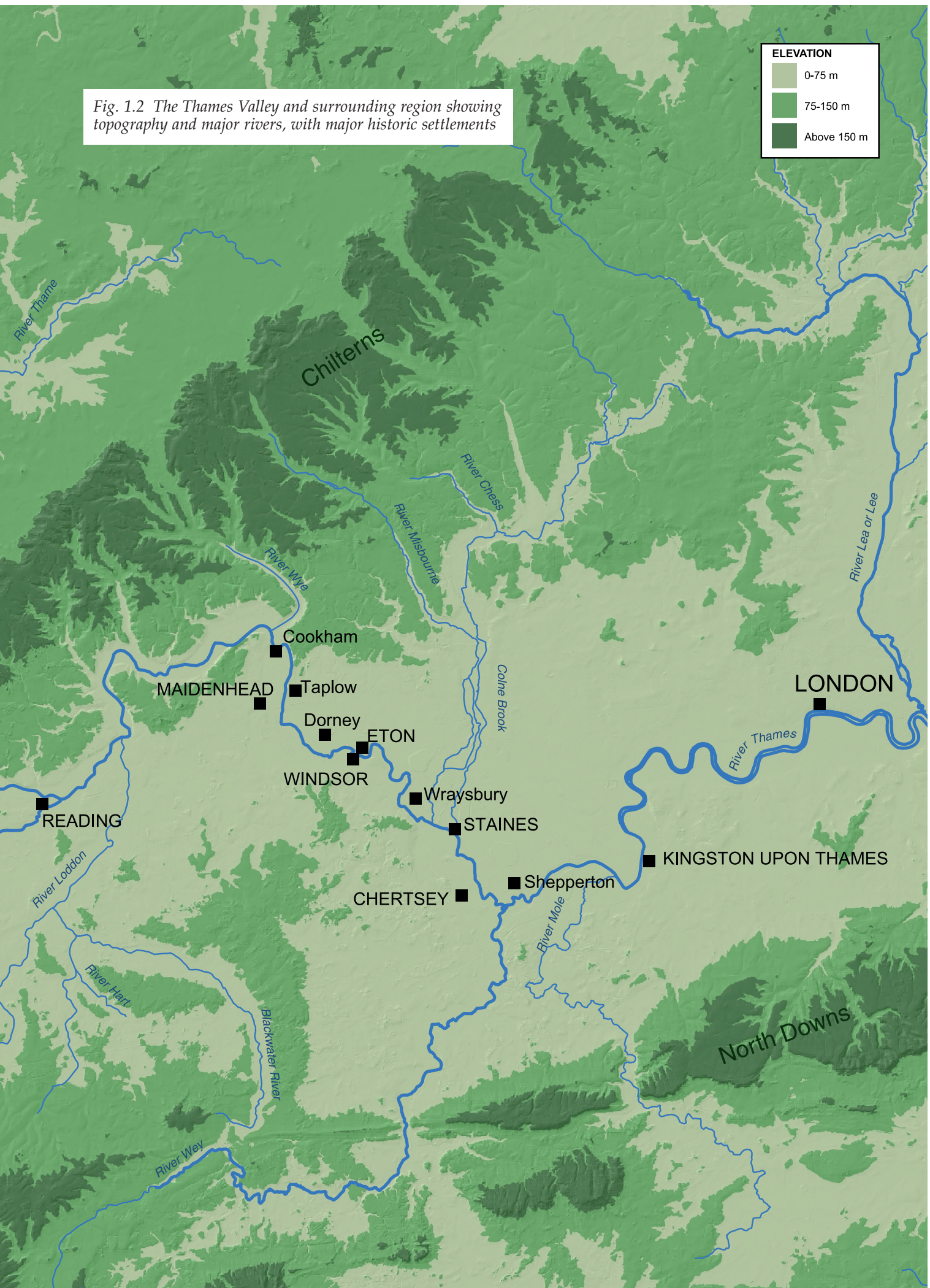
River Lambourn

River Pang

0 20 km

Fig. 1.2 The Thames Valley and surrounding region showing topography and major rivers, with major historic settlements

ELEVATION	
0-75 m	Lightest green
75-150 m	Medium green
Above 150 m	Darkest green



**UPPER THAMES TERRACE DEPOSITS**

- ALLUVIUM
- PEAT
- RIVER TERRACE DEPOSITS
- NORTHMOOR MEMBER
- SUMMERTOWN-RADLEY MEMBER
- WOLVERCOTE MEMBER
- HANBOROUGH MEMBER
- RISSINGTON MEMBER
- SHERBORNE MEMBER
- DAYLESFORD MEMBER
- FREELAND MEMBER
- WESTLAND GREEN MEMBER

**MIDDLE THAMES TERRACE DEPOSITS**

- ALLUVIUM
- PEAT
- BRICKEARTH
- LANGLEY SILT MEMBER
- ENFIELD SILT MEMBER
- RIVER TERRACE DEPOSITS
- SHEPPERTON MEMBER
- KEMPTON PARK GRAVEL MEMBER
- TAPLOW GRAVEL MEMBER
- LYNCH HILL GRAVEL MEMBER
- FINSBURY GRAVEL
- BOYN HILL GRAVEL MEMBER
- BLACK PARK GRAVEL MEMBER
- WINTER HILL MEMBER
- GERRARDS CROSS GRAVEL MEMBER
- BEACONSFIELD MEMBER
- CHORLEYWOOD GRAVEL MEMBER
- SATWELL GRAVEL MEMBER
- WESTLAND GREEN MEMBER
- KESGRAVE FORMATION

**TRIBUTARIES OF THE MIDDLE THAMES**

- DOLLIS HILL GRAVEL
- WOODFORD GRAVEL
- STANMORE GRAVEL
- SURREY HILL GRAVEL
- CAESAR'S CAMP GRAVEL
- BEENHAM GRANGE GRAVEL
- THATCHAM MEMBER
- SILCHESTER MEMBER
- BEENHAM STOCKS GRAVEL
- BUCKLEBURY MEMBER
- COLD ASH MEMBER
- SAND AND GRAVEL OF UNCERTAIN AGE AND ORIGIN

0  10 KM

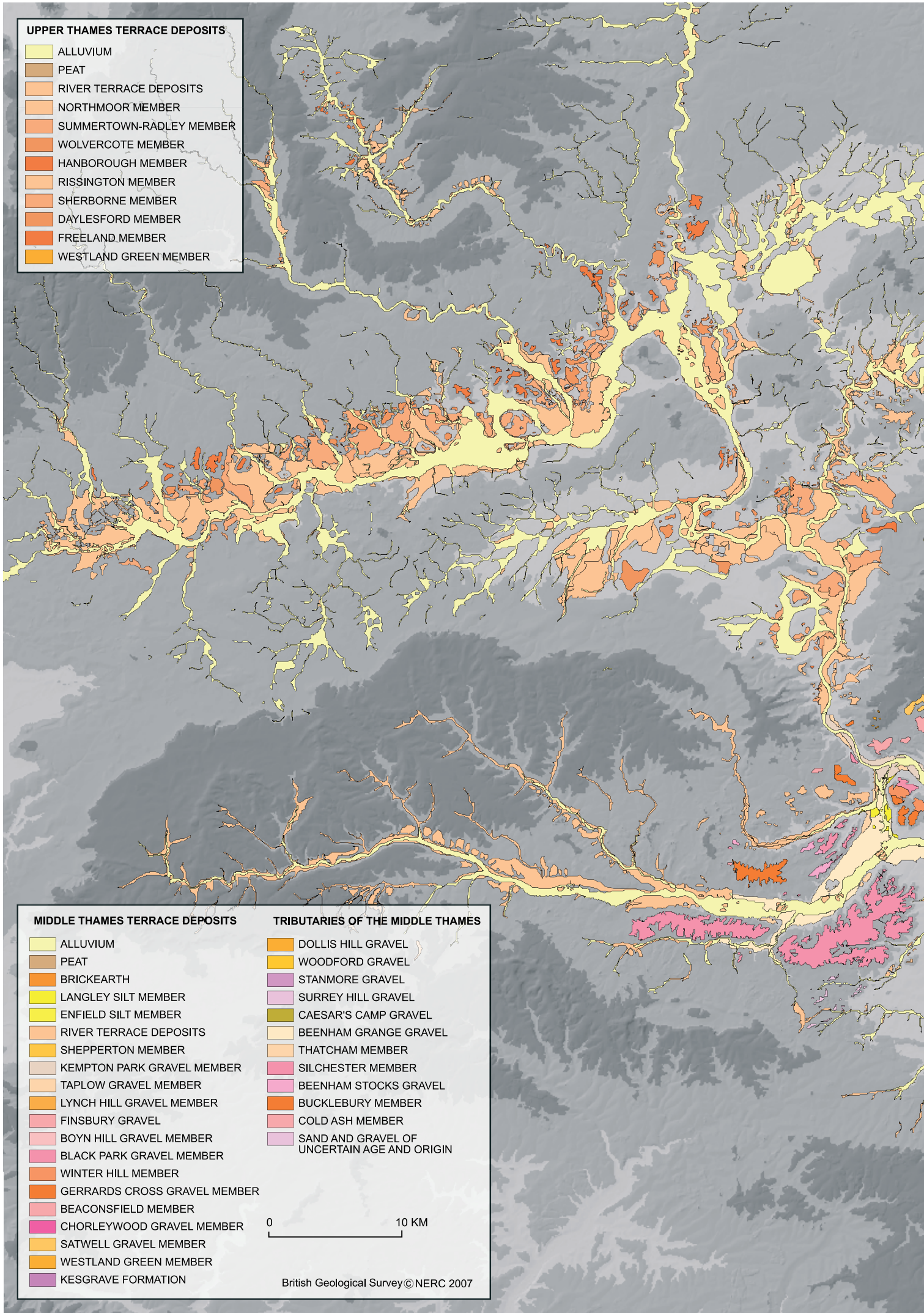
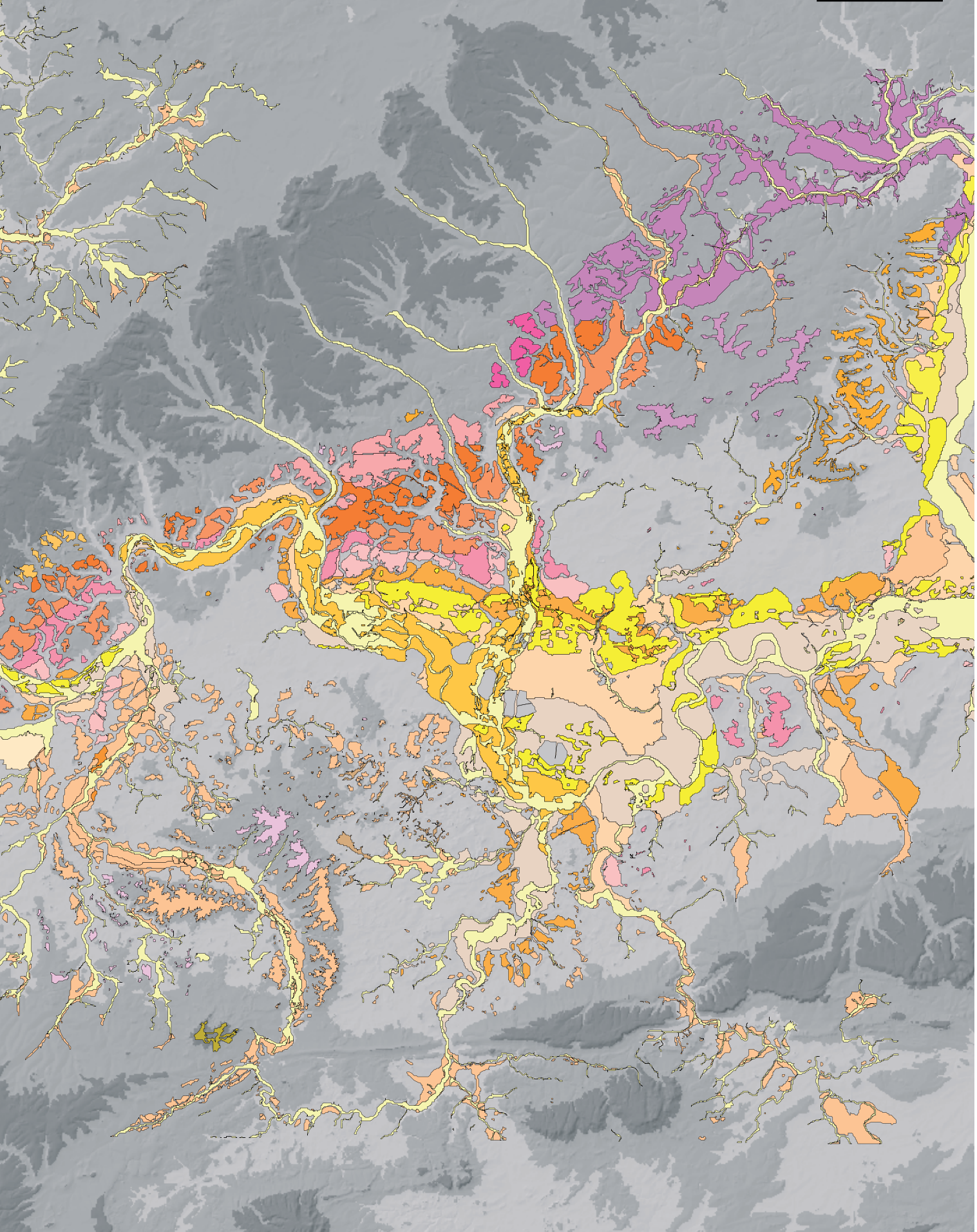
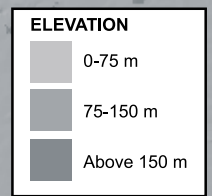


Fig. 1.3 The terraces of the Upper and Middle Thames



many have significant gravel terraces where archaeological remains are abundant. Our geographical range extends further away from the immediate study area in a few cases in order to provide a meaningful context for certain types of evidence from the valley itself. However, systematic review of evidence from the upper reaches of the tributaries and the areas of higher ground at the edges of the valley has been beyond the scope of the present volume. Despite this, the wealth of evidence from the gravels and the fact that there is often little comparative material from immediately adjacent areas, while problematic, has enabled us to make a virtue of necessity. The dynamic character of archaeological study of the gravels gives this somewhat artificially restricted area a validity and coherence of its own, although we accept that integration of this evidence with contiguous and different landscapes is essential for a wider understanding of the archaeology of the greater Thames Valley region.

#### **The geological character of the study area (Fig. 1.3)**

The geology and formation of the Thames Valley is considered in detail in a further volume in this series. This section provides a briefer overview as background for the present volume.

The Upper Thames drains part of a belt of Jurassic and Cretaceous sedimentary rocks which strikes from Dorset north-east to the Wash and dips to the south-east. The Jurassic limestone hills of the Cotswolds comprise the watershed to the north-west. The Thames runs eastwards across a vale of Oxford Clay, collecting various tributaries from the Cotswolds such as the Coln, Windrush and Evenlode, before turning to a south-easterly direction at Oxford towards the chalk escarpment of the Berkshire Downs and Chilterns. The Cherwell, which drains the eastern end of the Cotswolds, joins the Thames at Oxford. The Thames cuts its way through the Chalk at the Goring Gap to enter the London Basin, a syncline filled with Tertiary sedimentary rocks of which London Clay is the most important along the Middle Thames. (The term Middle Thames applies to the length of the river between the Goring Gap and Teddington Lock.) At Reading, the Thames is joined by the Kennet, which runs eastwards along Tertiary deposits at the foot of the dip slope of the Berkshire Downs. The dip slope of the Chilterns, drained into the Thames by the Colne, rises to the north-west of the London Basin. The Chalk of the Weald anticline, including the North Downs, rises to the south of the London Basin. The Wey and Mole enter the Thames from the south. The Thames itself progresses eastwards from Reading across the London Basin to London and the estuary with first a northern loop, towards its confluence with the Wye, and then a southern loop, towards its confluences with the Wey and Mole.

The modern Thames has been substantially channelized by dredging, embanking and the insertion of locks and weirs for navigation. It has also experienced much natural silting which has tended to simplify a complex system of linked multiple channels (an anastomosing system) to a single channel. However, along part of its length, for example at Oxford, a complex channel system survives. The Thames has a gradient of less than 1 m per km and a non-flashy flow.

#### ***The gravel terraces***

Both the Upper and Middle Thames are flanked by extensive gravel terraces, in places more than 3 km wide. The prerequisites for the formation of such terraces are a supply of hard rock upstream, or on the interfluences, and an area of very soft bedrock which the river crosses with a shallow gradient. Terrace aggradation requires a period of high discharge of water and surface instability. The river forms a braided system of many minor migrating channels which work over the soft bedrock, depositing gravel on their beds and creating a local gravel floodplain. Cold climatic episodes both facilitate high seasonal discharge from the melting of winter snow and provide the erosive processes that result in fractured rock reaching the stream system. Periods of down-cutting can also occur, with the removal of much of a gravel terrace and its redeposition from a new base level. Sometimes this results in a series of terraces stepping down the valley side.

In the case of the Upper Thames Valley, the hard rock was provided by the limestone of the Cotswolds while the area of terrace aggradation was over the Oxford (and Gault) Clay vale. This has given terraces with a major component of oolitic limestone. In the Middle Thames Valley, the main source of hard rock in the younger terraces was flint from the Chalk of the Chilterns and Downs with lesser quantities coming from some of the Tertiary beds, and the area of aggradation was over the London Clay. The sequence of terraces can be seen at its greatest at the Chilterns, where the Thames has cut down over *c* 160 m since the late Pliocene/early Pleistocene (about 1.9 million years) and left 14 terraces (although authorities still differ on the precise number). However, many of the older terrace deposits are now of very limited extent.

Gravel terraces are absent in the Goring Gap. As a result, correlation between the terraces of the Upper and Middle Thames has proved problematic, and the terrace systems of the two regions are usually considered separately. Within the Upper Thames region, the Evenlode Valley displays a complex sequence of older terraces related to the earlier course of the river Thames. This is considered in detail in a further volume in this series. Elsewhere in the modern Upper Thames Valley there are broadly speaking four major gravel

terraces, which were deposited during the cold periods (glaciations, or 'Ice Ages') of the Pleistocene, the lowest and youngest being of the most recent (the Devensian) glaciation. There are major Pleistocene gravel terraces in the Middle Thames, the lowest and youngest likewise being Devensian. The terraces themselves range from 12 m to less than 1 m in thickness. The entire body of gravel that comprises the lowest terrace in both regions was traditionally given the name floodplain terrace. All the terraces represent former floodplains and only part of the floodplain terrace would ever have experienced flooding over the period of the past 11,600 years (known as the Holocene) since the end of the Devensian glaciation. In both the Upper and Middle Thames, part of the lowest terrace was reworked and lowered during the very Late Glacial (the end of Late Devensian Zone III, perhaps between 10,400 and 9600 cal BC) when channel flow was becoming established. This area tends to have a covering of fine alluvial overbank sediments deposited by the river when in flood, and the term floodplain (as opposed to floodplain terrace) will be restricted to this area.

The channels of the Thames seem to have been incised to their greatest extent at the start of the Holocene. Thereafter, the regime has been one of channel silting and simplification from multiple to single channel systems (Robinson 1992a, 47-8). There has been little Holocene channel migration. In the Upper Thames, pedological processes (the formation of soils) predominated over alluvial accretion on the floodplain during the Early and Middle Holocene (Robinson and Lambrick 1984). Any flooding was of limited extent. The present covering of up to 2 m of alluvial clay is the result of flooding and sedimentation over the past 2000 years. In contrast, at least some parts of the floodplain of the Middle Thames began to experience fine overbank alluvial sedimentation, implying flooding, in the early Holocene (Parker and Robinson 2003).

The correlation and nomenclature of the Thames gravel terraces remain topics of continued research and debate (Sumbler 1996, 110-12), and these issues are considered in greater detail in a forthcoming volume in the present series. For the purposes of the present volume, the major terraces of the study area will be referred to as the 1st or floodplain, 2nd, 3rd and 4th terraces. These terms should be understood as referring to the following deposits:

### *Soils and soil fertility*

The Upper and Middle Thames have entirely lowland catchments and arable agriculture now extends to the watersheds. The soils of the Upper Thames Basin are mostly calcareous or circumneutral and only in a few areas of acid soils and plateau gravels are there serious problems of soil fertility. The limestone of the Cotswolds gives soils that are easily worked but the soils are often shallow and brashy, sometimes with problems of steep slopes. The Oxford Clay is relatively intractable and suffers from impeded drainage but cultivation is possible and it is mostly ploughed. The light free-draining soils of the gravel terraces were originally stone-free argillic brown earths but limestone gravel has been incorporated into them from at least the Iron Age onwards by cultivation and this has countered tendencies towards acidification. The gravel terraces are well suited to agriculture and those parts which have survived gravel extraction are under the plough. As has already been mentioned, the alluvial clays of the floodplain were mostly deposited over the past 2000 years. They seal thin soils over gravel. The floodplain is still regularly inundated where there is no flood protection but modern drainage and river management have enabled their cultivation, mostly for grass leys.

The soils of the Middle Thames Basin tend to be more acidic and less fertile than those of the Upper Thames Basin. Although the Chalk gives rise to light calcareous soils, much of the dip slope of the Chilterns is covered with acidic clay-with-flints. Woodland is quite extensive on the clay-with-flints. Soils of the London Clay are more acidic than those of the Oxford Clay. Light acidic soils are present on some of the other Tertiary and also Cretaceous (Greensand) deposits in the region. The gravel terraces have light, free-draining soils which, because the gravel is flint, are often acidic. The floodplain has similar alluvial clay soils to the Upper Thames Valley. However, in the Lower Kennet Valley, there are extensive peat-filled backswamps beneath a thin layer of alluvial clay. Neither region has the chalky boulder clay which runs further north in Buckinghamshire because they were beyond the maximum extent of Pleistocene ice cover.

<i>Terrace</i>	<i>Upper Thames Valley</i>	<i>Middle Thames Valley</i>
1st or floodplain terrace	Northmoor gravel	Shepperton gravel
2nd terrace	Summertown-Radley gravel	Taplow gravel
3rd terrace	Wolvercote gravel	Lynch Hill gravel
4th terrace	Hanborough gravel	Boyn Hill gravel

## THE FIRST MILLENNIUM AD

### A chronological overview

The first millennium AD was a period of tangible and very significant social, political and economic changes. Their effects were of course felt very widely but the Thames Valley region produces evidence of central importance for the understanding of many of them.

Many of the features which characterise what archaeologists define as the late Iron Age appeared in south-east England as early as the 2nd century BC. The speed with which they spread is not always clear, and was probably variable, but one of the most obvious archaeological developments, the adoption of new ceramic styles traditionally labelled 'Belgic', may not have occurred in the Upper Thames Valley, at least, until the early part of the 1st century AD (see further below, Chapter 3). In this sense the beginning of the first millennium can be seen as broadly marking major changes in the archaeological record, certainly in the Upper Thames. In the late Iron Age we seem to see for the first time the appearance of coherent polities with approximately identifiable territories and in some cases, because we emerge here into recorded history, known names. The Thames Valley is a very important area for the interaction of several of these units at the end of the Iron Age. The Roman Conquest in AD 43 interrupted this process of development, and the region had become an integral part of the province of Britannia by the end of the 1st century AD at the latest. The Thames was probably in places a boundary between the territories of several tribal units although the extent to which these had distinct identities is uncertain. For whatever reason, however, substantial Roman settlements ('small towns') on the river were very few in number. Political development within the Roman period saw the late Roman diocesan capital established at one end of the valley at London and one of the subordinate provincial capitals probably at the other end of the valley, at Cirencester, at about the end of the 3rd century.

The archaeological correlates of these political developments are extensive rural settlements of the 1st and early 2nd centuries, many of which, in the Upper Thames at least, ceased to be occupied roughly in the period AD 120-140. Many of the settlements which were newly established in the 2nd century then continued into the later Roman period, but close dating of their development is difficult. Generally a distinction can be drawn between middle and late Roman periods. The latter, from the mid 3rd century onwards, is characterised in rural contexts by some coin loss (usually for the first time in the Roman period) and the appearance of distinctive pottery styles, particularly the widespread Oxfordshire fine wares. Without further coin evidence, however, few rural pottery assemblages are sufficiently distinctive to allow much closer definition within the period after

AD 250, and subdivision of 4th century assemblages is only occasionally possible. Chronologically diagnostic metalwork is generally rare; the most common pieces, brooches, are almost entirely of 1st to mid 2nd century date, while other personal items, usually scarcer, are more often of broad late Roman date. There are no detected general chronological trends in crucial aspects such as lower status domestic building styles or types.

The period of centralised Roman rule had come to an end by around AD 410, at which point it is clear that field army units and some administrative elements had been either withdrawn or ejected, and the supply of imperial coin had ceased. Over the course of the 5th century there was a major transformation in the nature of settlement, culture and society associated with the arrival of Germanic migrants from the continent, the Anglo-Saxons. Vitally important evidence for the changing nature of power in this period comes from sites in the study area such as Dorchester-on-Thames. The timespan covered by the present volume has the effect of setting this most complex change of all, from Roman Britain to Anglo-Saxon England, in centre stage. The 5th century presents great challenges in terms of correlating limited archaeological evidence to controversial historical frameworks and there is no consensus even amongst the contributors to this volume. The divergent interpretations of this period are discussed further below, particularly in the final chapter.

In broad terms, the six centuries of Anglo-Saxon England are conventionally divided by archaeologists into three successive periods. The early Saxon period (*c* AD 450-650) is the age of migration and settlement, characterised in the archaeological record by the appearance and proliferation of new types of burials with distinctive grave good assemblages, new types of settlements and building forms, and a lifestyle of self-sufficient farming by people living within very localised communities. Documentary sources for the period are few and for the most part of dubious reliability. They characterise the period as one of hostility and conflict between British and Anglo-Saxons, with the former ultimately driven out of most of eastern and central England, although most archaeologists today would consider these accounts to be exaggerated. Towards the end of the period the first kings are evident in the written record and the process of conversion of the Anglo-Saxons to Christianity was underway. The Thames Valley, with some of the earliest datable Anglo-Saxon finds in the country, appears to have been one of the first and most extensive areas of Anglo-Saxon settlement. The mid Saxon period (*c* AD 650-850) sees the establishment of the church amongst the Anglo-Saxons, and the emergence of a number of competing kingdoms. An increasingly elaborate social hierarchy deriving from the growing influence of the church and from royal kinship and favour is reflected in the appearance of recognisable royal and high-status



residences and the first monastic communities. The expansion of trade in the 7th and 8th centuries is associated with the appearance of Anglo-Saxon coinage, imported goods, and the establishment of specialised places of manufacturing and trade. Towards the end of the period there was a significant downturn in economic activity and the country came under increasingly menacing and damaging attack by Norwegian and Danish Vikings. The character of the study area changes in the mid Saxon period from a focal point of settlement to a border region disputed by the kingdom of Mercia to the north and the kingdom of Wessex to the south. Surrey proved to be a key contested area in the history of power relations between Wessex, Mercia and the smaller kingdoms of the south and east and produces important physical evidence of this in the form of linear earthworks, of a character that mirrors very closely the linear features associated with late Iron Age power politics on the eve of the Roman conquest (such as the South Oxfordshire Grim's Ditch). Despite the background political conflict, royal and monastic centres are evident in the Thames Valley, and recent work at Yarnton has provided fundamentally important information about the evolution of individual estate centres and farming practices. The late Saxon period (c 850-1066) begins with the Viking wars, which eliminated all but one of the mid Saxon kingdoms, and culminated in the settlement of Danes in much of eastern and north-eastern England. The surviving Anglo-Saxon rulers of the kingdom of Wessex, starting with Alfred the Great, led the ultimately successful process of resistance and reconquest, to emerge as kings of all England in the 10th century. The late Saxon period sees the establishment of towns, the revival of economic activity and trade, and the elaboration of highly effective systems of national and local government. In the late 10th and early 11th century the country once again came under Viking attack, culminating in the accession of the Dane Cnut to the throne of England in 1016. Documentary sources increase considerably in both extent and reliability for this period, and at its very end Domesday Book provides a unique insight into levels of population, settlement and economic activity. A series of key defended centres, some of which were to grow into towns, were developed along the Thames during the late 9th or early 10th century, at Cricklade, Oxford, Wallingford, and Sashes (Cookham). With the establishment of a single kingdom and national systems of administration, the Thames became a significant border between both units of civil government and the dioceses of the church. Its central position, and perhaps the growth and increasing influence of London, gave the study area an enhanced importance at this time, reflected in the increasingly frequent presence of the king and leading noblemen and churchmen in the area. In the study area, as elsewhere, the proliferation of small estates and local lords may be associated with the intensifica-

tion of arable farming, the development of the open field system and the growth of nucleated villages, which emerge as the characteristic components of the manorial system of the medieval period.

The rhythms of everyday life and the agricultural cycle need not, in principle, have been affected by the political developments reviewed above, but the reality was different. The Roman conquest imposed a political structure beyond that of the local or regional power base. How far this was reflected in economic terms is much debated, but the requirement for individuals to pay their taxes ultimately to a central authority must have had a bearing on agricultural production. What we do see is evidence for intensification and also for specialisation of production, reflected for example in the exercise of choice in selection of cereal types, and the exploitation of hay meadows. Increased deposition of alluvium by flooding suggests intensification of ploughing but the chronology of this is not always clear.

Significant evidence for the reorganisation of landholding in the Upper Thames in the early 2nd century AD may be linked to both political and economic aspects of these changes, though we must be cautious about the application of 19th- and 20th-century concepts of maximisation of profit from agricultural estates in the Roman period. Differences in the character of rural settlement are observable in the Upper Thames in particular – notably between areas of ‘peasant type’ settlement and those with at least some villas – though there is still a marked contrast with ‘villa dominated’ settlement zones, such as in the Cotswolds. The picture is less clear in the Middle Thames, however, as is that of the evidence for rural settlement in the early to middle Saxon periods. It is uncertain if the known distribution of settlement at this time is significant or reflects the sometimes patchy nature of archaeological work. Understanding of rural settlement in the later Saxon period is still poorly informed by archaeological evidence, although particularly important information on stages predating the development of nucleated villages comes from Yarnton in the 8th-9th centuries. Increasingly, however, the evidence can be complemented by documentary sources at this time. Although this is a study of the archaeological record of the Thames Valley any account of the first millennium AD relies on at least a modicum of correlation of historical and archaeological sources. The two cannot often be closely linked since they address different types of questions; nevertheless there are periodic points of contact between them and the bare bones of a political/military narrative can be fleshed out with the archaeological evidence that tells us how people lived. Alternatively, hints of social and economic trends in the documentary sources can sometimes assist in the interpretation of trends principally detectable in the archaeological record. The significance of individual pieces of both archaeological and historical evidence can be debated, but integra-

tion of appropriate historical evidence is vitally important for rounding out archaeological data in a number of key areas.

#### **THE NATURE OF THE EVIDENCE** (Figs 1.4, 1.5)

This study draws on a wide variety of types of archaeological evidence, ranging for example from poorly recorded observations made by antiquarians in the 19th century (and sometimes earlier) to the most recent stable isotope analyses of excavated human remains, and from objects dredged from the river to plans of substantial tracts of landscape recorded in advance of mineral extraction. Aerial photographs, geophysical survey and surface finds collection data all play an important part. More recent work tends to dominate the present volume for a variety of reasons. This is partly because of its scale, which often allows us to see settlements and other features in a much wider context than was commonly the case before, say, the 1960s. Moreover, vitally important economic and environmental evidence in the form of plant and animal remains was rarely (and never systematically) collected before that time. This reflects the fact that many of the questions that archaeologists ask have changed fundamentally within the last generation. Current interests in landscape development and settlement form and economy (amongst others), best addressed by extensive fieldwork and widespread systematic sampling of deposits, would seem very strange even to archaeologists of the period between the two world wars. While recent work dominates this account, many old discoveries and excavation reports shed useful light on the archaeology of the region and have been incorporated as appropriate (the development of archaeological study of the region is discussed briefly below).

The overall quantity of information is vast and it is not possible within the scope of this volume to present gazetteers of the evidence. A number of key sites which contribute extensively to understanding of a wide range of aspects have been selected for special treatment as 'Features'. Located at various points throughout the volume, these include a summary description of the most important aspects of the key sites, together with illustrations. The many early and middle Saxon cemeteries discovered in the region have also been summarised in a table presented as an appendix. The great majority of the sites listed in this appendix were catalogued by Tania Dickinson during the course of her doctoral research (1976).

The basis of this study is published evidence, but we have drawn extensively on unpublished data, draft excavation reports and to a lesser extent on the so-called 'grey' literature, reports with limited distribution held by the various local authority Sites and Monuments Records that cover the region (or Historic Environment Records as they are increasingly called). Detailed examination of SMR records falls outside the scope of this survey, but use has

been made of data held by English Heritage's National Archaeological Record (Swindon). Correlation of the archaeological record with selected historical sources has been important for the late Saxon period, but not for earlier periods. This and the mid Saxon period are the least well-endowed in terms of archaeological evidence; such evidence is often presented in greater detail than that for earlier periods, detailed description of which would produce a greatly overburdened narrative.

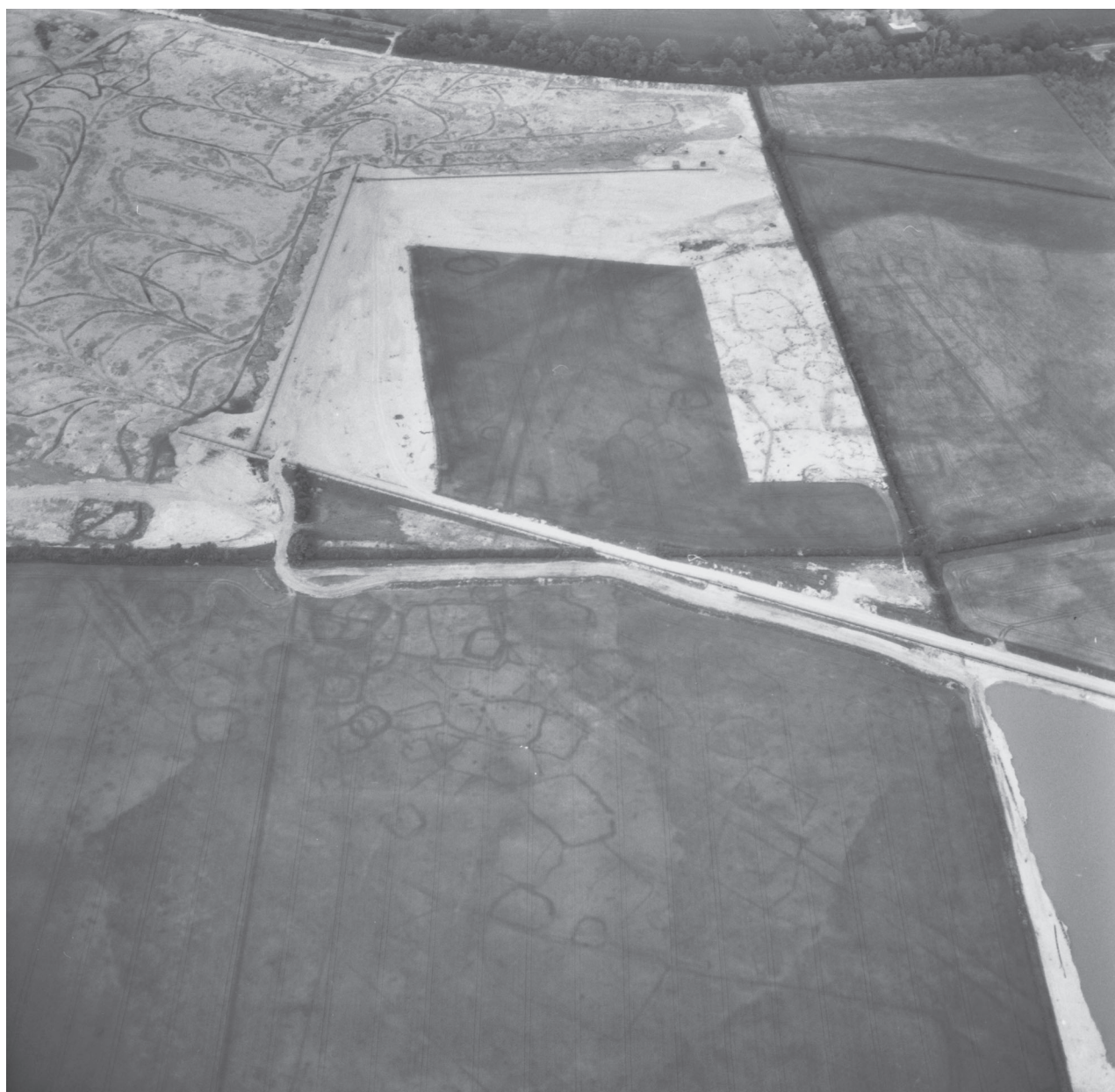
The vast majority of the data synthesised here derive directly from archaeological sites situated on the gravels of the Thames Valley. The soils on the gravels are particularly suitable for the production of cropmarks (Fig. 1.4), allowing sites to be located from the air, so that much evidence for ancient settlement and other landuse can be gathered even without intrusive work. Even here, however, there can be variation as some of the Middle Thames gravels are obscured by brickearth, and flying restrictions and modern development have limited opportunities for aerial reconnaissance to a greater extent than in the Upper Thames. Overall, however, the highest quality information usually comes from excavation, which allows much more detailed understanding of the chronology, sequence of development and character of sites, whether first identified from the air or by other means. Some excavations of this type on the gravels have occurred in the context of housing and other developments, and the recent work at Heathrow Airport for the development of Terminal 5 is exceptional in scale. Nevertheless, the most significant investigations, in terms both of size and of the importance of their results, have generally taken place in association with programmes of mineral extraction. The scale of much recent and contemporary gravel extraction is such that, with adequate resourcing, archaeologists can recover evidence for substantial tracts of landscape, usually multi-period in character, allowing the evolution of settlement patterns and the relationships of individual settlements to their wider setting to be understood (Fig. 1.5).

There has thus been a huge amount of archaeological endeavour devoted to the gravel soils of the Thames and other valleys and some have argued that this has resulted in an unbalanced picture of regional archaeologies. The existence of imbalance is accepted here. We are aware that for many aspects of past societies the picture revealed by the archaeology of the Thames gravels may not be representative of that of adjoining areas. We have taken some account of this, but have focused principally on the fact that the gravels are areas where disproportionately large bodies of evidence have been accumulated and that this evidence merits consideration in its own terms. In the future it may be appropriate for a measure of positive discrimination to be applied in favour of the archaeology of other topographies and geologies. In the meantime pressure on the archaeological resource contained within the gravels shows no sign of significant

reduction. The obligation on all to recover and record this resource, and to understand and present the evidence both to archaeological and wider communities, remains unchanged. Ongoing work continues to show that the nature of the archaeological sites on the gravels is far from predictable, even in relatively well-understood periods such as the Roman.

Preservation of archaeological features and other materials is variable on the Thames Valley gravels. The broad difference in the character of the gravels themselves, between relatively calcareous limestone-derived gravels in the Upper Thames and more acidic flint gravels of the Middle Thames, has been referred to above. This has a bearing on the survival

of certain types of archaeological material, most particularly human and animal bone. The topography of the gravel terraces and their favoured status for arable agriculture has resulted in considerable erosion of some sites through continual ploughing. This has taken place over extended periods at least from medieval times onwards (and even earlier in some cases, with discernible evidence for Roman ploughing of prehistoric deposits and monuments). Some sites are therefore quite severely truncated by the time they are examined archaeologically, although it can be argued that recovery of the broad patterns of landscape organisation is always worthwhile even in these circumstances. Other sites are better



*Fig. 1.4 Cropmarks at Thornhill Farm, Fairford, Glos., 2 June 1990. The cropmarks of Iron Age and Roman enclosures and a Roman trackway are visible in the foreground*



*Fig. 1.5 A typical gravels landscape under excavation: Horcott Pit, near Fairford, Glos., looking south. Excavations underway in July 2006, with Anglo-Saxon sunken huts towards the north of the site and a Roman cemetery towards the south*

preserved, and in the case of sites or features sealed under alluvial soils (and therefore protected from the effects of agriculture) such preservation can be very good indeed. Such sequences of alluvial sediments occur on the floodplain, sealing non-alluvial palaeosols and sometimes with interstratified archaeological deposits, while colluvial ('hill-wash') sediments derived from past cultivation have accumulated on terrace edges in a few localities and can also mask and protect archaeological deposits.

Carbonised plant remains are usually present on settlement sites and the soils are often well-suited to flotation processes for their recovery. Bone preservation in the Upper Thames Valley is often satisfactory, even if the soil itself is not calcareous, because the incorporation of limestone gravel into deposits buffers rainwater leaching. However, under the more acidic conditions on the terraces of the Middle Thames, bones survive less well. Shells of land and freshwater molluscs rarely survive on gravel terrace sites in the Upper Thames Valley except where there are locally calcareous conditions. However, the waters of the Thames are calcareous. Palaeochannel sediments are usually basic and contain abundant shells. Overbank alluviation is sometimes decalcified but where this has not occurred, shells survive in it. The robust nature of marine shell means that it is usually capable of survival in those deposits in which bone is preserved. Land and freshwater mollusc shells are normally absent from Middle Thames sites except in palaeochannels and on the floodplain. Pollen is not preserved in non-waterlogged sediments on the gravels of the Upper Thames but some non-waterlogged sites on the terraces of the Middle Thames have deposits which are sufficiently acidic for the preservation of pollen although the results must be treated with caution.

Probably the most important aspect of the environmental archaeology of the river gravels, as opposed to any other substrate, is that they can present the opportunity to study relatively dry, fertile, well-settled agricultural landscapes from waterlogged remains. The nature of the formation of the gravel terraces means that although the surface of the terrace is usually free-draining, if there is underlying clay there is often a perched water table. In the Upper and Middle Thames Valley, especially on the lower terraces but also on some higher terraces, the water table can be very close to the surface. Where this occurs, settlement sites often have ditches that extend below the water table and have many waterholes or wells. The organic sediments preserved at the bottom of these features contain pollen, waterlogged macroscopic plant remains including seeds, leaves, twigs and wood, and insect remains. Palaeochannels containing waterlogged remains are frequently present on the floodplain. In addition to biological material, waterlogged features can contain significant artefacts, for example of wood and leather that would not survive ordinarily. The various

categories of biological remains that can be found in non-waterlogged deposits are also preserved in the waterlogged sediment although the decay of organic material sometimes causes local acidification which results in the loss of shells.

Thus a very wide range of evidence is available from the Thames gravels and floodplain for the past environment. While the regions have neither the degree of organic survival of a wetland landscape with developing peat surfaces, nor the extent of preservation of mollusc shells and palaeosols to be found in some Chalk landscapes, the many lines of evidence give a more balanced picture than from some other regions. It should be noted, however, that systematic modern reduction of ground water levels, whether in the context of mineral extraction or in other circumstances, has a major adverse effect on surviving waterlogged deposits; identification and subsequent protection or privileged examination of these is therefore extremely important.

In addition to issues of preservation there are other limitations on the evidence which require brief consideration. The quantity of information available is variable in different parts of the valley, and it is not always clear whether this reflects the distribution of gravel quarrying and other development activity, or whether it reflects genuine variability in settlement density in the late Iron Age, Roman and Anglo-Saxon periods. There are clearly some stretches of the river, for example between Wallingford and Reading, and downstream from Reading to Maidenhead, where mineral extraction and other development has been less intensive than elsewhere, and it is perhaps no coincidence that knowledge of these areas tends more to be restricted to individual sites than encompassing wider areas of landscape. It is inevitable, however, that archaeological work will have concentrated in areas of large scale development impact, whatever their cause, and that imbalances in data gathering will result. Nevertheless, from 1990 onwards, with the advent of nation-wide planning policy guidance (PPG16) requiring appropriate archaeological work in advance of development, coverage of threatened areas has at least become more consistent, even if in some cases this will have involved no more than low level sampling with evaluation trenches. If such work does not lead on to larger scale excavation its results, which may include low level but still locally significant evidence, are sometimes difficult to locate in the 'grey' literature (see above).

## THE RESEARCH BACKGROUND (Fig. 1.6)

Comment on the antiquity of Thames Valley sites goes back at least as far as Leland's observations about Dorchester recorded in the 1540s (for this and other antiquarian research on Roman Oxfordshire see Henig and Booth 2000, 202-221). There is thereafter a long tradition of antiquarian reporting and speculation on (for the most part) chance finds, but in the 18th and early 19th century the valley

received less antiquarian attention than comparatively 'richer' areas such as the Roman villas of the Cotswolds, although the excavation of mosaic pavements at Basildon in 1839 is in this tradition. Nevertheless from the mid 19th century onwards there were important discoveries, even if their significance was not always understood and the process of excavation and recording was rudimentary and very destructive by today's standards. A remarkable exception was the work of Stephen Stone in a gravel pit at Standlake, where open area excavations of prehistoric features and Anglo-Saxon graves were recorded in plan and with models (Brown 1973b). Stone also recognised cropmarks, and used to observe them from the back of his horse; he plotted cropmarks at Northfield Farm, near to Long Wittenham. The specific archaeological importance of the gravels was more generally recognised later, but pioneering work on aerial archaeology, principally based on the gravels, was undertaken in the Upper Thames, particularly by Major Allen in the 1930s (eg Allen 1984; for the wider context, Whimster 1992). The excavation of selected sites on the basis of the aerial evidence followed almost at once, although the specific link between aerial evidence and excavation in advance of quarrying generally came a little later. Meanwhile, the archaeological response to the impact of gravel extraction was limited, but the work of E T Leeds on the Saxon settlement in the quarries of Sutton Courtenay in the 1920s was particularly significant. Leeds was based at the Ashmolean Museum, one of very few institutions with staff able to become involved in the archae-

ology of the region (Reading Museum was also important in this respect in the post-war period). Even so this work was performed on a small scale and mostly opportunistic. In the Upper Thames, at least, it was not until the 1930s, and particularly the period after the Second World War, that the number (but not necessarily the scale) of interventions increased, a leading role being taken by the Oxford University Archaeological Society.

Wartime construction and post-war redevelopment led to a substantial increase in the scale of aggregate extraction. The first formal acknowledgement at a national level that this presented a serious archaeological problem came in an 'inoffensive little pamphlet' (Cunliffe 1992, ix) entitled *Gravel Sand and History*, published by the Council for British Archaeology in 1949. The existence of the threat was, however, implicit rather than explicit in this document. Nevertheless the resources to address it lagged behind. Responses in the field in the 1950s and 60s (typified by the work of Margaret Jones at Roughground Farm from 1957 to 1965 before she moved to the huge gravel landscape of Mucking in the Thames estuary) had a certain heroic quality. By the mid 1970s, a period which saw the first appearance of archaeological 'units', the scale of response was generally larger and there was a corresponding need to systematise knowledge of the fundamentally important aerial evidence. In the Thames Valley this led to a series of surveys, first of the Oxfordshire evidence (Benson and Miles 1974a), followed by that for the Middle Thames (Gates 1975) and finally the Upper Thames of Gloucestershire and Wiltshire (Leech 1977). At the



Fig. 1.6 Antiquarian investigations: a later 5th-century cremation urn found at Upper West Field, Shepperton, Surrey during gravel digging in 1812

same time the specific issue of gravel extraction in north-west Surrey was considered by Longley (1976). Large scale and relatively systematic examination of gravel sites dates from this time, but there was no correspondingly systematic framework within which it could take place, as different planning authorities placed varying importance on the need for archaeological examination of landscapes in advance of gravel extraction. Even after the introduction of new planning guidance (PPG16) in 1990 there was no automatic requirement for archaeological work in this context, because many quarries were working within the long-term framework of local mineral plans developed years previously with no archaeological conditions attached. Despite these difficulties, however, there have been outstanding examples of co-operation between mineral companies and the archaeological community, many of the fruits of which are discussed here.

The volume of data deriving from excavation and other work on the Thames gravels was one of the factors behind the appearance of a number of local or regional archaeological summaries, particularly from the 1980s onwards. Harding's (1972) review of the Iron Age of the Upper Thames, however, was based on work that just preceded the explosion of excavation-derived data, though it included important summaries of older gravel quarry sites such as Cassington. Equally, the new information made little or no contribution to the reviews of Roman and Anglo-Saxon Gloucestershire by McWhirr (1981) and Heighway (1987) respectively, though it was used by Miles (1984). *The Archaeology of the Oxford Region* (Briggs *et al.* 1986) provided an important summary, however, as did *The Archaeology of Surrey to 1540* (Bird and Bird 1987), while the *East Berkshire Archaeological Survey* (Ford 1987) comprised a more basic presentation of data for this area. Meanwhile the Roman archaeology of the Chilterns had been reviewed on successive occasions and at varying levels by Branigan (1967; 1973; 1985), but the Thames gravels were marginal to these surveys and contributed relatively little to them. The Chilterns-based emphasis of much Buckinghamshire research has again been emphasised by more recent surveys (eg papers in Holgate 1995). The Thames gravels were similarly marginal to the concerns of most (but not all) of the contributors to a recent survey of Roman and early Saxon Wiltshire (Ellis 2001).

Recent years have also seen full length period-based surveys of Roman and Anglo-Saxon Oxfordshire (Henig and Booth 2000; Blair 1994) and of Roman Surrey (Bird 2004a) which set the contribution of the archaeology of the gravels in a wider (but still local) context. A further volume has updated discussion of the archaeology of Surrey in various periods (Cotton *et al.* 2004), and a series of brief period-based reviews of Oxfordshire has also appeared (Salway 1999; Hamerow 1999; Blair 2000). Meanwhile, a wider consideration of the archaeology of the gravels (Fulford and Nichols 1992)

contained important discussions including ones devoted solely (Lambrick 1992) or in part (Robinson 1992a and b) to the Thames Valley. Overall, therefore, there is a considerable tradition of period- and (usually) county-based synthesis, though Berkshire has been less well served than other parts of the area. The county-based approach has been adopted largely for reasons of historical convenience rather than because these units had any intrinsic significance for the period covered. The emphasis of all these surveys was for the most part on summarising existing data. While some address questions of research priorities these have not been considered systematically, and the Thames Valley falls outside current English Heritage frameworks for regional research agendas, as it lies across several of the different regions defined for that purpose. The present volume is also primarily one of synthesis, but the final conclusions do identify some aspects of the archaeology of the first millennium considered to be particularly deserving of consideration in future work.

A point which is at best implicit in a number of the earlier reviews mentioned here is the importance of understanding the changing nature and scale not only of archaeological field practice but also of analysis and interpretation. In contrast with prehistory, Roman (and by extension Romano-British) archaeology has long been considered impervious to broad developments in archaeological thinking. Recently, however, Roman archaeology has shown much more awareness of aspects of its own past (eg Hingley 2000), as well as a willingness to engage in a wide range of new approaches derived from outside the discipline (as seen for example in the volumes of papers from successive Theoretical Roman Archaeology Conferences (TRAC)). The subject still lacks an overall 'history' such as has been produced for medieval archaeology (Gerrard 2003). More than ever, Romano-British archaeology is dynamic and contested, and offers a range of approaches to what was until recently the dominant paradigm of Romanisation as the framework for understanding the workings of Roman Britain (see below Chapter 4). The historiography of the Anglo-Saxon period involves the fusion of the very different disciplines of archaeology and history, which in some approaches have been very closely linked even at the beginning of the period when the value of the written sources is most debatable. This has arguably contributed to the particular problems of understanding the crucial developments of the middle of the first millennium. While archaeological syntheses automatically reflect various aspects of contemporary approaches and often reject older views, this has become a much more conscious process in recent times. This trend has prompted the attempts made at various points in the present volume to explain some of the interpretative concepts and frameworks used, rather than assume that they are universally understood, accepted and unproblematic.

