Iron Age and Romano-British
Settlements and Landscapes of Salisbury Plain

By M.G. Fulford, A.B. Powell, R. Entwistle and F. Raymond

Iron Age and Romano-British Settlements and Landscapes of Salisbury Plain

By
M.G. Fulford, A.B. Powell, R. Entwistle and F. Raymond

Iron Age and Romano-British Settlements and Landscapes of Salisbury Plain

By
M.G. Fulford, A.B. Powell, R. Entwistle and F. Raymond

with contributions from
Denise Allen, Michael J. Allen, S.J. Allen, Phil Andrews, George Boon†,
Kate M. Clark, Rachel Every, Kevin Hayward, Jamie Kaminski,
Stephanie Knight, Matt Leivers, Jacqueline I. McKinley, Adrienne Powell,
David Richards†, R.H. Seager Smith, Dale Serjeantson, D.N. Sim,
Pippa Smith, and Chris J. Stevens

Wessex Archaeology Report 20
Wessex Archaeology and University of Reading

Published 2006 by Wessex Archaeology Ltd
Portway House, Old Sarum Park, Salisbury, SP4 6EB

http://www.wessexarch.co.uk/

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

ISBN 1–874350–42–6
ISBN 978–1–874350–42–2

Produced by Julie Gardiner
Cover design by Karen Nichols
Printed by Cromwell Press Ltd, Trowbridge, England

The publication was funded by English Heritage

Front cover: Aerial view of the Romano-British settlement at Chisenbury Warren, looking north-west (December 1998). *Photograph* © Crown copyright. NMR 18219/15

Back cover: Copper alloy dish from Coombe Down South (SP 009) and brooches from Chisenbury Warren (SP 072. *Photographs*: Elaine Wakefield

Wessex Archaeology Ltd is a registered charity No. 287786

Contents

List of Figures

List of Plates

List of Tables

Acknowledgements

The project on the Iron Age and Romano-British Settlements and Landscapes of Salisbury Plain took place over three years from April 1992 to March 1995, based at the University of Reading. It was commissioned by English Heritage, whose grant supported the two field investigators, Roy Entwistle and Frances Raymond, with the remainder of the resources provided by the University of Reading through its Department of Archaeology. We gratefully acknowledge the help of Amanda Chadburn at English Heritage and her former colleagues, Dai Morgan Evans, Rob Perrin, and Geoffrey Wainwright, Chief Archaeologist, for their support and guidance throughout the field project.

The programme of surface collection and excavation in the Military Estate was made possible by the then Commandant, Colonel Jeffrey Rooke, and the staff of Salisbury Plain Training Area Headquarters. We also received assistance and encouragement from the staff of the Public Services Agency, Durrington. In particular we owe a singular debt of gratitude to the then Defence Land Agent, John Loch, for his enthusiastic assistance. Throughout the project we benefited from the invaluable support of Roy Canham, then the Wiltshire County Archaeologist, and of the staff of the then Royal Commission on the Historical Monuments of England based at Salisbury and Swindon, particularly Graham Brown, Mark Corney, David Field, and David McOmish. Although only a small part of our research took place in Hampshire, we also warmly acknowledge our thanks to Michael Hughes and David Hopkins, successive County Archaeologists for Hampshire.

At Reading we are grateful to Margaret Matthews and to former colleagues and students, particularly Steve Allen, Elaine Ingleson, Steve Rippon, and Jenny Stevens for their help in the field and, in the case of Margaret and Steve Allen, with illustration of the finds. We also acknowledge the help of the specialists commissioned from Reading who have contributed as authors or co-authors to this report. Additionally we would like to thank Isobel Wilde for her contribution to the reporting of the pottery and to Janet Firth for her work on the human remains.

Following a period of almost 10 years when it was not possible to make further progress with the completion of the report owing to the departure from Reading of Roy Entwistle and Frances Raymond and my secondment to the senior management of the University, English Heritage provided further grant-aid to Wessex Archaeology to assist in the completion and publication of the report. From English Heritage, Barney Sloane and Sarah Jennings have provided supportive oversight of this second stage of work, while at Wessex Archaeology, it is a great pleasure to acknowledge the work of Karen Walker, and, particularly, Andrew Powell, the manager of the project, who has contributed very substantively to the content and shape of this report, as well as Liz James who prepared new and amended illustrations, and the further specialists commissioned by Wessex Archaeology who have contributed as authors and co-authors to this report.

Dave Webb and Nick Bradford produced animal bone plates (archive) and Margaret Brooks undertook the reconstruction of the cattle skulls where possible. Stephanie Knight would like to express her thanks to Claire Ingrem of the Centre for Applied Archaeological Analyses, University of Southampton, for finding archive material, and to the original authors for their comments and assistance. Mike Allen is particularly grateful to Chris Stevens for discussion of his thoughts on the cultivated landscape, and to the late John Evans for encouraging us to attempt to define arable versus pasture and plough versus ard land-use from the environmental evidence.

I most warmly thank Roy Entwistle and Frances Raymond whose commitment and dedication throughout the field stage has done so much to shape the final outcome presented here. My colleague, Richard Bradley, Director of the predecessor, Linear Ditches Project, has been a great help throughout and his perceptive comments have helped shape the prehistoric sections of this report. Finally I am grateful to the Leverhulme Trust which awarded me a Major Research Fellowship. This enabled me to step down from the office of Pro-Vice-Chancellor in 2004 and devote time to work with Andrew Powell to complete this report.

Michael Fulford
University of Reading
September 2005

Abstract

The Salisbury Plain Military Training Area (SPTA) extends over some 37,000 hectares of the chalklands of Salisbury Plain, an area approximately the same size as the Isle of Wight. Since the Defence Estate has not been subjected to intensive arable cultivation since the end of the 19th century when land began to be purchased for training purposes, it now contains some of the best preserved archaeological landscapes and monuments in southern Britain. Following concern about the possible impact of more intensive as well as different types of use of the estate following the withdrawal of armed forces from Germany at the end of the Cold War, projects were established by English Heritage and the then Royal Commission on the Historical Monuments of England to survey and assess the archaeology. The project reported here was set up in 1992 with the particular aim of assessing the evidence for Iron Age and Romano-British settlement and land-use on the Plain, by locating sites, establishing chronologies, particularly for enclosures and field systems, and characterising settlement. In the case of the latter it was planned to incorporate limited area-excavation of two settlements: Coombe Down and Chisenbury Warren.

Within a study area of 186 square km, broadly between the valleys of the Avon and the Bourne in the eastern part of the SPTA, two sample areas were defined for extensive and intensive surface collection. While the western sample area between the eastern side of the Avon valley and the prominent hillfort of Sidbury Camp amounted to some 18 square km, the eastern sample area included about 16 square km. Altogether some 1305 ha were linewalked, about 7% of the entire study area. More intensive, gridded surveys were then undertaken of individual sites. Altogether some 18 new settlement sites were discovered of which 13 were Romano-British, three were predominantly Iron Age, and two produced evidence of Middle–Late Bronze Age occupation. Apart from limited test pitting in pasture which relocated a settlement at Beach's Barn, Fittleton, small-scale evaluative trenching was reserved for the investigation of field systems and enclosures of probable Iron Age date. Small-scale excavation was undertaken at eight of the latter, accompanied by targeted environmental sampling for carbonised and molluscan remains and animal bone.

The results of the fieldwork showed an increase in enclosure through to the later Iron Age when there is evidence for settlement abandonment followed by a further development of unenclosed settlement at the end of the Iron Age and the beginning of the Roman period, including the emergence of nucleated villages such as Chisenbury Warren, which then continued through the Romano-British period. The evidence from the lynchet excavations confirms the Romano-British period as being one of the most intensive periods of arable cultivation of the Higher Plain. Complementing the descriptions of the surface collections and the excavations are full analyses of both material culture from the 1st millennium BC and the Romano-British period and the environmental data, particularly that from faunal and charred plant remains, charcoal, and molluscan analysis.

Against the wider background of the chalkland across southern Britain, a concluding chapter reviews the contribution of the project to our understanding of the settlement, settlement hierarchy, field systems and agricultural economy of the Iron Age and Romano-British period, including the development, status and context of the distinctive, nucleated Romano-British villages of the Higher Plain.

Résumé

La zone de manoeuvres militaires de la plaine de Salisbury (SPTA) s'étend sur quelques 37000 hectares des terres crayeuses de la plaine de Salisbury, une surface à peu près équivalente à celle de l'île de Wight. Comme le domaine de la défense n'a plus fait l'objet de cultures labourées intensives depuis la fin du 19ième siècle, date à laquelle ces terres ont commencé à être achetées en vue d'y entrainer des troupes, elles détiennent maintenant certains des paysages et des monuments archéologiques les mieux préservés du sud de la Grande-Bretagne. Suite à des inquiétudes quant à l'impact que pourrait avoir une utilisation plus intensive et de types différents du domaine, conséquence du retrait des forces armées basées en Allemagne à la fin de la guerre froide, des mesures furent prises par English Heritage et ce qui était alors la Commission Royale pour les Monuments Historiques d'Angleterre pour en prospecter et en évaluer l'archéologie. Le programme qui fait l'objet de ce rapport fut mis en place en 1992 avec pour but spécifique d'évaluer les témoignages d'occupation et d'utilisation des terres de la plaine, à l'âge du fer et à la période romano-britannique, en localisant les sites, établissant des chronologies, en particulier des enclos et des systèmes de champs et en caractérisant les occupations. Dans ce dernier cas, on avait prévu d'inclure des excavations limitées de certaines zones de deux occupations Coombe Down et Chisenbury Warren.

Dans les limites d'une zone étudiée de 186 km carrés, en gros entre les vallées de l'Avon et de la Bourne, dans la partie est de la zone de manoeuvres, on a déterminé deux zones échantillons pour un ramassage en surface extensif et intensif. Tandis que la zone échantillon à l'ouest entre le versant est de la vallée de l'Avon et la forteresse proéminente du camp de Sidbury couvrait environ 18 km carrés, la zone échantillon à l'est s'étendait sur environ 16 km carrés. En total, quelques 1305 ha furent arpentés en ligne, environ 7% de la totalité de la surface concernée. Des examens plus intensifs, avec quadrillage furent ensuite effectués sur des sites individuels. En tout, on découvrit quelques 18 nouveaux sites d'occupation, dont 13 étaient romano-britanniques, trois étaient principalement de l'âge du fer et deu révélèrent des témoignages d'occupation datant de l'âge du bronze, moyen à final. Mis à part des explorations tests limitées dans des pâtures qui permirent de resituer une occupation à Beach's Barn, Fittleton, les tranchées d'évaluation de petite échelle furent réservées à l'étude des systèmes de champs et des enclos susceptibles de dater de l'âge du fer. Sur huit de ces derniers, on entreprit des fouilles sur une petite échelle, accompagnées de collecte d'échantillons environnementaux ciblés de restes calcinés, de mollusques et d'ossements animaux.

Les résultats des études sur le terrain montrèrent que le nombre de terrains clotûrés avait augmenté jusqu'à l'âge du fer tardif, période pour laquelle existent des témoignages d'abandons d'occupations suivis d'un nouveau développement des occupations ouvertes à la fin de l'âge du fer et au début de la période romaine, y compris l'émergence de villages nucléés tels que Chisenbury Warren, qui subsistèrent ensuite pendant la période romano-britannique. Les vestiges provenant des fouilles de bordures de champs confirment que la période romano-britannique fut l'une des périodes les plus intensives de cultures labourées sur la haute plaine. Venant compléter les descriptions des collectes en surface et des excavations, on trouve des analyses complètes à la fois de la culture matérielle du 1er millénaire av.J.-C. et de la période romano-britannique et des données environnementales, en particulier celles provenant des restes de faune, des plantes calcinées, du charbon de bois et de l'analyse des mollusques.

Dans le cadre plus vaste des terres crayeuses qui s'étendent sur le sud de la Grande Bretagne, un chapitre de conclusion réexamine ce que ce programme a apporté à notre compréhension des occupations, de la hiérarchie de ces occupations, des systèmes de champs et de l'économie agricole de l'âge du fer et de la période romano-britannique, y compris le développement, le statut et le contexte des villages nucléés romano-britanniques originaux.trouvés sur la haute plaine.

Traduction: Annie Pritchard

Zusammenfassung

Der Truppenübungsplatz Salisbury Plain Training Area (SPTA) erstreckt sich über rund 37000 Hektar auf der Kalkformation der Ebene von Salisbury und ist damit in etwa so groß wie die Insel Wight. Da auf dem Gelände des Truppenübungsplatzes seit Ende des 19. Jahrhunderts, als mit dem Landerwerb für das Übungsgelände begonnen wurde, keine intensive Landswirtschaft mehr betrieben wurde, finden sich dort heutzutage einige der am besten erhaltenen archäologischen Landschaften und Denkmäler Südenglands. Aufgrund von Bedenken hinsichtlich der möglichen Auswirkungen intensiverer und auch anders gearteter Nutzungen des Geländes nach dem Rückzug von Truppenteilen aus Deutschland am Ende des „Kalten Krieges", wurden von English Heritage und der damaligen Royal Commission on the Historical Monuments of England verschiedene Projekte zur Erfassung und Untersuchung der archäologischen Denkmäler initiiert. Das im folgenden vorzustellenden Projekt wurde 1992 mit der spezifischen Zielsetzung begonnen, die Überreste eisenzeitlicher und romano-britischer Besiedlung und Landnutzung auf der Ebene zu untersuchen, und zwar durch die Erfassung von Fundstellen, der Ermittlung der zeitlichen Abfolge, besonders von Einfriedungen und Feldsystemen, sowie der Charakterisierung der Besiedlung. Letzteres schloß zusätzlich begrenzte Flächenausgrabungen zweier Siedlungen ein: Coombe Down und Chisenbury Warren.

Innerhalb eines 186 km^2 großen Forschungsgebiets, zwischen den Tälern der Flüsse Avon und Bourne im östlichen Teil der SPTA gelegen, wurden zwei Untersuchungsbereiche für extensive und intensive Feldbegehungen ausgewählt. Der westliche Untersuchungsbereich zwischen der östlichen Seite des Avon-Tals und dem markanten Hillfort von Sidbury Camp war ungefähr 18 km^2 groß, das östliche Untersuchungsgebiet rund 16 km^2. Insgesamt wurden lineare Feldbegehungen auf ca. 1305 ha durchgeführt, ungefähr 7% des gesamten Forschungsgebiets. Einzelne Fundstellen wurden dann zusätzlich innerhalb eines Vermessungsnetzes feinbegangen. Im ganzen sind auf diese Weise 18 neue Siedlungsstellen entdeckt worden, davon 13 romano-britische, drei überwiegend eisenzeitliche und zwei mit Belegen für mittel- bis spätbronzezeitliche Besiedlung. Abgesehen von begrenzten Testgruben in Weideland, die zur Wiederauffindung einer Siedlung bei Beach's Barn, Fittleton, führten, blieben kleinmaßstäbige Suchschnitte auf die Untersuchung von vermutlich eisenzeitlichen Feldsystemen und Einfriedungen beschränkt. Kleinere Ausgrabungen fanden auf acht Einfriedungen statt, begleitet von gezielter Probenentnahme verkohlter Reste, von Mollusken und Tierknochen.

Die Ergebnisse der Felduntersuchungen belegen eine Zunahme der Flurparzellierung bis in die spätere Eisenzeit, dann gibt es Hinweise auf Siedlungsabbruch, gefolgt vom erneuten Aufkommen unparzellierter Besiedlung am Ende der Eisenzeit und dem Beginn der Römischen Kaiserzeit, als auch Haufendörfer wie Chisenburry Warren entstehen, die dann durch die gesamte Römische Kaiserzeit bestand haben. Nach Ausweis der Ausgrabungen der Feldraine war die Römische Kaiserzeit eine der intensivsten Perioden ackerbaulicher Nutzung in den höheren Lagen der Ebene. Die Beschreibungen der Feldbegehungen und der Ausgrabungen werden ergänzt durch vollständige Auswertungen der materiellen Kultur des 1. Jahrtausends v. Chr. und der Römischen Kaiserzeit wie auch der paläoökologischen Daten, vor allem der Analysen von Tierknochen, verkohlten Pflanzenresten, Holzkohle und Mollusken.

Vor dem weiteren Hintergrund der Kalklandschaften Südenglands behandelt ein abschließendes Kapitel den Beitrag des Projekts zu unserem Verständnis von Besiedlung, Besiedlungshierarchie, Feldsystemen und Landwirtschaft der Eisenzeit und der Römischen Kaiserzeit unter Einschluß von Entwicklung, Status und Umfeld der für die höheren Lagen der Ebene typischen romano-britischen Haufendörfer.

Übersetzung: Jörn Schuster

Preface

The use of large tracts of landscape for military training through the 20th and into the present century, such as Salisbury Plain where the Military Training Area extends over 93,000 acres (37,637 ha), has meant that very significant areas have not been subjected to the systematic cultivation which has destroyed so many archaeological monuments of all ages across England, which previously survived as earthworks. Instead there has been destruction of a different kind and intensity instigated by the changing methodologies of military training, all of which impact, or potentially impact on the archaeology, and then become historical monuments in their own right (McOmish *et al.* 2002, 137–47). The majority of ancient earthworks are fragile and, in a military context, highly susceptible to generalised damage from tanks and other wheeled vehicles, tree-planting, etc, never mind more obviously intrusive activities such as the construction of roads, anti-tank ranges, the digging of trench systems, splinter-proof shelters, and so on (Evans 1994). While, at ground level, it may not be obvious to an untrained observer what many categories of earthwork represent, aerial perspectives and systematic planning of extant remains at ground level show clearly the nature and potential of the remains.

After some 20 years of survey work, the publication of *The Field Archaeology of the Salisbury Plain Training Area* represented a milestone in our understanding of the nature and value of the archaeological monuments of the Military Training Area (McOmish *et al*. 2002). Above all it enhances the basis for the long-term conservation and management of the surviving archaeology. At the same time the compilation of the field record based mainly on the plotting and interpretation of aerial photography and the surveying at ground level of earthworks can also be seen as the development of an infinite series of hypotheses about the archaeology. It can therefore be convincingly argued that only further field research will reveal the full value and potential for future research of the initial field record.

In the context of the developing survey by the former RCHM(E) of the field archaeology and apprehensions and uncertainties about the impact of different and, potentially more intensive, training policies following the end of the Cold War and the withdrawal of forces from Germany, English Heritage commissioned the Linear Ditches Project at the University of Reading in 1988, subsequently published as *Prehistoric Land Divisions of Salisbury Plain* (Bradley *et al.* 1994). This led to their commissioning, in 1992, in partnership with the University of Reading, a further project on the later prehistoric and Romano-British archaeology, the Iron Age and Roman Settlements and Landscapes of the Military Training Area. It is this research which is reported here.

The project was fortunate to enjoy the continued involvement of Roy Entwistle and Frances Raymond, whose passionate commitment to, and knowledge and experience of, the archaeology of Salisbury Plain, and of the practice of field archaeology within a very active military training area, working with the Commandant of the Training Area and the Defence Land Agent, were utterly invaluable. The combination of the extraordinary richness of the results of the field investigations and my secondment to the senior management of my University for a decade has resulted in an inevitable, but regrettable delay in the publication of the project.

Michael Fulford
University of Reading
September 2005

Deposition of Archive
It is intended that the project finds and associated archive will be deposited permanently with Devizes Museum when storage facilities become available. In the meantime, the archive and finds will be stored with the University of Reading's Museum and Collection Service.

1. Introduction

Iron Age and Romano-British Landscapes of Salisbury Plain

Research on the Iron Age and Romano-British landscapes of Salisbury Plain was prompted by several factors, of which the principal was concern over their long-term conservation and management within the Salisbury Plain Military Training Area (SPTA). These issues were summarised by Dai Margan Evans in his Preface to *Prehistoric Land Divisions on Salisbury Plain* (Bradley *et al.* 1994, 1–2) which presented the results of an earlier project on the Wessex prehistoric linear ditches carried out between 1988 and 1991. As with the prehistoric monuments, the nature of the military use of the training area was such that very large areas of the chalk uplands had not been subjected to modern cultivation and the earthworks of both extensive field systems and settlements of prehistoric and Romano-British date survived in excellent condition. Unlike other tracts of chalk downland which had been subjected to intensive and extensive arable cultivation since the 1940s, the SPTA had been the focus of different types of army training, generally non-intensive in terms of large areas, but selectively and cumulatively destructive. Only the fringes of the SPTA had been subjected to regimes of cultivation comparable to those elsewhere (McOmish *et al.* 2002, 1–5, 11–13, 137–48).

The quality of preservation and the potential importance of the Romano-British settlements were drawn to the attention of a national audience in the 1960s by Collin Bowen and Peter Fowler of the then Royal Commission on the Historical Monuments (England) (RCHM(E)), when the Council for British Archaeology held what proved to be a very influential conference on rural settlement archaeology in Britain (Thomas 1966). This saw the first publication of the earthwork plan of the nucleated settlement of Chisenbury Warren (nr Enford, Wiltshire), reinstating the concept of the 'village' (Bowen and Fowler 1966, 50–3, figs 4–5). With increasing focus on the Military Training Area in the 1980s and 1990s arising from the publication of the *Nugent Report* in 1973, the RCHM(E) embarked on a comprehensive survey of the surviving earthworks of all periods of the SPTA. From the later prehistoric period, and in addition to the linear ditches and field systems, the recording of a significant number of large, medium-sized and small enclosures complemented that of the better known hillforts such as Battlesbury, Casterley Camp, and Sidbury (McOmish *et al.* 2002, 51–86). For the Romano-British period the focus of attention was on the nucleated settlements, whether compact or linear in plan, such as Compton Down, Knook Down West, Knook Down East, Chapperton Down, Chisenbury Warren, etc, and their relationships with the landscape. The exacting standards of earthwork survey recorded these settlements in great detail, such that the village street(s), the remains of individual properties, village 'greens', ponds, and trackways into the surrounding fields could all be traced (*ibid.*, 87–108).

What was particularly attractive about this record was its integrity, giving in certain areas an impression of completeness, not only in respect of the plans of individual settlements and field systems, but also in their relation to each other. Presence, absence and extent of the classes of evidence in question, particularly in those areas of the high plain which had not been subjected to much cultivation since the Romano-British period or to devastating forms of military training, allowed the possibility of understanding an entire landscape, rather than just individual and dislocated components. A good example of this is represented by the three, remarkably well preserved, Romano-British settlements and associated field systems, etc on the northern edge of the Higher Plain in the contiguous parishes of Charlton, Rushall, Upavon, and West Chisenbury. These were not touched by 19th century cultivation which elsewhere reached onto the Higher Plain (*ibid.*, 11–13, fig. 1.10; also fig. 4.21). The significance of this becomes all too apparent when comparisons are made with other areas of the southern British chalklands which have recently been subjected to survey, including earthworks, by the former RCHM(E), particularly in Dorset (RCHM(E) 1970a; 1970b; 1975). There earthwork survival was much more limited and the vast majority of the evidence derived from aerial photography and the record of soil marks of settlements and field systems. The survival of the earthworks of the probable Romano-British settlement and field systems on Meriden Down, Winterbourne Houghton is exceptional in this county (RCHM(E) 1970b, 298 & facing fig.). Notwithstanding the quality of what has been documented, without further, extensive and complementary field-walking and surface collection combined with geophysical survey, we are still far from understanding what the recorded pattern of settlement in Dorset represents in terms of the Iron Age and Romano-British periods.

It is the special character of the preservation of the settlements and field systems of the chalk landscapes of the SPTA which single them out from other areas

of the chalk in southern Britain. In terms of overall settlement pattern, the chalk has, since the publication of the first edition of the OS Map of Roman Britain in 1928, been seen to be distinct in its support of Romano-British 'villages' but not 'villas'. Collingwood observed that settlement was 'dense in its central ganglion, the chalk plateau of Salisbury Plain; dense on the plateaux of Berkshire and Hampshire and on the chalk ridges that run from these centres into Kent, Sussex and Dorset' (Collingwood and Myres 1936, 175). Equally, and at the same time, it was perceived that 'In Romano-British times practically the whole of Salisbury Plain, Cranborne Chase and the Dorset uplands were under plough' (Crawford and Keiller 1928, 9). The apparent absence of villas led Collingwood to advance the idea that 'large tracts of country exclusively inhabited by peasants, like Cranborne Chase and Salisbury Plain' formed imperial estates run by the procurator or leased to *conductores* (Collingwood and Myres 1936, 224; *cf*. Frere 1999, 268–9). This notion was revisited by Hingley as part of a larger exploration of rural settlement in Roman Britain (1989). He wondered whether the distinction between non-villa and villa settlement was related to social organisation, a distinction between land held by individuals and that controlled by a community. At the same time, and noting that certain areas of non-villa settlement produced quantities of metalwork finds, he questioned whether the absence of villas in certain areas might have been as much a matter of 'social constraints on the display of wealth as of actual poverty.' (*ibid*., 157–61). Millett also has questioned the extent to which it might be possible to recognise an imperial estate without epigraphic or other documentary evidence. He further argued that 'the substantial tracts of countryside without known villas should be seen as the normal pattern of landscape variation, the consequence of a continuance of traditional landholding and building patterns; it is the presence rather than the absence of villas which demands explanation.' (1990, 120). In other respects recent surveys of rural settlement and landscape in Roman Britain have discussed more generally the evidence from the Plain and the southern chalklands in the context of the emergence of the 'village' and its relationship with the 'villa' in the wider, British or southern British context (eg, Dark and Dark 1997, 51–4, 95–6; Esmonde-Cleary 1989, 110–16; King 2004, 355–7; Millett 1990, 205–11).

In terms of material culture, too, through the Iron Age and into the early Romano-British period Salisbury Plain can be seen to be as a distinct, topographical entity, if not as a barrier to the distribution of certain material goods. This is most evident in the later Iron Age where the principal areas of circulation of, in particular, the distinctive, 'Dobunnic' and 'Durotrigan' coinages fade at the edge of the chalk escarpment of the Plain in, respectively, the Vale of Pewsey and the Wylye valley (Cunliffe 2005, figs 8.3, 8.10). Similarly 'Atrebatic' coinage and its predecessors do not circulate west of the Wiltshire Avon (*ibid*., fig. 7.16). The same pattern can be seen earlier with the distribution patterns of ceramics of Early and Middle Iron Age date (*ibid*., figs 5.4; 5.5). Even if this is partly a reflection of a lack of research, it is difficult to resist the general conclusion that Salisbury Plain can be perceived as a landscape around whose periphery a number of different and distinctive social groupings can be identified, particularly from the mid-1st millennium BC. With the emergence of an over-arching authority in the form of the *pax romana* of the Roman occupation of Britain, the possibilities for the settlement and exploitation of the Plain might be very different. The lack of a coherent structure among the groups settled on the Plain may, perhaps, explain Roman administrative arrangements. If the authority of the geographer, Ptolemy (II, 3, 13), is to be believed the Roman *civitas* of the Belgae, whose centre was at Winchester, stretched north-westwards across Wiltshire and the Plain to include *Aquae Calidae* (Bath). In this context, therefore, the issue of defining the relationship between Iron Age and Roman becomes particularly acute for a landscape such as Salisbury Plain.

Our understanding of the settlement and agricultural exploitation of chalk landscapes, such as Salisbury Plain, took a significant leap forward with the publication of the fruits of aerial photography (eg, Crawford and Keiller 1928). Prior to this, knowledge was largely founded on Pitt Rivers' excavations of individual settlements in Cranborne Chase which, at Rotherley and Woodcutts, provided the basis for the first characterisations of such settlements as 'villages' as opposed to 'villas' (Collingwood and Myres 1936, 209). Indeed, there has been very little excavation of chalkland nucleated settlements since the late 19th century. Research on the larger landscapes of the chalk with the systematic plotting of aerial photographic coverage and the ground survey of surviving earthworks fell to the Royal Commission from the 1960s. In the case of the SPTA this work was brought to a brilliant fruition with the publication of *The Field Archaeology of the Salisbury Plain Training Area* (McOmish *et al.* 2002), for which the research was still being undertaken during the duration of the project reported here, and which greatly informed its shape. The Royal Commission's resources did not allow for either systematic surface collection to complement the earthwork surveys, or for evaluative excavation, or, indeed, for extensive use of geophysical survey to complement the emerging earthwork plans of individual settlements and field systems. Given

their fragility, the emphasis was rightly on the recording of the standing earthworks.

The first, modern attempt to understand the settlement and exploitation of the chalk of southern Britain from later prehistory through to the early modern period was the detailed investigation of the two north Wiltshire parishes of Fyfield and West Overton undertaken between 1959 and 1998 (Fowler 2000). The principal field methodologies employed in this project were the metrical ground-survey of selected sites and areas coupled with aerial photographic cartography and small-scale excavation. These were used to address two principal questions: 'How, why and when did the landscape, particularly the landscape of the downs, evolve into its twentieth-century form?' and 'What types of economic activity were carried out in the study area and how were they distributed within it?' Among a subset of further questions was 'What was the chronology, extent and function of the 'Celtic' fields?' (*ibid.*, 30–1).

A further, very substantial attempt to understand later prehistoric and Romano-British settlement development and land-use on the chalk of southern Britain was that undertaken on the Berkshire Downs in the 1980s (The Maddle Farm Project; Gaffney and Tingle 1989). Here, and typical of the English chalk downland and thus contrasting with the SPTA, there had been intensive and extensive modern cultivation with subsequent loss of upstanding earthworks. The Project had four principal aims: the determination of differential functions of areas within settlement complexes; the determination of the nature of land use associated with contemporary settlements; the establishment and interpretation of any existing settlement hierarchy, including the definition of social/tenurial relationships; and the location of the contemporary (Iron Age/Romano-British) settlement distribution (*ibid.*, 5). It was later followed by a complementary survey of the adjoining clay lowlands of the Vale of the White Horse (Tingle 1991).

The objective of the Maddle Farm survey was to combine extensive surface collection of a landscape within a radius of 6 km of a known Romano-British 'villa' at Maddle Farm with intensive surface collections of the concentrations of ceramics and other materials representative of settlement within a radius of 2 km of the 'villa'. Fifty per cent of the arable in the area of the extensive survey was sampled by 500 metre-wide transects, while all the available arable of the core area was surveyed. Altogether some 48.25 square kilometres were sampled by surface collection. In addition, selective and small-scale excavation was undertaken to attempt to characterise the date and nature of two settlements, the villa at the heart of the survey and a nearby 'non-villa' settlement at Knighton Bushes. Complementary excavation was also undertaken of a field system (Ford *et al.* 1988). Geophysical survey was carried out on a very limited scale at the Knighton Bushes settlement.

Large-scale, surface collection surveys had been undertaken in other landscapes, most notably, on an heroic scale, in the 1980s, across almost 250,000 ha of the Fenland of Cambridgeshire, Lincolnshire, and Norfolk, and on a smaller scale in the south of England, but The Maddle Farm Project was the only one to concentrate on the chalk (*cf.* Hall and Coles 1994; Millett 1990, 184; Shennan 1981). Whereas the principal aim of these surveys was to enhance Sites and Monuments Records through the recovery of information about the location of individual sites, Maddle Farm differed both in the nature of the questions asked, particularly in the way survey could inform about the use of the 'off-site' landscape, and in the methodologies employed, particularly the use of sample excavation.

More recently, and only some 20–30 km to the east, a different approach has been taken to investigating the later prehistoric landscape of the north Hampshire chalk. Following the completion of the long-term programme of excavation of the Iron Age hillfort of Danebury, the Danebury Environs Programme was established in 1989 with one of its objectives being 'to forward our knowledge of the organisation and utilisation of the landscape in the first millennium BC' (Cunliffe 2000, 13–14). A series of area excavations were undertaken on a range of settlements and linear earthworks selected on the basis of both the earlier survey of the aerial photographic coverage of the area (Palmer 1984) and subsequent reconnaissance (Bewley 2000). Geophysical survey of the sites selected for excavation complemented the photographic transcriptions (Payne 2000). The focus was thus on activity which was associated with identifiable, crop-mark sites and more wide-ranging surface collection to test for settlement without crop-mark signature was not employed.

In terms of approaches to survey, then, this was the context for the surveys and excavations reported here. In terms of tried methodologies the principal approaches had relied on the transcription of aerial photography and surface collection. Neither geophysical survey nor evaluative, small-scale excavation had been deployed as a systematic tool of survey of extensive or intensive survey. Only in the case of the Danebury Environs Programme had there been a different approach. There a programme of extensive excavation of a limited number of settlements and earthworks had been planned on the basis of extensive aerial photographic survey to contextualise a major programme of excavation of a contemporary hillfort. The Salisbury Plain project commenced at the conclusion of the Linear Ditches project in the autumn of 1991 (Bradley *et al.* 1994).

The Salisbury Plain Project: Research Aims and Objectives

Context

The Salisbury Plain Project to investigate Iron Age and Romano-British settlement arose from two interconnected pressures. On the one hand the results of the Royal Commission's systematic survey work through the 1980s were revealing the extent and impressive quality of the surviving earthworks of field systems and Romano-British settlements, on the other, changes in military training practice on the Plain brought about by the ending of the Cold War and the loss of training areas in Germany were bringing new pressures on these landscapes. In particular the need to provide for greater use of the Plain for tracked vehicles posed a particular threat to fragile earthworks. Against this background of increasing military requirements of the training area, and in the context of an enormous growth in the extent of the recorded archaeology, a more focused management regime for the archaeology was needed. At the same time our understanding of that archaeology and its significance was severely limited.

The SPTA extends over some 39,000 hectares, stretching for some 38 km from the chalk escarpment above the Wylye valley in the west to the Bourne valley in the east, and 14 km south from the chalk escarpment overlooking the Vale of Pewsey in the north. Whereas the limits of the training area correspond well with major features in the natural topography to the north, west, and east, the southern boundary is arbitrary in terms of topography, cutting across the Plain and the valleys of the Till, Avon, and Bourne. Within this area as a whole almost no modern archaeological investigations of Iron Age and Romano-British settlement had taken place (McOmish *et al.* 2002, 13–18; *cf.* Bonney 1968; Cunliffe 1973; Cunnington 1930), but the detail with which individual settlements and their associated field systems could be understood in plan through earthwork survey raised fundamental questions about their character, chronology, and development over time.

In the context of these great gaps in our knowledge, a principal aim of the Project was to characterise the nature of the Iron Age settlement pattern, its hierarchy and relationship with the marginally better researched hillforts, and to trace its development through the Romano-British period to the early medieval period. In the case of the field systems, the aim was to define their associations with individual settlements and develop a chronology of their expansion and contraction. This would allow the possibility of developing an insight into the changing ratio of arable and pasture and the associated implications for intensification and social change. The Linear Ditches Project, for example, had brought into focus the extent of Romano-British cultivation of the field systems of the Higher Plain, and had identified stand-still phases in lynchet formation within that period (Bradley *et al.* 1994, 122–36). There was also the question of the relationships between settlements, particularly those of Romano-British date, on the Higher Plain and to settlement in the river valleys. A number of recent discoveries below the chalk escarpment in the Vale of Pewsey and in the Avon valley suggested the presence of Romano-British villas, raising the question of possible relationships between the nucleated settlements on the higher ground and the villas in the valleys below (*cf.* McOmish *et al.* 2002, 104–7).

Finally, when the long history of the agricultural exploitation of the Higher Plain is considered, the evidence from the Romano-British period and its immediate context in the later Iron Age for intensive settlement and cultivation stands out as quite remarkable. The survival of the earthworks themselves is testimony in itself to the lack of subsequent, intensive cultivation for which there is little evidence until the 18th/19th centuries (*ibid.*, 12–13, fig. 1.10). The thin and relatively dry soils of the Higher Plain are not best suited to cereal production without intensive manuring and, for cattle to survive, access to water is essential. It is difficult to imagine the pressures, whether of population numbers or of local estate regimes, which led to the level of exploitation to which the earthwork evidence so dramatically points. A limited, forensic investigation into the settlements and field systems of the Iron Age and Romano-British periods offered the prospect of developing a framework for a major research project to understand this phenomenon.

The Study Area

To address the questions of the transition from Iron Age to Romano-British, Romano-British to medieval, the origins of the nucleated settlements, the use of field systems and trackways, it was necessary to focus on a more limited study area within the larger, 800 square kilometre landscape of Salisbury Plain. In certain respects the choice of study area was influenced by observations made during the course of earlier fieldwork in the eastern part of the SPTA (Bradley *et al.* 1994). That research had increased our awareness of the complexity of the late prehistoric and Romano-British landscape, and at the same time it demonstrated the potential for recovering even the most transient forms of evidence. The conditions of preservation were such that we could realistically expect to answer detailed questions about the

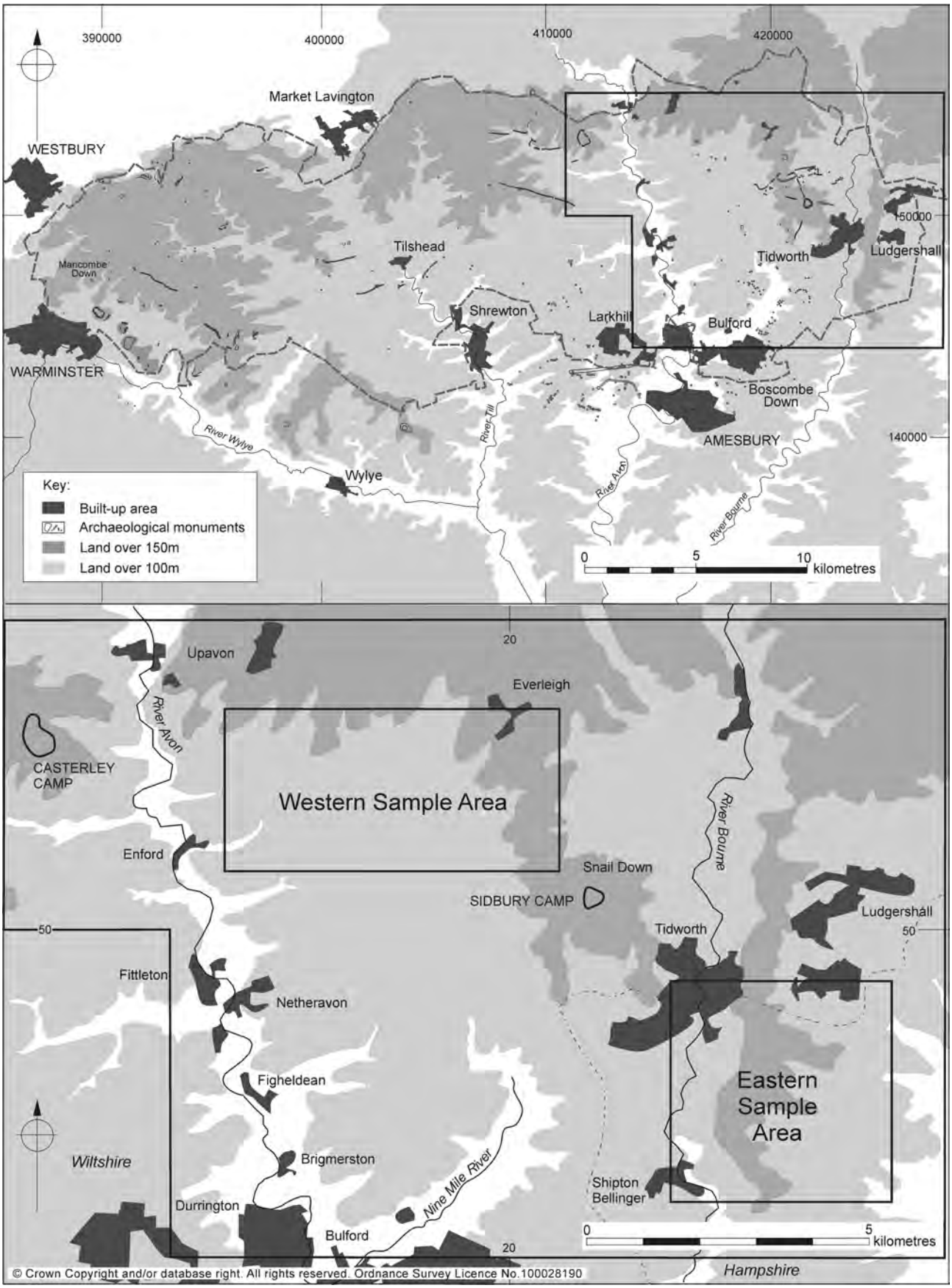

Figure 1.1 The Study Area and Sample Areas

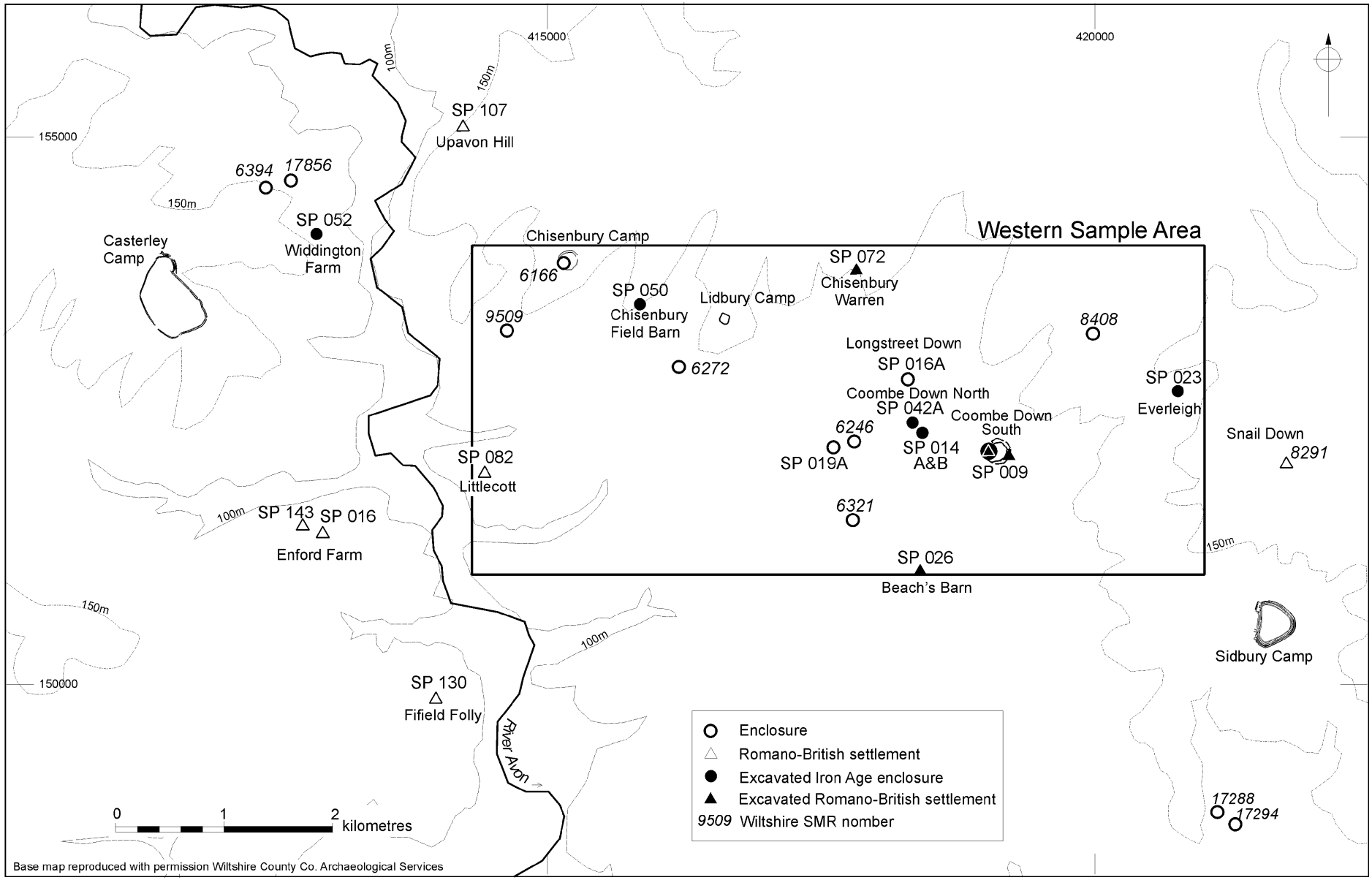

Figure 1.2 The Western Sample Area

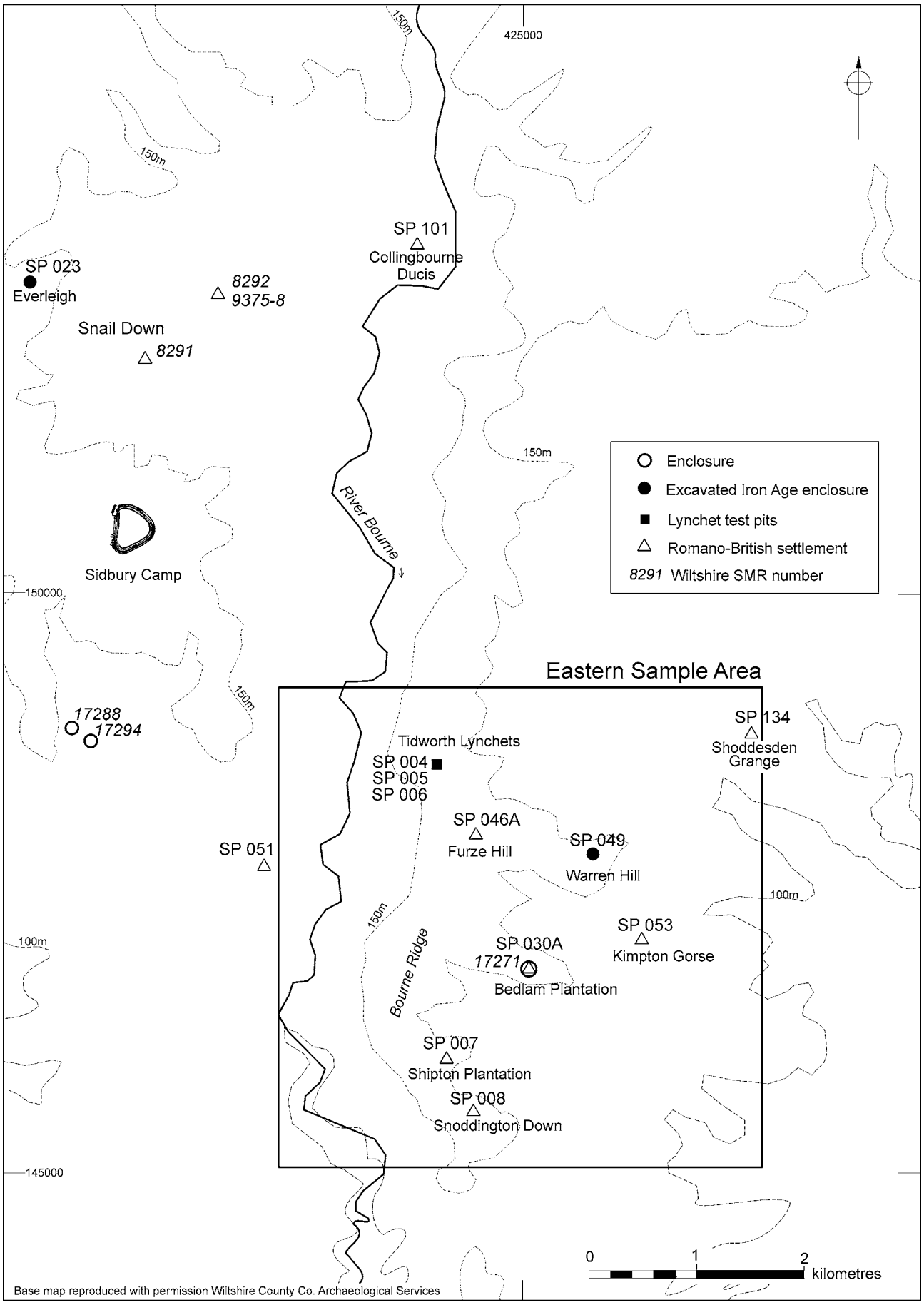

Figure 1.3 The Eastern Sample Area

development of settlement and landscape from late prehistory through to the early medieval period. Such a high level of preservation, resulting from the removal from arable cultivation of large areas of the SPTA, is almost unique in the chalklands of southern England, and few opportunities now exist to study near complete settlement and landuse patterns.

We could also expect to benefit from the work of the RCHM(E) who were then engaged in a programme of earthwork survey and aerial photographic transcription that has extended our comprehension of the archaeological resource. As well as making a valuable contribution to our own research, the work of the RCHM(E) has played a decisive role in the development of management plans for the conservation of archaeological sites in the SPTA. This present study and its predecessor have helped in that process by adding detail to our existing knowledge, at a time of renewed pressure from changes in the scale and character of military training.

The study area (Fig. 1.1) measures 186 square kilometres, the greater part of which lies within the SPTA. It includes a representative sample of the best preserved field systems, trackways, and settlements, as well as the hillforts of Sidbury Camp and Casterley Camp. Although archaeological considerations were foremost in selecting this area, its use for military exercises made issues of accessibility more pressing than is usual. The central and western parts of the SPTA, though of great archaeological interest, are used for 'live' firing and consequently most of the fieldwork was confined to the eastern part which was subject to fewer restrictions.

The Wiltshire and Hampshire Sites and Monuments Records (SMRs) for the eastern part of the SPTA contained numerous references to sites and finds dating to the late prehistoric and Romano-British periods. The sheer number of these records made it necessary to adopt a sampling strategy so that work could be concentrated in areas with a representative range of sites, rather than being spread too thinly across the study area. Moreover, the constraints of working in a military training area meant that it was not practicable to examine all parts of the study area in equal measure. It was decided, therefore, to focus as far as possible on two sample areas, chosen to satisfy the archaeological criteria while providing a sample of the principal landuse and topographic zones.

The Western Sample Area extended over 18 square kilometres (9.7% of the study area) (Fig. 1.2). It enclosed a large tract of old downland and a limited amount of arable land, mostly confined to Coombe Down and Longstreet Down. In terms of the large number of Iron Age and Romano-British sites, and in the generally high degree of preservation, the archaeology of this area contrasts sharply with that of the Eastern Sample Area. This applied equally to 'Celtic' field systems which were sufficiently well preserved to permit a detailed study of their relationship to settlements on Coombe Down (SP 009) and at Chisenbury Warren (SP 072).

The Eastern Sample Area measured 16 square kilometres (8.6% of the study area) (Fig. 1.3). It incorporated a stretch of the Bourne valley, including the prominent wooded ridge running northwards from Quarley Hill. Along the ridge, isolated tracts of old downland still survive, although a great part of this has been taken into cultivation since the 1950s. Below the ridge, and stretching to the eastern edge of the study area, the low-lying land was mostly arable farmland with a very much longer history of cultivation. The existing archaeological record for the area included a levelled enclosure on Warren Hill (SP 049), ploughed Romano-British sites at Shipton Plantation (SP 007) and on Snoddington Down (SP 008), and a well preserved series of lynchets in grassland on the western side of the river valley overlooking Tidworth (SP 004, SP 005 and SP 006). The previously recorded Romano-British sites at Kimpton Gorse (SP 053) and Shoddesden Grange (SP 134) were both under cultivation and consequently available for surface collection.

The contrasting pattern of modern land use in the two sample areas was both an advantage and a disadvantage. On the one hand, it allowed excavation to be focused in areas where sites had suffered less from long term cultivation, but on the other hand, these were the very areas where the potential for surface collection was most limited. This resulted in an imbalance between the detailed contextual information gained from excavation and the broader spatial information provided by surface survey. Although the distribution of well preserved Iron Age and Romano-British settlements dictated that excavation should be concentrated in the Western Sample Area, the distribution of arable land, though confined, allowed for rather more flexibility. Hence, in order to compensate for the limited amount of surface collection in the Western Sample Area, additional areas along the edges of the Avon valley were surveyed. Even though it remains somewhat fragmentary, the final arrangement of surface collection fields provides a cross section of the study area, and it allows a reliable comparison to be made between the settlement patterns associated with the two river valleys.

Geology and Topography

Except to the north-east where Middle Chalk and Gault Clay outcrop, and on Sidbury Hill which is capped by Reading Beds, the solid geology of the

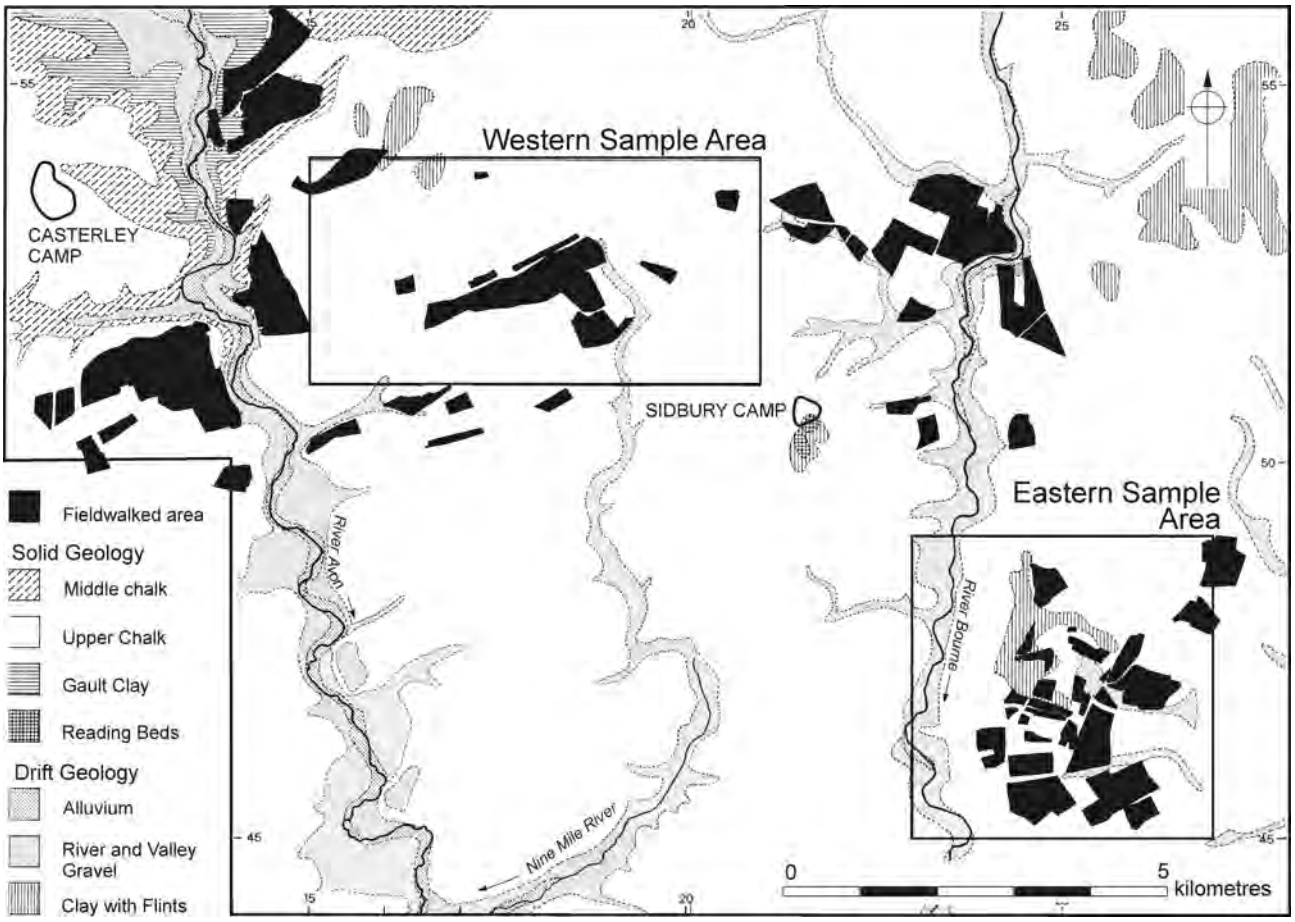

Figure 1.4 Geology and fieldwalked areas

study area is dominated by Upper Chalk (Fig 1.4). The drift geology shows a similar lack of variation. Alluvium is mostly confined to the floodplain of the River Avon, while Valley Gravel occurs more widely in the river valleys and dry coombes. Some plateaux and ridges carry a residual distribution of clay with flints, but this has not been mapped to its full extent.

The main topographic relief is provided by the drainage of the Bourne and Avon rivers, and to a lesser extent by the Nine Mile River, which joins the Avon at the southern edge of the study area. Along its eastern flank, the Bourne valley is bordered by a steep-sided ridge, marking the boundary of the SPTA. On the opposite side of the valley, a low undulating line of hills extends northwards to Sidbury Hill, which stands out from the surrounding countryside and is visible from most of the higher land within the study area. Between the Bourne and Avon, the landscape is divided by frequent coombes which become more prominent closer to the Avon valley. West of the Avon the land climbs steeply, reaching heights between 150 m and 180 m, and is intersected by a number of deep dry valleys opening onto the Avon floodplain.

Over the higher ground and dipslopes, the soils of the study area are mostly light calcareous rendzinas, varying to brown earths and argillic brown earths to the east of the River Bourne. The rendzinas fall into three main mapping units and are defined according to land use as well as topographic criteria (Curtis *et al.* 1976). On moderately sloping valley sides with a long history of cultivation the resultant soils are typically fine chalky earths which are classified as the Upton series. These grey rendzinas are confined to the margins of the river valleys and connecting coombes, occupying areas that have been under cultivation more or less continuously since the medieval period. Tracts of land with a shorter or less sustained history of cultivation are characterised by the darker soils of the Andover and Icknield series. These form the predominant soil types between the rivers Bourne and Avon, where the more limited impact of cultivation is reflected in a correspondingly high level of archaeological preservation.

It is difficult to assess the degree to which post-Roman soil erosion and colluviation have been responsible for masking settlement evidence on valley floors. Colluvial deposits have been recognised in

some of the dry valleys, but their date and full extent are not understood. Across the chalk downland, the known distribution of late prehistoric and Romano-British settlements does show a preference for the higher ground, but how closely this reflects the true distribution is uncertain. Although the downland soils are generally light and relatively fertile, on plateaux and ridges isolated pockets of Tertiary Drift have given rise to heavier clay soils. However, these areas were not avoided by prehistoric or Romano-British farmers. Indeed, the distribution of 'Celtic' fields and settlements throughout the study area suggest that soil conditions were not a significant determining factor.

More pertinent was the relationship between soil type and the survival of pottery and other degradable material in the ploughsoil. Soil types in the study area show limited but significant variation, and this can be linked to the post-Roman agrarian history of the landscape. To the west along the Avon valley, a combination of long-term cultivation and steep valley slopes has resulted in considerable soil degradation and erosion. It is difficult to assess the impact this might have had on ploughsoil assemblages, but we must assume that it has resulted in the attrition of the more friable pottery fabrics (Swain 1988). In other parts of the study area soil degradation appears to have been less severe, either for topographic reasons or because cultivation is more recent. This impression of different landuse histories is reflected in the density of medieval and post-medieval manuring debris which shows marked contrasts, especially between the western and eastern parts of the study area adjacent to the river valleys.

Specific Research Objectives

With the permanent staff resource dedicated to the field project represented by a two-person team (Entwistle and Raymond), it was possible to develop a two-fold strategy towards addressing the principal aims within the study area. With the larger resources of the Department of Archaeology at Reading it was feasible to develop a third strategy, involving modest-scale excavation. From the outset it was clear that resources for either the limited excavation of the larger hillfort enclosures within the study area, such as Casterley Camp or Sidbury Hill, or for the area-excavation of settlements such as Chisenbury Warren, or villas in the river valleys were beyond the scope of this project.[1] It was envisaged that the necessary field work would be carried out over two years, 1992–4, followed by post-excavation, 1994–5. The following summarises the project's objectives:

i) *Location of sites*: an important objective was to determine the nature of the pattern of settlement of Iron Age and Romano-British date across the study area. How representative and reliable was the existing record? Extensive line-walking of available arable, combined with intensive surface collection of areas with concentrations of finds, could assist in the recognition, dating, and spatial definition of both new sites and those recognised from aerial photography or recorded from early observations and finds in the SMR (*cf.* Grinsell 1957). In areas of pasture this approach could be complemented by test pitting to identify poorly recorded settlements such as those believed to exist at Beach's Barn, Rainbow Bottom. and Snail Down.

ii) *Establishment of chronologies*: this was directed at two classes of monument. First, enclosures (other than hillforts), believed on morphological grounds to be of Iron Age date (McOmish *et al.* 2002, 81–6), represented a distinctive aspect of the settlement of the Higher Plain. Within the study area some 23 enclosures have been recorded, of which a few had been investigated by excavation by Cunnington in the early 20th century. Limited excavation of the ditches of a sample of these enclosures could reasonably be expected to provide evidence of their date, either in the form of artefacts (ceramics), or charcoal or bone which might be susceptible to radiocarbon dating. There was also the possibility that even excavation on this small scale might yield ceramic and animal bone assemblages that might be informative about a settlement's wider relations and economic strategy. The second class of monument was represented by field systems where small-scale excavation offered the means for investigating their chronologies and, in conjunction with molluscan sampling, of their use (or dis-use) over time.

iii) *Settlement characterisation*: the study area contained the remains of the well preserved earthworks of two settlements at Coombe Down and Chisenbury Warren. The latter, with its distinctive, linear settlement along a spinal 'street' had, since Bowen and Fowler's first publication of the RCHM(E) earthwork survey in 1966, become a type-site for the character of Romano-British settlement on the chalk of southern Britain. Those surveys showed that both were extremely complex. In the case of Coombe Down geophysical survey commissioned by RCHM(E) also revealed evidence of earlier, prehistoric enclosures and further complexities, not evident in the plan of the earthworks. Although surface finds of

Romano-British date had been recovered from both of them, only excavation would resolve issues of their dating and development through time. With the larger resources of the Department of Archaeology at Reading it was possible to envisage larger-scale excavation than that described above (ii). Clearly issues of chronology and settlement duration were the priorities to be addressed, but there was expectation that recovery of material culture and biological data, particularly animal bone and charred plant remains, might provide an initial characterisation of the agricultural economy of these settlements, their status, standard of living, and economic relations. Although the establishment of tenurial relationships is hard, if not impossible, to ascertain with certainty from archaeological evidence, there was a reasonable expectation that study of the associated finds might shed light on relations with settlement in the river valleys (and beyond). The possibility of reasonable recovery of ceramics in particular might also allow some conclusions about the wider social relations of the Iron Age settlements (above).

In addressing the overall aims in the way outlined above it was expected that the project would make a substantive, complementary contribution to the surveys being carried out by the then RCHM(E). To some extent the project may be regarded as the first test of hypotheses presented by the Commission's analytical earthwork surveys and aerial photographic transcriptions.

Endnote

[1] In 1991 the field project with a dedicated, full-time team of two was costed at just over £30,000 of which approximately 75% was contributed by English Heritage and 25% by the University of Reading.

2. Methodology

In terms of its archaeology, the study area presented the impression of a relatively well known landscape but, as we have intimated, that view rested on a body of work which was in need of re-appraisal. For that reason our work was concerned as much with the re-assessment of previously recorded sites as it was with the discovery of new ones. To achieve that end, a field methodology was required that would combine broad-based landscape survey with the more detailed investigation of individual sites.

As we have seen, one of the attractions of the area chosen for research was that it included both arable farmland and pasture, as well as an expanse of old grassland that made up approximately 29% of the study area. This diversity offered the opportunity to deploy a range of techniques that would generate comparative data, thereby enabling us to address some of the taphonomic issues which have an important bearing on the interpretation of our results.

The existence of extensive tracts of arable land along the river margins favoured the use of surface collection to establish the broad picture of settlement and landuse. However, fieldwork on a similar scale was not possible across much of the central part of the study area which is largely uncultivated land. In these circumstances a far greater reliance was placed on the known distribution of sites documented in the Wiltshire SMR. Based on this information, test pit surveys were used to locate a number of sites of uncertain character, such as the recorded Romano-British sites at Beach's Barn (SP 026) and Rainbow Bottom (SP 025) (Cunnington 1930), and to investigate the earthworks adjacent to the Everleigh enclosure (SP 023) surveyed by RCHM(E). Test pit surveys were also employed to establish the date range of extant field systems. This work was chiefly focused on fields associated with the Romano-British settlements at Chisenbury Warren and Coombe Down South in the centre of the study area, although a limited amount of work was also carried out on the lynchets above Tidworth to the east (SP 004–006).

Surface Collection

Surface collection strategies and the inferential value of unstratified ploughsoil assemblages have been the subject of much discussion over the last three decades (Hinchliffe and Schadla-Hall 1980; Hazelgrove *et al.* 1985; Schofield 1991). Emphasis has been placed on the development of reliable recovery techniques and on the use of appropriate sampling strategies (Shennan 1985; Ford 1987). Alongside this, other studies have drawn attention to the effect of formation processes on the potential for social and economic reconstruction (Gaffney and Tingle 1989).

An awareness of these issues is implicit in our approach to the surface collection work and in the interpretation of the results. Inevitably, however, pragmatic considerations had a decisive part to play in the planning, with time and manpower constraints, in particular, influencing the organisation and scale of the fieldwork. Far more arable land was available than could be covered in the two seasons available. Consequently a sampling strategy was required that would achieve the right balance between broad-scale survey and the more intensive work that would be necessary in areas of particular archaeological significance. In addition to accommodating archaeological variation, the strategy would need to sample the main topographic zones and soil types.

One solution that had been tried successfully in other areas was to specify a series of transects based on topographic and geological variation and walk all the arable fields within each (Shennan 1985; Ford 1987). This is particularly suited to multi-period studies in geologically varied landscapes, where there has been very little past work. Although this approach has certain advantages, it did not seem applicable to our study area, where circumstances favoured a more purposive strategy giving due weight to the results of previous fieldwork. It seemed appropriate, therefore, to use the known distribution of sites to establish a sampling framework, which could then be extended to include areas apparently devoid of sites. The initial planning stage relied heavily on the Hampshire and Wiltshire SMRs, and the comprehensive aerial photographic transcriptions that were available for the greater part of the study area. This information provided the basis for defining the sample areas which, in addition to having a range of archaeological sites, would include an adequate proportion of arable land for broad-scale surface collection work.

Except for areas to the north and east, outside the SPTA, ploughed fields were concentrated along the margins of the river valleys. This was less of a disadvantage than it might have been, since it did allow for a detailed survey of the archaeological distributions in relation to the major topographic zones, with their contrasting soils and histories of land use. Nevertheless, the scarcity of arable fields on the downland between the two river valleys was a serious limitation, although some surface collection was possible in the area to the north of Sidbury Hill, providing, in effect, a transect of fields linking the Eastern and Western Sample Areas.

Altogether, 1305 ha of arable land were walked, which represents 7.0% of the study area as a whole. This included 22.8% of the Eastern Sample Area and 10.7% of the Western Sample Area, an imbalance reflecting the differing land use patterns in the two areas. An attempt was made to redress this during the final season of fieldwalking by covering additional arable land adjacent to the Avon Valley, but outside the Western Sample Area.

It is important to emphasise that the period covered by this study raised certain expectations about the size and density of artefact distributions, for these greatly influenced our approach to surface collection. This is apparent in our choice of recovery methods, which were biased in favour of the larger artefact concentrations characteristic of late prehistoric and Romano-British sites. For that reason the work was based primarily on line walking, although gridded and intensive collections were undertaken when more precise spatial information was required.

Line-walking

This technique was adopted in order to achieve the maximum area coverage whilst maintaining an adequate level of resolution for the identification of artefact concentrations. The orientation and length of runs were determined by the shape and size of the individual fields. In each case the runs were set out at 25 m intervals across the width of the field, taking their alignment from the field edge. Apart from the spacing of runs, this basic method is identical to that adopted by the East Hampshire Survey after field trials to evaluate its effectiveness (Shennan 1985). However, one disadvantage of this method of survey is that spatial control is only possible in one direction because individual runs vary in length according to the shape of the field. In spite of this it proved to be a rapid and effective method of site prospection, and entirely suited to large-scale landscape survey by a small field team (see Light *et al.* 1994). Standard forms were used to record the shape and dimensions of individual fields and any surface features or soil marks that might be of archaeological significance.

Gridded Surface Collection

This was based on methods that are now widely used and, with minor variations, have become the standard practice in landscape survey. It was substituted for line walking in areas where a more refined level of spatial recording was needed, as on the extensive settlements at Shipton Plantation and Snoddington Down (SP 007, SP 008) where it was the only effective method of establishing the limits of the individual scatters and mapping the distribution of different categories of material (eg, Figs. 4.21 and 4.22). It was also used around the sites on Coombe Down and Longstreet Down where the aim was to record the density and distribution of pottery across the ploughed-out enclosures (SP 014A and B, and SP 042A), and to assess the density of pottery across 'Celtic' fields associated with the settlement at SP 009 (eg, Fig. 3.6).

The collection unit used the hectare square of the OS 1:2500 sheets, divided into sixteen 25 m runs aligned south to north equally spaced at 25 m intervals. Surface conditions, slope and any significant features were noted on standard recording forms. The hectare grid also served to provide the framework for burnt flint sampling. A grid line passing through the centre of the artefact distribution was selected and burnt flint was collected by 25 m units along its length. At the end of each run the burnt flint was recorded by weight and number before being discarded in the field.

Intensive Collection

Most of the newly discovered sites were first found by line walking but, because of its inherent limitations, the method was unsuited to precise recording. For that reason initial identification was followed by a further stage of collection based on an accurately placed grid. This involved setting out a transect divided into 5 m square collection units and aligned using the OS 1:2500 map. By this means a consistently comparable sample was recovered, the boundaries of the scatter could be established and an accurate grid reference assigned to the site.

A standard recording form showing the arrangement of runs and direction of walking was used for each level of surface collection. For the gridded fieldwalking the hectare recording forms are backed-up with annotated copies of the OS 1:2500 sheets showing the collection grid. The line walking and intensive collection records include drawings giving the field shape and dimensions, and the position of the intensive collection grid where appropriate. These records, along with a master plan showing the locations of all of the surface collection fields, are included in the project archive.

Collection Principles and Artefact Analysis

Some adjustment to the usual policy of collecting all artefacts had to be made for pragmatic reasons. As the project was principally focused on the Iron Age and Romano-British periods it was considered, at the

time, unnecessary to expend time collecting and subsequently processing worked flint. However, because previous work had identified a significant correlation between concentrations of burnt flint and late prehistoric sites (Bradley *et al.* 1994), the recovery and quantification of this material formed part of the gridded surface collection programme. Other categories of material, irrespective of their likely date, including all other stone, whether of local origin or from sources outside the study area, were collected as part of the standard recovery procedure.

Surface collection criteria used for the definition of settlements

Eighteen settlements were identified by extensive fieldwalking, using criteria described below. Two sites (SP 027 and SP 104) producing evidence for Middle to Late Bronze Age occupation were recorded and the pottery analysed, but no additional work was undertaken. A further three sites, all on Coombe Down (SP 014, SP 016, and SP 019), produced predominantly Iron Age material, in each case corresponding to ploughed-out enclosures recorded by aerial photography (SP 014A/B, SP 016A and SP 019A, Fig. 3.5).

Although the distributions in the ploughsoil of prehistoric pottery were considerably less dense than those of Roman pottery (below) they also tended to be more restricted and could therefore be interpreted with greater confidence, with even the slightest concentrations being considered significant (see Light *et al.* 1994). Although claims have been made for the prehistoric origins of manuring (Fowler 1981), it is unclear whether significant amounts of domestic debris were included along with animal waste and therefore how much of a contribution manuring may have made to Iron Age pottery distributions. Many of the lynchet excavations produced Iron Age sherds, and although these are mostly in fabrics that cannot be dated closely, their presence may indicate manuring as part of the agricultural intensification that took place in southern England during the pre-Roman Iron Age (Robinson 1984).

Surface collection in arable areas on Coombe and Longstreet Downs revealed a close correspondence between concentrations of Early to Middle Iron Age pottery (although with low numbers of sherds), burnt flint, and ploughed-out enclosure earthworks (SP 016, SP 019, SP 014, and SP 042). While the excavations of enclosure ditches at SP014 and SP 042 confirmed the contemporaneity of the surface and stratified assemblages, they also showed how the accumulation of Romano-British ploughsoil in the upper fills of the ditches (and other features) had effectively protected Iron Age contexts from disturbance by subsequent cultivation, resulting in the overall paucity of Iron Age pottery in the ploughsoil. Even at Coombe Down South (SP 009), where intensive and long-term Iron Age occupation was indicated by an array of features inside an enclosure (Trench A), the topsoil contexts produced relatively few Iron Age sherds (180 compared with 2985 Roman), the main reason here too being the accumulation of up to 0.25 m of Romano-British ploughsoil. The levelling of enclosures and infilling of ditches by Romano-British ploughing was a widespread phenomenon across the study area, being recognised also at Warren Hill (SP 049), Chisenbury Field Barn (SP 050), and Widdington Farm (SP 052).

In addition, the more friable pottery fabrics, which make up a high proportion of Middle and Late Iron Age pottery assemblages, are likely to be under-represented, particularly in areas adjacent to the Avon Valley, where the distribution of Upton series soils testify to the intensity and duration of arable cultivation. A number of Romano-British sites in this area (Littlecott – SP 082, Upavon Hill – SP 107, Fifield Folly – SP 130, and Enford Farm – SP 143) also produced small numbers of Iron Age sherds, but as the pottery distributions will be skewed in favour of the most robust fabrics it is almost impossible to answer questions about origins of the settlements or the duration and continuity of occupation.

Finally, it is necessary to consider the cultural context of pottery use and discard in the period covered by the study. Changing scales of pottery production and consumption would have affected the amount of pottery entering the archaeological record. The social practices governing the deposition of pottery also changed. While, on Romano-British settlements, pottery seems to have been discarded casually along with other domestic rubbish, or stored with animal waste for subsequent use as manure, this material, on Middle Iron Age settlements, appears to have been selectively deposited in pits and ditches (Hill 1992). It is not clear what proportion of the pottery was deposited in this way, or how often such activities took place, but such practices are likely to have reduced significantly the amount of pottery reaching the surface of ploughed fields.

The remaining 13 settlement sites (Table 2.1) were of predominantly Romano-British date, of which nine were investigated further using intensive collection grids (Figs. 2.1 and 2.2). The sites varied widely both in their extent and in the range of materials recovered from the ploughsoil.

Our initial reliance on the known distribution of ploughsoil finds raised the question of how we should interpret the records made by fieldworkers in the early 20th century. Many of the references to finds of chiefly Roman pottery are of uncertain provenance, and in some cases it is not clear what they represent. It is now commonly accepted that much of the pottery recovered from arable fields derives from

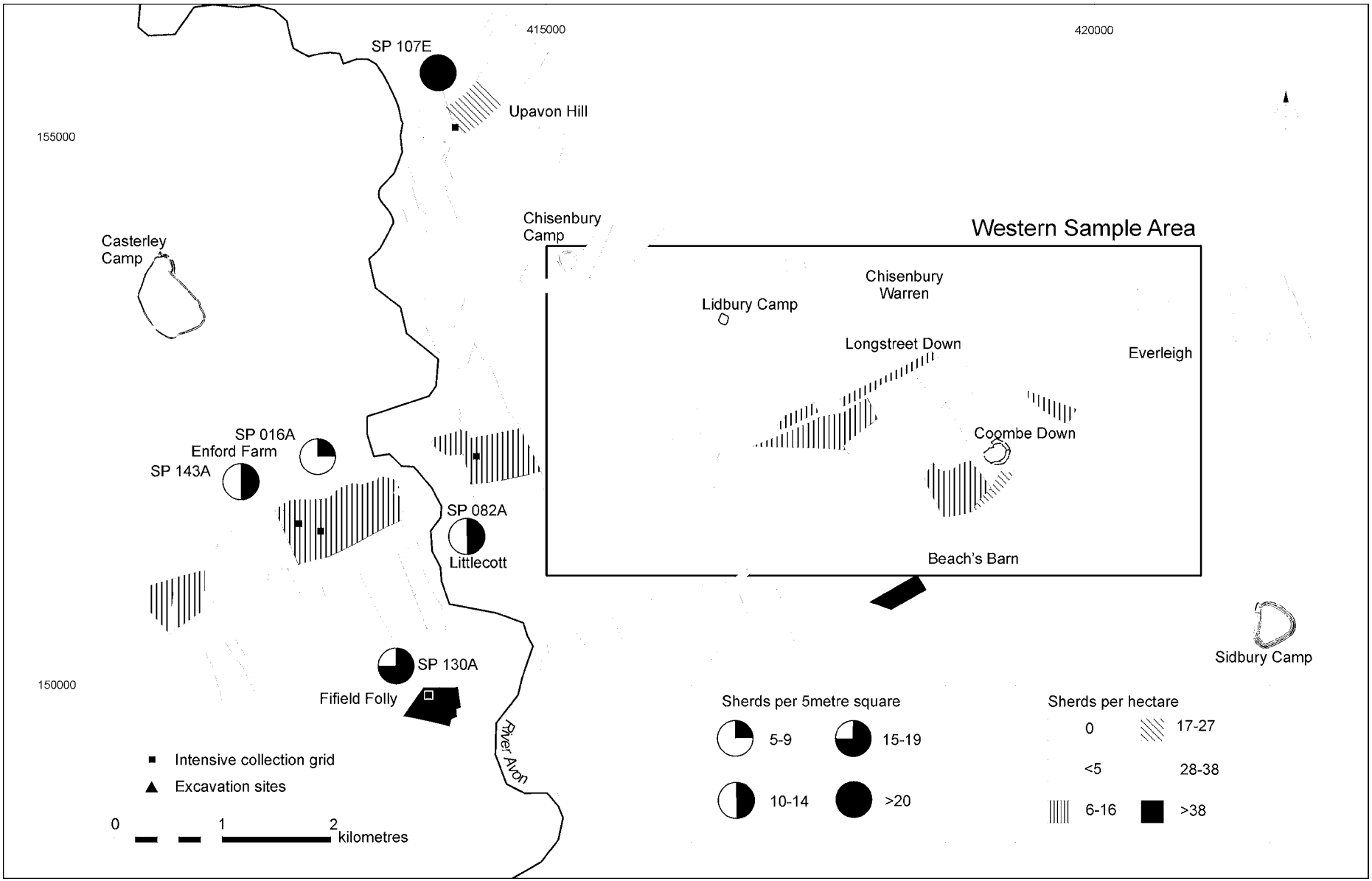

Figure 2.1 Romano-British settlements identified by fieldwalking and intensive collection in the western part of the Study Area

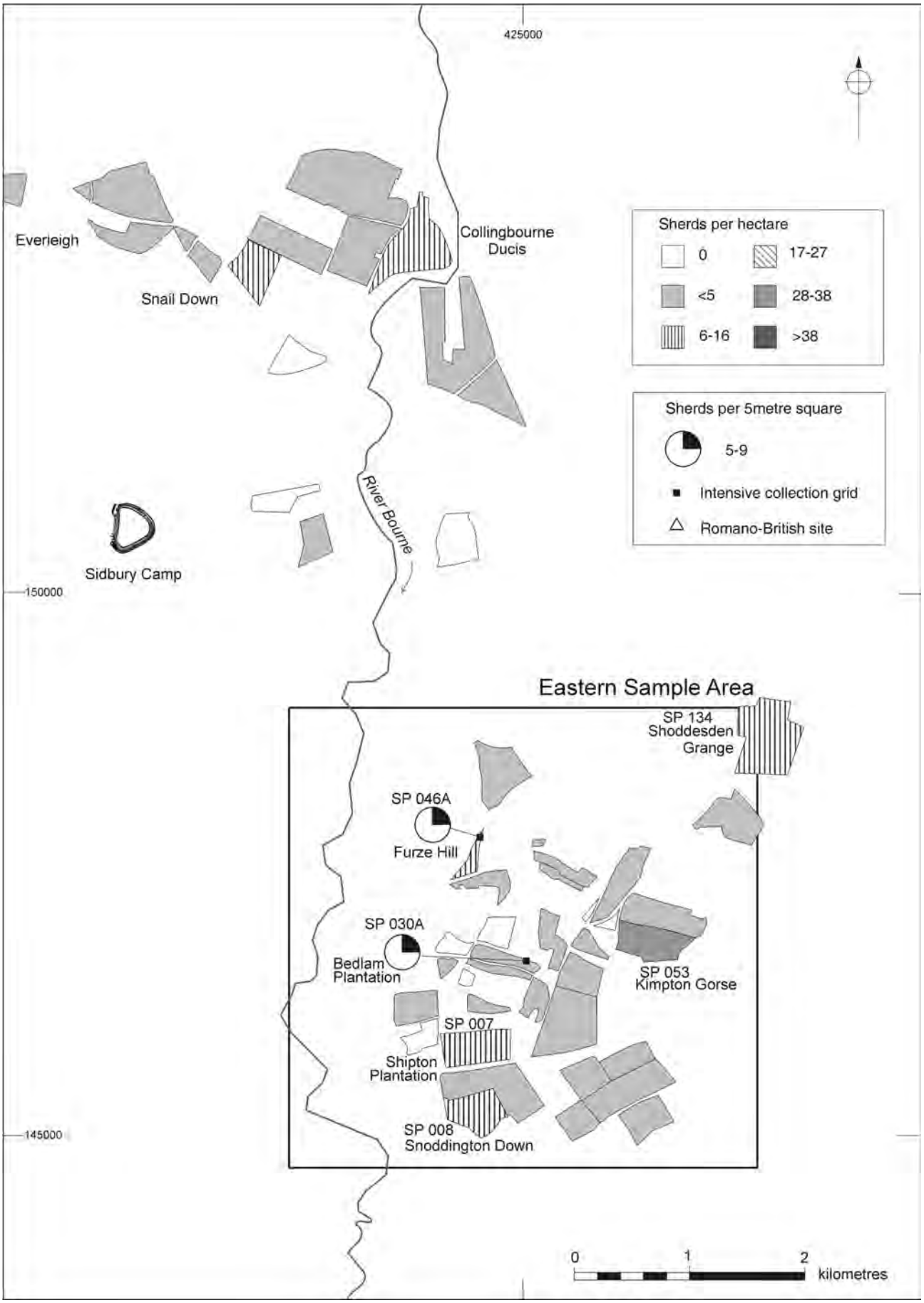

Figure 2.2 Romano-British settlements identified by fieldwalking and intensive collection in the eastern part of the Study Area

Table 2.1 Romano-British settlements identified through surface collection showing the approximate area of the surface scatter

Site	*Location*	*Area (hectares)*
SP 007	Shipton Plantation	2.0
SP 008	Snoddington Down	6.0
2P 026*	Beach's Barn	>1.5
SP 030	Bedlam Plantation	>0.25
SP 046*	Furze Hill	>0.5
SP 082	Littlecott	4.0
SP 101	Collingbourne Ducis	3.0
SP 107E	Upavon Hill	2.0
SP 116	Enford Farm	0.25
SP 130	Fifield Folly	4.0
SP 134	Shoddesden Grange	2.25
SP 143	Enford Farm	0.25

Sites marked * were on the extreme edge of ploughed fields, consequently only a minimum estimate of size can be made

using settlement waste for manuring fields (Gaffney and Tingle 1989). Although the density of such pottery is usually very low, in some areas sherds occur with remarkable ubiquity. Of the 1305 hectares fieldwalked, 1247 (95.6%) produced sherds of Roman pottery. This compares with 56% in the Maddle Farm Survey (Gaffney and Tingle 1989) and 42% in the Vale of the White Horse (Tingle 1991). Concentrations of Roman pottery are often found near ploughed-out 'Celtic' field lynchets, confirming the mounting evidence that these features are substantially of that period (Ford 1982; Bradley *et al.* 1994). However, this was not apparent to earlier fieldworkers, and it is often difficult from their comments to distinguish settlement sites from what we now regard as manuring scatters.

There are inherent difficulties in the interpretation of unstratified ploughsoil assemblages. Aside from the affects of post-depositional processes, the changing patterns of Romano-British settlement and cultivation have blurred the distinction between settlements and manuring scatters. Although Roman pottery was widely distributed across the study area, in some parts the scatters were both extensive and dense (Figs. 2.1 and 2.2). In the Western Sample Area all of the surface collection fields (193 ha) produced sherd scatters, ranging in density from 0.5 to 29.3 sherds per ha (mean – 6.2 sherds per ha), but while the extremes of this range are likely to reflect manuring and settlement discard, intermediate values could be the product of either. The density of sherds in the ploughsoil, therefore, might allow the identification of larger settlements, but it would fail to differentiate between the densest manuring scatters and debris from smaller settlements.

This was rectified to an extent by using more than one artefact class to define a settlement, since it was consistently observed that Romano-British sites with high pottery densities and above average sherd sizes also produced a wider range of finds, including quern fragments, tiles in non-local stone, other non-local stone, and, to a lesser extent, ceramic building material. The high assemblage diversity of the 13 identified settlement sites was determined by plotting the number of artefact categories at each site where artefact numbers were at or above the mean value. Four of these (SP 053, SP 082, SP 107, SP 130) exceed the average numbers in all artefact categories, while a further two (SP 026C and SP 116) were below the mean only in their numbers of quern fragments. At some of the settlements there was corroborative evidence, either extant earthworks (SP 008 and SP 082), soil marks (SP 101), geophysical survey (SP 026C), or finds of coins and metalwork (SP 053 and SP 107 D) (Chapter 5).

Even so, it was not possible in some instances to differentiate intense infield manuring from plough erosion over part of an adjacent settlement (such as SP 017 and SP 019 close to the settlement at Coombe Down South, SP 009). Colluviation may have also contributed to the concentration of finds, as at SP 118 which occupies a steep slope on the edge of the Avon Valley and where intensive cultivation and manuring during the post-Roman period probably added to the density of stone fragments. In addition, the low artefact visibility of some possible settlements may be explained in terms of chronology. For instance, in contrast to late Romano-British settlements which have significant amounts of imported stone, particularly in the form of tiles, early Romano-British sites (such as SP 007, SP 008, SP 030, SP 046 and SP 101, in the Eastern Sample Area) produced lower proportions of non-local stone, and tile is mostly absent (SP 101 produced a single fragment). Table 2.2 contrasts these sites with the nearby 3rd–4th century AD settlement at SP 053, where the large numbers of non-local tile fragments account for most of the difference (Fig. 4.21).

Dating surface collection sites

There are at least as many obstacles to the dating of settlements identified through artefacts in the ploughsoil. The unstratified nature of the artefact assemblages, along with the differential affects of attrition, seriously restrict the potential for chronological interpretation. For Iron Age settlements, the dating rests largely on assemblages of unfeatured sherds, identified solely on the basis of their fabrics. While some of these can be attributed to a particular

Table 2.2 A comparison of the proportions of non-local stone by number on early and late Romano-British settlements in the Eastern Sample Area

Period	*Site*	*Non-local stone*	*Hectares*	*Frags per hectare*
Early Romano-British	SP 007	4.0	20.0	0.2
	SP 008	51.0	14.5	3.5
	SP 030	–	7.0	–
	SP 046	3.0	7.0	0.4
	SP 101	29.0	14.0	1.2
Late Romano-British	SP 053	137.0	16.6	8.3
	SP 053 (tile)	108.8	16.6	6.5

phase, others were in use throughout the Iron Age and even into the Romano-British period.

Romano-British settlements present fewer problems because of the higher numbers of featured sherds and the wider range of datable fabrics. However, almost all of them also produced evidence for Iron Age activity, although in most cases this is based on a very few diagnostic sherds and excludes the local coarse wares that dominate early assemblages, and that were probably in use across the period of transition. This probably results in a serious under-estimation of the Iron Age presence, and makes it hard to answer questions about a settlement's origins and the date of its final occupation.

Dating 'Celtic' field systems

Many of the problems connected with the interpretation of surface collection material are encountered when dealing with pottery from lynchets. The assemblages recovered from the fossil ploughsoils are typically composed of small abraded sherds, the majority of which are unfeatured or in fabrics with a long use-life. Moreover, because the layers that make up a lynchet are the product of successive phases of cultivation, each one disturbing and mixing part of the underlying stratigraphy, the pottery assemblages within them include some sherds incorporated at the time of ploughing, and others derived from early episodes. These can include previous phases of cultivation and manuring, as well as periods when the field was out of cultivation and put to other uses. As a result, lynchets contain a high proportion of residual sherds, and the most recent pottery may be considerably older than the layer itself.

In spite of this, most of the lynchets excavated for this study contained evidence of more than one episode of cultivation, as well as traces left by fallow periods. While several produced sufficient pottery to show that they were substantially of Romano-British date, further refinement of the dating can be difficult. This is because the limitations in using ploughsoil assemblages for dating described above in relation to settlements apply equally in relation to assemblages recovered from lynchets – the greater number of forms and fabrics that can be ascribed to the early rather than late Romano-British assemblages, and the large component in most assemblages of wares that were in use from the 1st–4th centuries AD.

Nevertheless, the excavation, during the Linear Ditches Project, of a lynchet in the Weather Hill field system (LDP 082), produced small numbers of late Romano-British sherds indicating that the ploughsoil accumulated during or after that time, even though the majority of sherds were either undiagnostic or of early Romano-British date. A similar trend was recognised during the Maddle Farm Survey, where it was interpreted as evidence for a relative decline in the intensity of manuring during the late Romano-British period (Gaffney and Tingle 1989). This disparity between early and late Romano-British sherd numbers was a characteristic of lynchet assemblages in this study. Undoubtedly, manuring practices did fluctuate through time; indeed it is possible that the 'standstill phases' recognised in some of the more substantial lynchets represent long-term periods of fallow, during which fertility was restored directly by the dung of grazing animals. However, we know too little about Romano-British agricultural practices to be sure that changes in pottery density are a reflection of changes in the intensity of manuring.

Test Pit Surveys

Test pit surveys were undertaken to locate the poorly recorded Romano-British sites at Rainbow Bottom (SP 025) and Beach's Barn (SP 026). These sites, in grassland, were essential to our understanding of settlement in the western part of the study area, which largely rested on the better known sites at Coombe Down South and Chisenbury Warren. A third survey proposed for a site on Snail Down, recognised originally by Colt Hoare (1812) but no longer visible on the ground or from the air, could not be carried out because of military training.

A site at Rainbow Bottom was first reported by Hawley (Cunnington 1930, 166–216) who noted irregularities on the ground associated with surface finds of pottery and some coins. Cunnington placed the Hawley site on the northern side of the coombe at SU 1700 5275, but more recent work undertaken when part of the area was under cultivation failed to find any trace of it (SMR no. 6171). Moreover, the array of 25 test pits along the lower slope of the valley, within the area designated on the 1:10,000 SMR map, produced only a very small number of late

prehistoric and Roman sherds, and it seems unlikely that a Romano-British settlement existed along this part of Rainbow Bottom. The location of the site rests on anecdotal information, which may be unreliable; indeed some confusion seems to exist as to whether Hawley's reference is to Rainbow Bottom or Chisenbury Warren.

In contrast, the excavation of 18 test pits at Beach's Barn revealed a substantial building with flint and cob walls, at SU 18465104, in an area where a Romano-British building had been discovered by William Cunnington in 1894. The current SMR record (No. 1652) reflected the uncertain provenance of Cunnington's site, placing it within a broadly defined area supporting woodland and dense herbaceous vegetation, and the possibility that these are two different buildings, within what we now know to be an extensive area of settlement, cannot be ruled out (*cf.* Wessex Archaeology 2006).

A more limited survey, comprising 10 test pits, was undertaken to evaluate a series of earthworks recorded by the RCHM(E) adjacent to the Everleigh Iron Age enclosure. However, no traces of surviving structures were found, and the 36 sherds of pottery recovered, of Early Bronze Age to Romano-British date, were all recovered from layers that were of agricultural origin, suggesting that the low banks forming the site are part of a field system which has been altered by later activity.

At each of these sites the survey was based on a grid of 1 m square test pits spaced at 20–30 m intervals. The results of the surface collection work suggested that this was an optimal spacing for the initial stage of survey, but when higher artefact densities were encountered the spacing was reduced in order to gain closer spatial control. A section drawing was made of each test pit, and the soil profile was described using a method adapted from the Soil Survey Field Handbook (Hodgson 1974).

Sample Excavations

Sites were selected for excavation on the basis of two main criteria. The first was to provide a sample of settlements spanning both the Iron Age and Romano-British periods, and the different parts of the study area. Equally important was the need to make the most of the limited information available from earlier excavations.

Enclosures

Unfortunately, the evidence for Iron Age settlement in the study area was extremely sparse, consisting chiefly of the early excavation reports for Casterley Camp hillfort (Cunnington and Cunnington 1913) and Lidbury Camp (Cunnington 1917), and rather less satisfactory information for Chisenbury Camp (Cunnington 1932), Sidbury Camp (Megaw 1967), and Snoddington Down (Hawkes 1939). However, it provided a starting point for an investigation of the numerous enclosures in the study area, some 60 of which have been recorded. A number could be discounted as not being Iron Age on morphological grounds, but of the rest, aside from the results of Cunnington's work, there was no evidence by which to date them more closely. The enclosures appear to have a skewed distribution, with many more in the Western than in the Eastern Sample Area. Moreover, within this overall pattern, some fall into distinct groups occupying ridge top or plateau locations.

Eight enclosures were selected for excavation (Figs 1.2 and 1.3). These represented both the western and eastern extremes of the study area and the cohesive group of enclosures on Coombe and Longstreet Downs on the interfluve between the Bourne and Avon valleys. By adopting this geographical arrangement we would increase the likelihood of identifying any contrasts in chronology and material culture across the study area, differences which could contribute significantly to our understanding of Iron Age settlement.

The Widdington Farm enclosure (SP 052), in the western part of the study area, was situated less than 1 km to the east of the Casterley Camp hillfort, where limited excavations had been undertaken (Cunnington and Cunnington 1913). Similarly, the enclosure at Chisenbury Field Barn (SP 050) within the Western Sample Area was chosen because it offered an opportunity to take advantage of the earlier work on the nearby sites of Lidbury Camp and Chisenbury Trendle (Cunnington 1917 and 1932).

Five further enclosures selected in the Western Sample Area between the River Avon and the River Bourne all lay within 3 km of Sidbury Camp hillfort. The nearest to the hillfort was the Everleigh enclosure (SP 023), which was adjacent to the projected course of the Sidbury Double Linear (Bradley *et al.* 1994) and which, unlike the majority of enclosures, was situated on a low plateau. The other four were grouped within a short distance of each other on Coombe and Longstreet Downs (SP 009, SP 014A, SP 014B, and SP 042). These were of particular interest since they offered the opportunity to study a number of closely spaced settlements potentially spanning the Iron Age and Romano-British periods, and so address questions of settlement evolution, chronology, and cultural affinity in greater detail than would be possible elsewhere. The area was additionally important because it was partly under cultivation, allowing a combination of surface collection and sample excavation. As well as providing

broader contextual information, the results of the surface collection could be used to study the taphonomy of ploughsoil assemblages in relation to stratified sub-surface deposits.

In the Eastern Sample Area the most confidently identified enclosure of likely Iron Age date was the false crested enclosure on the eastern slope of Warren Hill (SP 049), a steep-sided spur of chalk downland overlooking the Kimpton Gorse Romano-British site (SP 053). The nearest excavated Iron Age enclosures were Lains Farm (Bellamy 1991) and Quarley Hill hillfort (Hawkes 1939), 3 km and just under 6 km to the south-east, respectively.

The primary aim of the excavation programme was to recover sufficient ceramic dating evidence to answer basic chronological questions about the origins, occupation, and final use of these settlements. With the exception of Trench A at Coombe Down South (SP 009), where the main objective was to sample the Romano-British settlement, all of the enclosure excavations were concentrated on the ditches (see Plate 1, below). The limited scale of this work precluded any systematic examination of the enclosure interiors and, apart from the Iron Age features in SP 009 Trench A, the only other substantial internal feature to be excavated was a pit at one of the Coombe Down North enclosures (SP 014B).

Settlements

By comparison with the Iron Age, the distribution of Romano-British sites in the study area was relatively well documented. In many respects this reflected the interests of earlier generations of fieldworkers, although in some measure it was also a function of the range and density of diagnostic material which readily identify Romano-British sites. Nevertheless, very little was known of even the most frequently cited settlements, and in many respects our knowledge had not advanced significantly since the studies of Cunnington (1930) and Bonney (1968).

The analytical earthwork surveys undertaken by RCHM(E) had highlighted this deficiency by drawing our attention to the scale and complexity of the Romano-British sites at Coombe Down South (SP 009) and Chisenbury Warren (SP 072) (McOmish *et al.* 2002). However, although this work had added to our knowledge of these sites, at the start of the project we were still unable to answer basic questions about their origins and duration of occupation, and far less to understand their position in the wider settlement pattern. These two sites were the only accessible and well-preserved Romano-British settlements in the study area, and as such they offered a unique opportunity to address detailed chronological questions through excavation. In addition to benefiting from the recent earthwork surveys, each had the further advantage of being associated with an extensive 'Celtic' field system. This allowed both sites to be studied in the broader context of their agricultural hinterland.

Lynchets

The programme of lynchet excavations was intended to complement the work on settlements by providing dating evidence for the associated 'Celtic' fields. The basic unit of excavation was a 2 x 1 m trench laid out at right-angles to the axis of the lynchet. Each trench was positioned so that the crest of the positive lynchet and its negative counterpart were sectioned. This increased the chances of finding boundary features, such as post-holes or ditches, which commonly lie below the head of the positive lynchet or on the edge of the negative lynchet. Most of the lynchet excavations were concentrated around the Romano-British settlements at Chisenbury Warren (Figs. 4.1 and 4.4) and Coombe Down South (the Weather Hill field system – SP 125–142; Fig. 4.24), with some limited work on the Tidworth lynchets (SP 004–006; Fig. 1.3).

Environmental Sampling

Sampling for carbonised plant remains was undertaken at a number of sites and the results are shown in Table 6.5. Molluscan sampling was confined to three sites. A column and additional spot samples were taken from the enclosure ditch at Chisenbury Field Barn (SP 050) but these have not been analysed. Samples were also taken from buried soil horizons in the ditches of enclosures at Coombe Down North (SP 014A and SP 014B). These have been analysed and the results are presented in Chapter 5. Sizeable animal bone assemblages were recovered from several of the ditch excavations and, after initial assessment, samples from Warren Hill (SP 049) were submitted for radiocarbon assay.

Explanation of the Numbering System

On a project encompassing 143 sites (as well as a further 35 site subdivisions), the potential for confusion in identifying contexts is considerable. The 143 sites included surface collection sites (line-walked, gridded, intensive, and general collection), test pit surveys, lynchet trenches, sample excavations, salvage excavation, and a watching brief. Each site was given its own numerical Site Code (SP 001–143), with

subdivisions (indicating either the application of a different methodology – eg, line-walked surface collection followed by intensive collection – or reflecting different excavation areas) shown by a letter suffix (eg, SP 053 and 053A, SP 009A/B/C or D).

The names assigned to these sites give an indication of their general location, but the 143 sites share just 57 site names. 'Enford Farm', for instance, refers to 17 surface collection units (numbered SP 116–29, 131, 133, and 143) around the farm. In order to distinguish between the range of fieldwork undertaken on Coombe Down, which included enclosure, settlement, and lynchet excavations, as well surface collection, the enclosure excavations at SP 014A, SP 014B, and SP 042A are referred to as Coombe Down North, and the bivallate enclosure and the Romano-British settlement (SP 009) as Coombe Down South.

While, therefore, any reliance solely on the site names would not accurately identify sites, site codes are not sufficiently memorable or distinct to allow their use on their own, and they give no indications as to the location of a site within the study area. For this reason, site names and site codes have been used together where it is considered that sites could be confused. However, as much of the key excavation was undertaken at site SP 009 (Coombe Down South) and SP 072 (Chisenbury Warren), it should be assumed, unless another site code is given, that references in the text to these locations relate to these sites.

A further source of potential confusion stems from the fact that the contexts at each excavation trench (and test pit) were numbered in a sequence starting at 1. In order to avoid the repetition of the trench name, contexts from the excavations at Coombe Down South (SP 009) and Chisenbury Warren (SP 072) have been given (in the text below, but not in the figures) a letter prefix indicating in which trench they were recorded (these will not be found in the archive).

Review of the Methodology

In terms of its general principles, the field methodology followed established practices. It departed from these mostly in the surface collection programme, which relied on line walking rather than the more favoured hectare grid technique. In retrospect the use of this method was justified by the extensive landscape coverage achieved by the small field team, but that was gained at the expense of detailed spatial control. To some extent this was rectified by the intensive collections based on 5 m square collection units which provided the systematic sampling necessary for intra-site comparisons. However, the results suggest that much of the detail recovered by intensive collection is confusing, probably because the limited areas involved were too small to detect significant patterning.

With hindsight, a more satisfactory approach would have been to substitute gridded collection based on a 10 m line. This would have provided a means of achieving extensive coverage, while at the same time maintaining sufficient resolution to identify any patterning in the artefact distributions. By speeding up collection, a 10 m grid would have allowed larger areas to be covered in greater detail, and it would have simplified the task of estimating the size of settlement scatters. The time allowed for surface collection was not sufficient to survey all the available arable land. Areas on each side of the Avon Valley, in the south of the study area, were not covered, and this has probably resulted in an underestimation of settlement density adjacent to the Avon Valley. In most other respects the field methodology proved an effective means of attaining our objectives, and the results amply demonstrate the value of the integrated landscape approach pioneered by the Maddle Farm Survey (Gaffney and Tingle 1989).

For logistical reasons the project design excluded any work on dry valley or alluvial sequences, although both would have made a useful contribution. The archaeology of the river valleys is largely an untapped resource; with the exception of the Wessex pipeline rescue excavations (eg, Graham and Newman 1993; Cleal *et al.* 2004), little work has been done in recent years. Understandably, attention has been focused on other parts of the SPTA, where military training has made archaeological evaluation an urgent priority. However, much could be gained from new work on the poorly recorded Romano-British sites in the Avon Valley (Chapters 1, 7), particularly since there is considerable potential for combining archaeological and palaeo-environmental research (*cf.* Evans's work in the Wylye and Test Valleys).

3. Iron Age Settlement and Landscape

Excavations were undertaken at eight downland enclosure sites (Fig. 3.1), representing a *c.* 15 km north-west to south-east transect across the Avon and Bourne valleys (Figs. 1.2 and 1.3). Widdington Farm (SP 052) was the only enclosure investigated west of the River Avon, while to the east, between the River Avon and the River Bourne, seven enclosures were investigated within the Western Sample Area – Chisenbury Field Barn (SP 050) overlooking the Avon valley, four enclosures on Coombe Down (SP 042A, SP 014A, SP 014B, and SP 009) above the head of the Nine Mile River valley, and Everleigh (SP 023) on the plateau between the Nine Mile River and the River Bourne. Warren Hill (SP 049), east of the River Bourne, facing east from the Bourne ridge, lies within the Eastern Sample Area.

Settlement

West of the River Avon

Middle to Late Iron Age pottery was recovered during fieldwalking at Fifield Folly (SP 130). This complements material in Salisbury and Devizes Museums which includes a later 1st century BC La Tène III fibula and a very fine, 1st century BC copper alloy strap-union. However, the main evidence for Iron Age settlement was found some 4.5 km to the north in the excavation of an enclosure at Widdington Farm (SP 052), just over 1 km to the north-east of Casterley hillfort.

SP 052 Widdington Farm

Widdington Farm is sited on an east-facing slope overlooking the Avon valley, with clear views eastwards of both East Chisenbury and Lidbury Camp (Fig. 1.2). No longer visible on the ground, it appeared on aerial photographs as a subcircular feature with a maximum diameter of approximately 180 m (SMR no. 6357) and an entrance on the eastern side (Fig. 3.1). Augering established the course of the ditch on the eastern side and a 10 m by 1 m trench was excavated just north of the entrance.

The ditch (4) had a broad V-shaped profile, some 6.5 m wide at the top and 2.5 m deep (Fig. 3.2). The presence of a number of residual Late Bronze Age sherds points to activity pre-dating the enclosure, either on the site of this enclosure or of two adjacent ditch circuits, only 20 m to the north-west and 100 m to the east. The enclosure itself was constructed in the Early Iron Age, pottery of this date being recovered from the primary and lower secondary silts (21–7 and 18). These were overlain by two layers of midden deposit (17 and 11), over 0.5 m thick, containing Middle Iron Age pottery (*c.* 3 kg), animal bone, charcoal, fragments of limestone, and over 150 kg of burnt flint. A shallow grave (19), cut into the lower layer and sealed by the upper, contained a crouched inhumation burial of a young male aged between 14–16 years (28) (see Chapter 6.2). The grave may have been subject to some disturbance, as a number of bones probably from the same individual were found within both layers of the midden deposit. The burial provided a radiocarbon date of 2014±19 BP, 100 cal BC–AD 20 at 2 sigma (UB-3843), suggesting that the midden accumulated over a considerable period of time, although there was no indication that any soil had formed within the ditch during that process. The midden was sealed by a buried soil, the lower stony layer (9) containing a further 2.5 kg of Iron Age pottery (although none of Late Iron Age date) as well as two early Roman sherds. This soil appears to represent the final abandonment of the enclosure, the overlying layers all producing Roman pottery.

An unusually large amount of imported stone (18.6 kg) was recovered from the ditch, almost half of which came from the upper midden and the overlying buried soil (context 9 only). Much of it came from sources to the north and west of the study area, including the Forest of Dean. Although the stone from the buried soil may have been discarded during the Romano-British period, an unworked fragment of Lower Old Red Sandstone from context 18 demonstrates that contacts with the Forest of Dean area were already established in the Early Iron Age.

East of the River Avon and the Western Sample Area

Single sherds of 1st century BC/AD pottery recovered during fieldwalking at two locations overlooking the Avon valley on its east side (Littlecott – SP 082 and Upavon Hill – SP 107) may indicate Late Iron Age origins for the Romano-British settlements at these sites (Fig. 1.2). However, most of the evidence for Iron Age settlement comes from a greater distance from the valley, from a series of enclosures strung out in a line and occupying prominent positions on the downs.

SP 050 Chisenbury Field Barn

The enclosure at Chisenbury Field Barn is one of a series of intervisible enclosures overlooking the heads of the coombes running down west into the Avon valley. It was visible only on aerial photographs (SMR

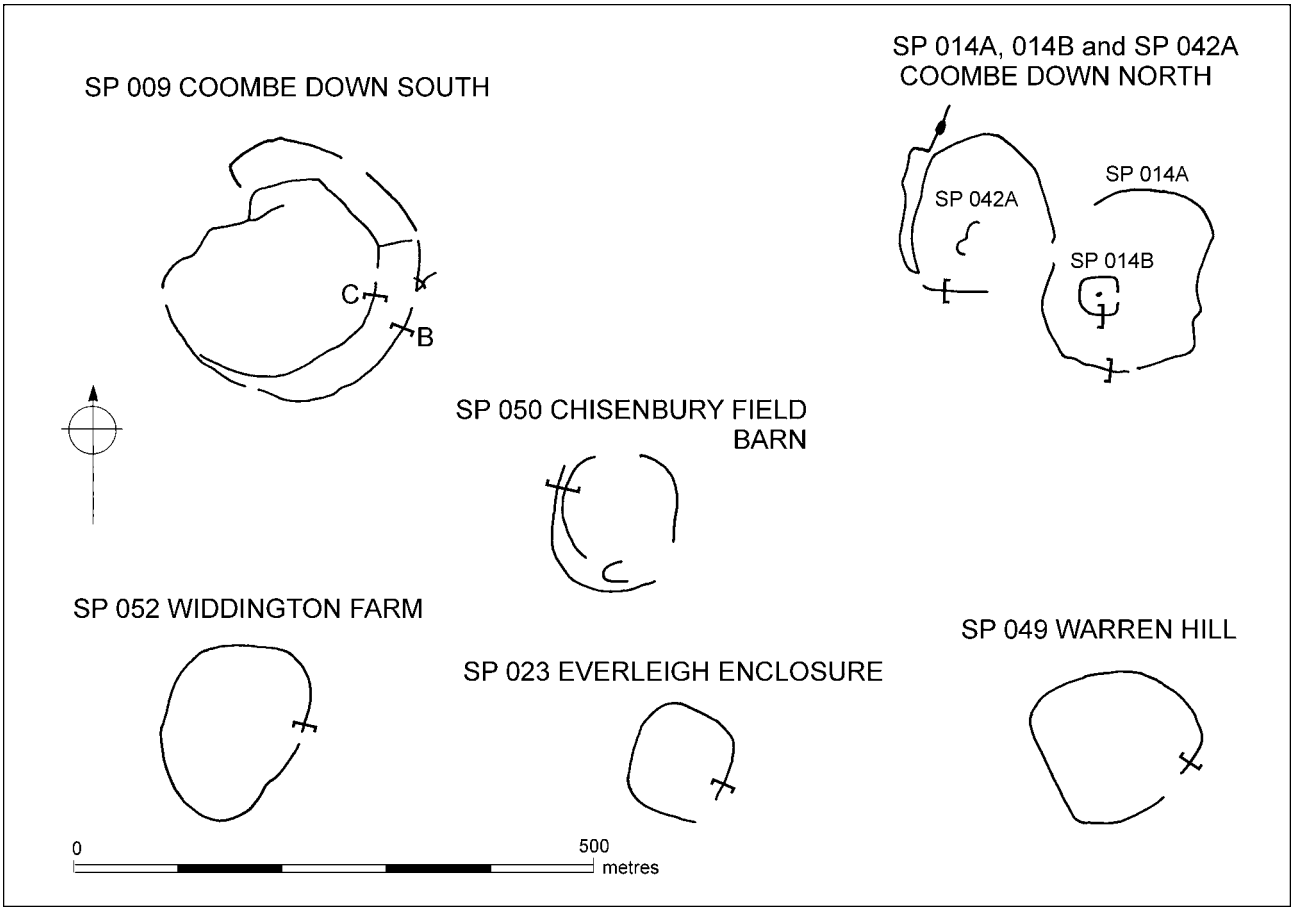

Figure 3.1 Comparative plans of Iron Age enclosures in the study area

no. 6212), these showing a ditch interrupted to the north and south, and traces of a slight outer ditch on the western and southern sides (Fig. 3.1). The location of the enclosure and selection of a site for excavation were established by geophysical survey and augering, and a 9 x 1 m trench was excavated on the western side at a point where the inner and outer ditches appeared to converge. The excavation revealed a sequence of three heavily truncated overlapping features (62, 50, and 56), possibly ditch terminals, immediately outside the stratigraphically later main ditch (49) (Fig. 3.3).

The two earliest features – feature 62 on the outside and feature 56 closer to the main ditch – appeared to be the northern terminals of two shallow, flat-bottomed ditches, although it is possible that they were both part of the same broad feature, over 3 m wide and just under 1 m deep. Any possible relationship between them, however, had been destroyed by a later cut (50) between them, feature 62 by that time having silted up to almost its full depth. A single small Late Iron Age sherd was recovered from the secondary silt (57) of feature 50, but given the suggested date (below) for the later, main ditch, it is likely that this was intrusive.

The main enclosure ditch (49) was a substantial V-shaped feature, at least 5 m wide at the top and 2.5 m deep with a narrow rounded base. The lower fills of unconsolidated chalk rubble (75 and 74) probably accumulated fairly quickly. The primary silt (75) contained part of an undecorated saucepan pot, and Middle Iron Age pottery was recovered from throughout the secondary silts (69–74), some of this in the upper of these (69) being decorated with shallow tooled motifs, and accompanied by animal bone and burnt flint. The lower tertiary silts (66 and 55) produced Middle/Late and Late Iron Age sherds, but a possible buried soil (53) overlying them and producing early Romano-British pottery may represent a break in the infilling of the ditch during the later part of the Iron Age to the start of the Romano-British period.

Coombe Down and Longstreet Downs

Prior to the excavation of the Romano-British open settlement site on Coombe Down (Chapter 4) a geophysical survey was undertaken by Geophysical Surveys of Bradford of selected areas within the earthwork complex to complement the earthwork survey of the site and its environs, and an air photo-

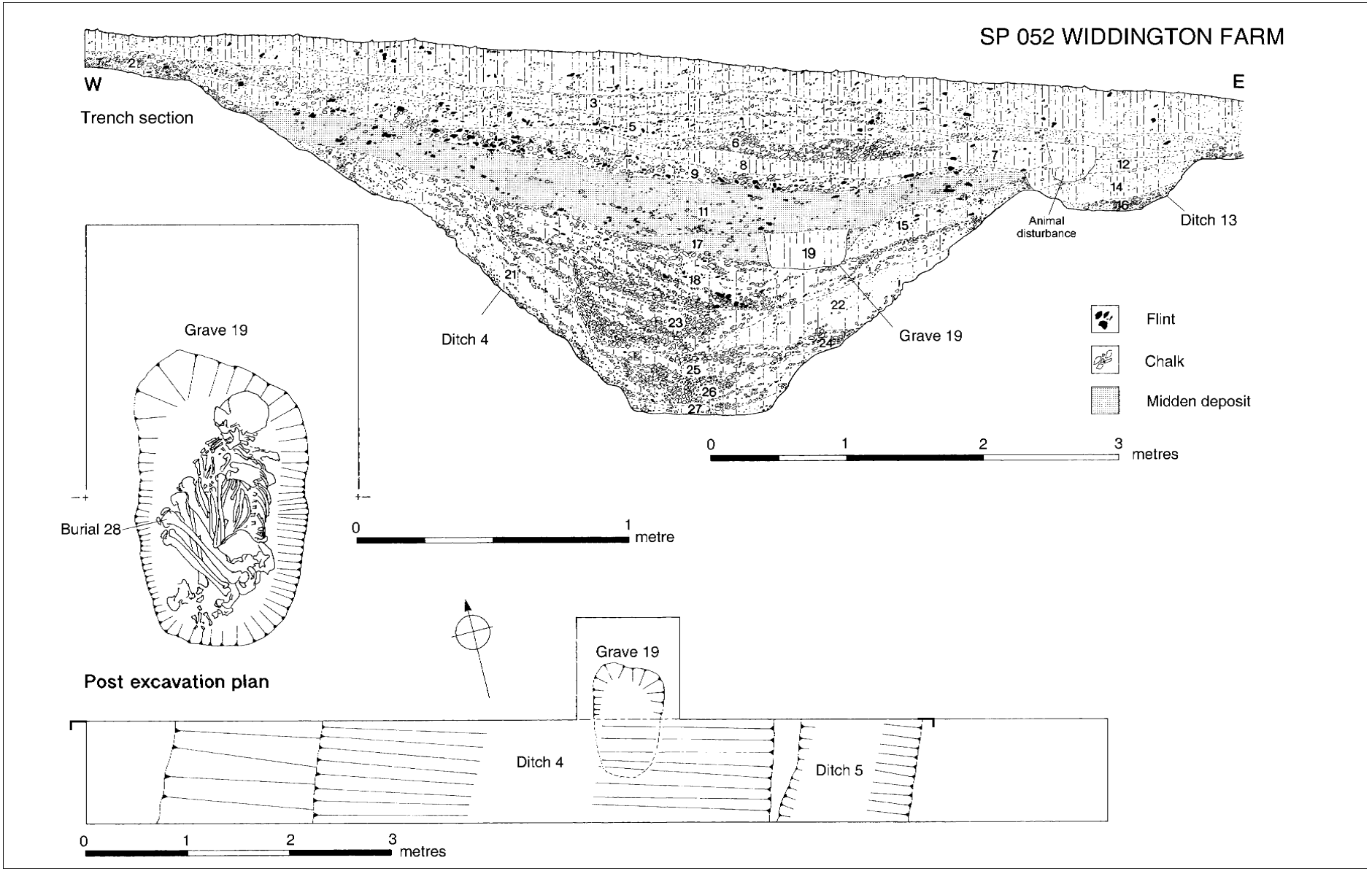

Figure 3.2 Widdington Farm SP 052: plan and section through enclosure ditch with plan of the Late Iron Age inhumation burial

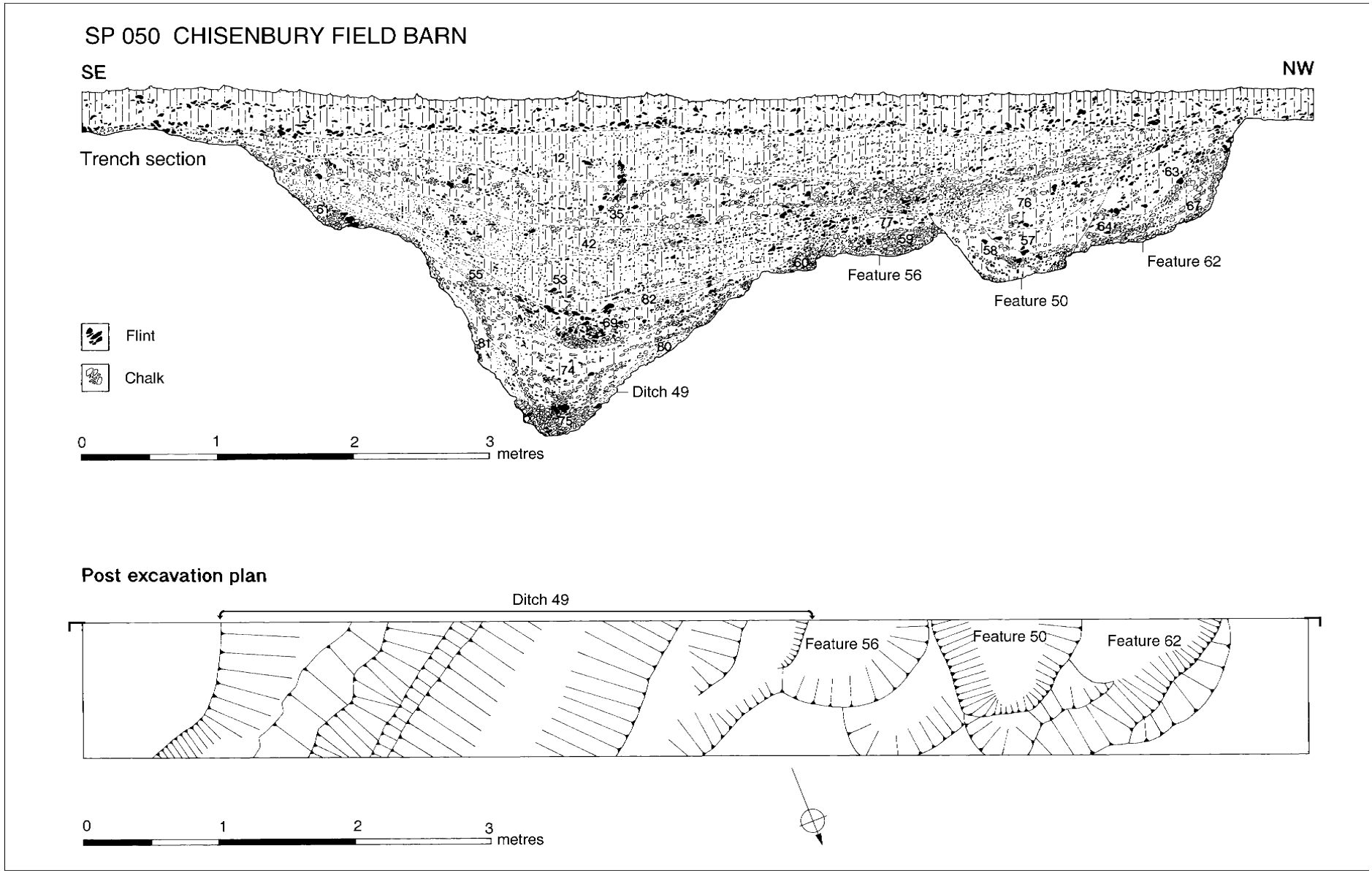

Figure 3.3 Chisenbury Field Barn SP 050: plan and section through main enclosure ditch and smaller, outer ditches

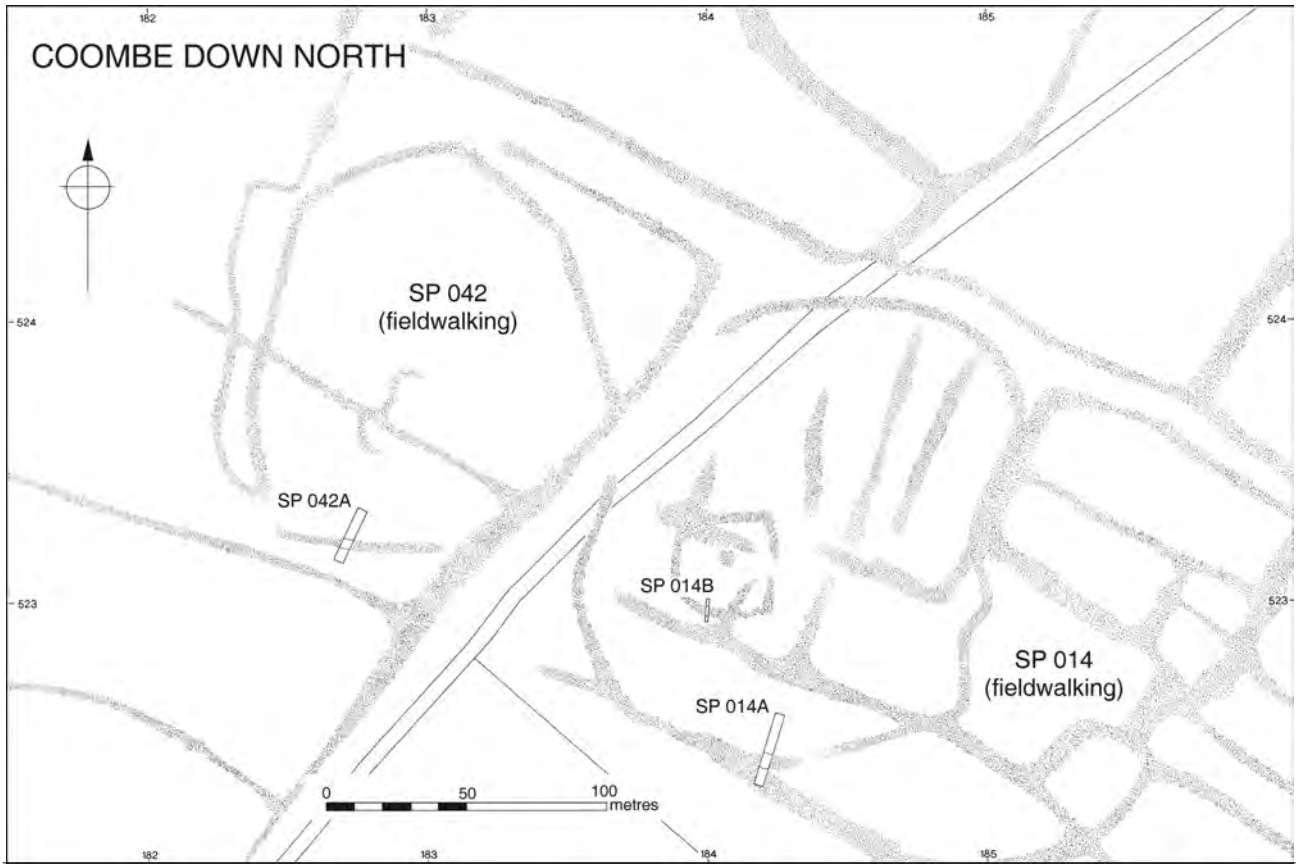

Figure 3.4 Aerial photographic transcription of Coombe Down enclosures SP 014A, 014B, and 042

graphic transcription, undertaken by RCHM(E). The geophysical survey revealed in considerable detail a partly bivallate enclosure underlying the Romano-British settlement and extending northwards into the modern arable (SP 009) (Fig. 3.9), while the air photographic transcription showed two adjacent enclosures (SP 014A and SP 042A) lying less than a kilometre to the north-west, the former surrounding a smaller, sub-rectangular enclosure (SP 014B) (Fig. 3.4). These were sited on a broad flat-topped ridge at 150–160 m OD and were intervisible with SP 009, as well as with two incompletely mapped enclosures less than 600 m away on Longstreet Down (SP 016A and SP 019A), part of the same ridge (Fig. 3.5).

Surface collection across Coombe and Longstreet Downs had produced some evidence for the occupation date of these enclosures (Fig. 3.6). As well as large quantities of burnt flint noted across the interior of SP 019A, 48 sherds of Iron Age pottery were recovered from an intensive collection transect across the site. A concentration of burnt flint was also recorded during fieldwalking alongside SP 016A, again associated with small numbers of Iron Age sherds, while further sherds were recovered, *c.* 600 m to the north, during the excavation of lynchets on the western side of the ridge (SP 073–075) (Fig. 3.5). The quantities of pottery were significantly greater than is usual in lynchet deposits, and they are a strong indication that the Romano-British cultivation was spreading over an area of Iron Age settlement. Fewer Iron Age sherds were recovered by fieldwalking over SP 014A and SP 042A, but there was a low background scatter of burnt flint which reached a peak over SP 014A. Although the numbers of Iron Age sherds are low by comparison with those of Romano-British date, they are nonetheless significant in view of their general paucity in Iron Age surface collection assemblages throughout the study area.

On the basis of their overall morphology (Fig. 3.1) and the evidence from the surface finds, the enclosures on Coombe Down and Longstreet Down seemed certain to be of broadly Iron Age date. Even when considered in such crude terms, the clustering of five separate enclosures within a kilometre of one another appears to represent an unusually focused pattern of occupation. Although not all of these need have been in use at the same time, the excavation of similar sites in the study area had produced evidence for more than one phase of enclosure, at least raising the possibility of overlapping occupation at some of the Coombe Down and Longstreet Down sites.

SP 042A Coombe Down North

The shape of this enclosure, which lies immediately to the west of SP 014A, is not entirely clear from the air photographic transcription (Fig. 3.4), due to the fact

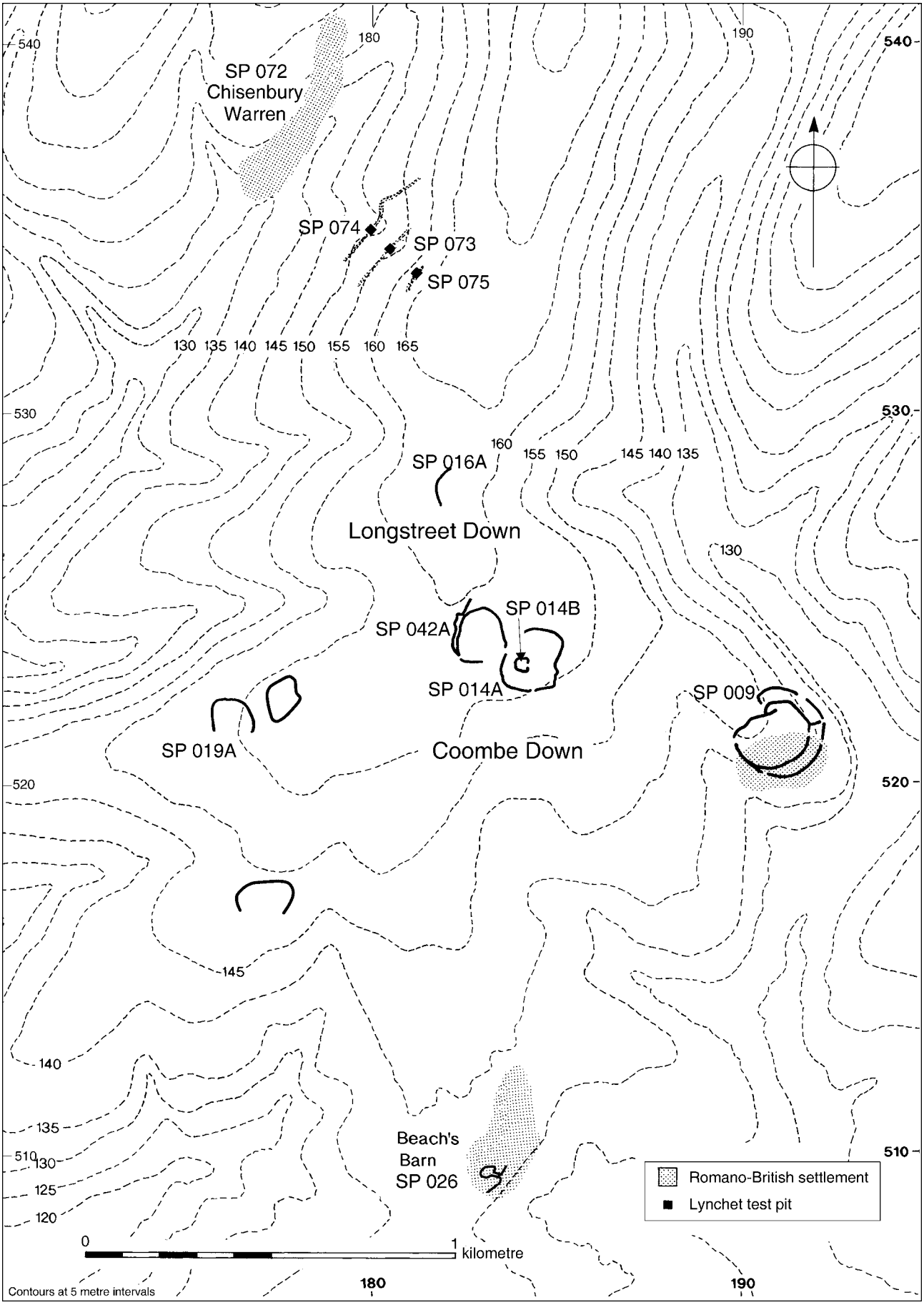

Figure 3.5 Iron Age and Romano-British sites on Coombe Down and Longstreet Down (Beach's Barn enclosure based on Wessex Archaeology 2006)

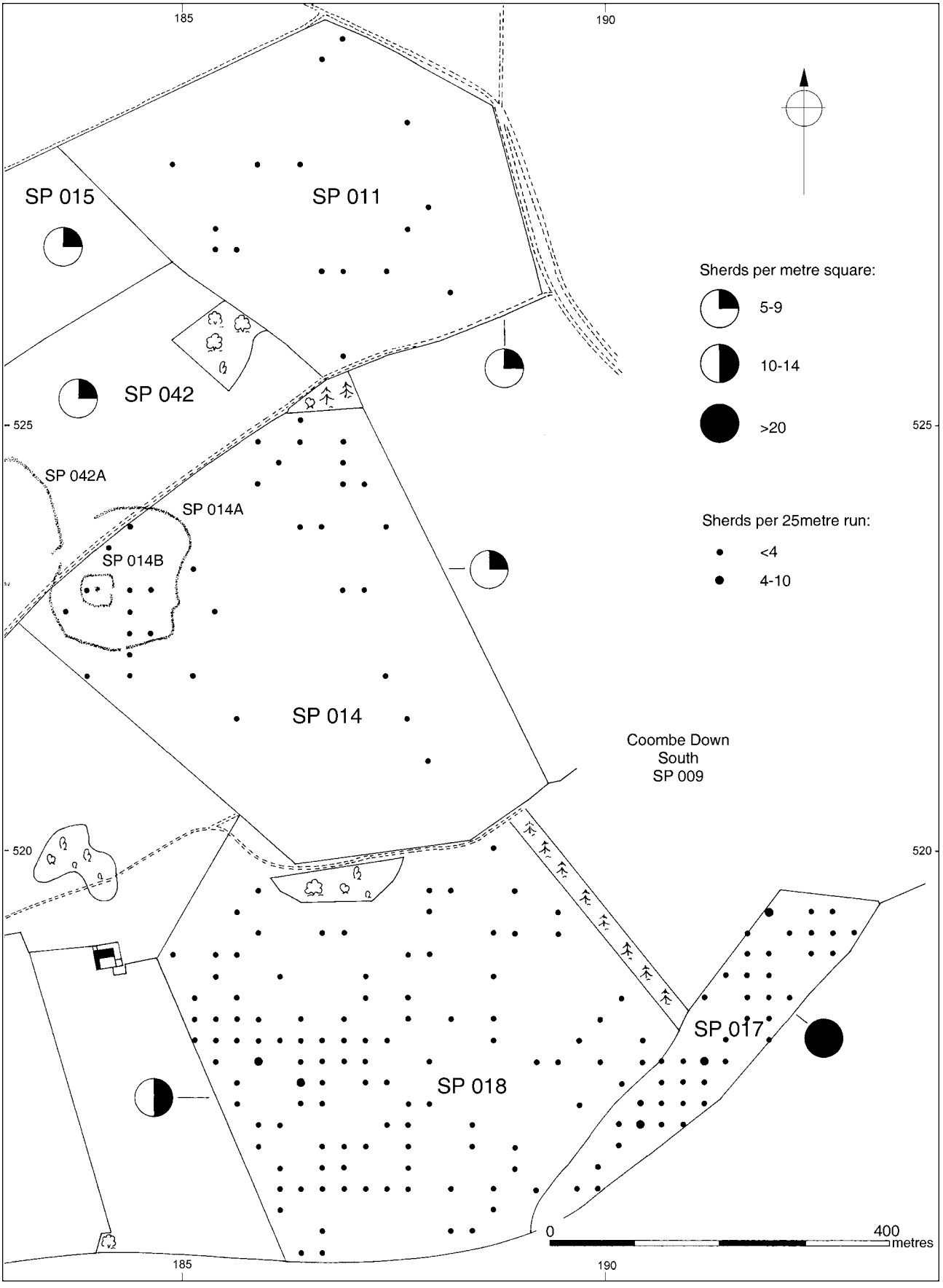

Figure 3.6 Gridded surface collection of Iron Age and Roman pottery on Coombe Down and Longstreet Down

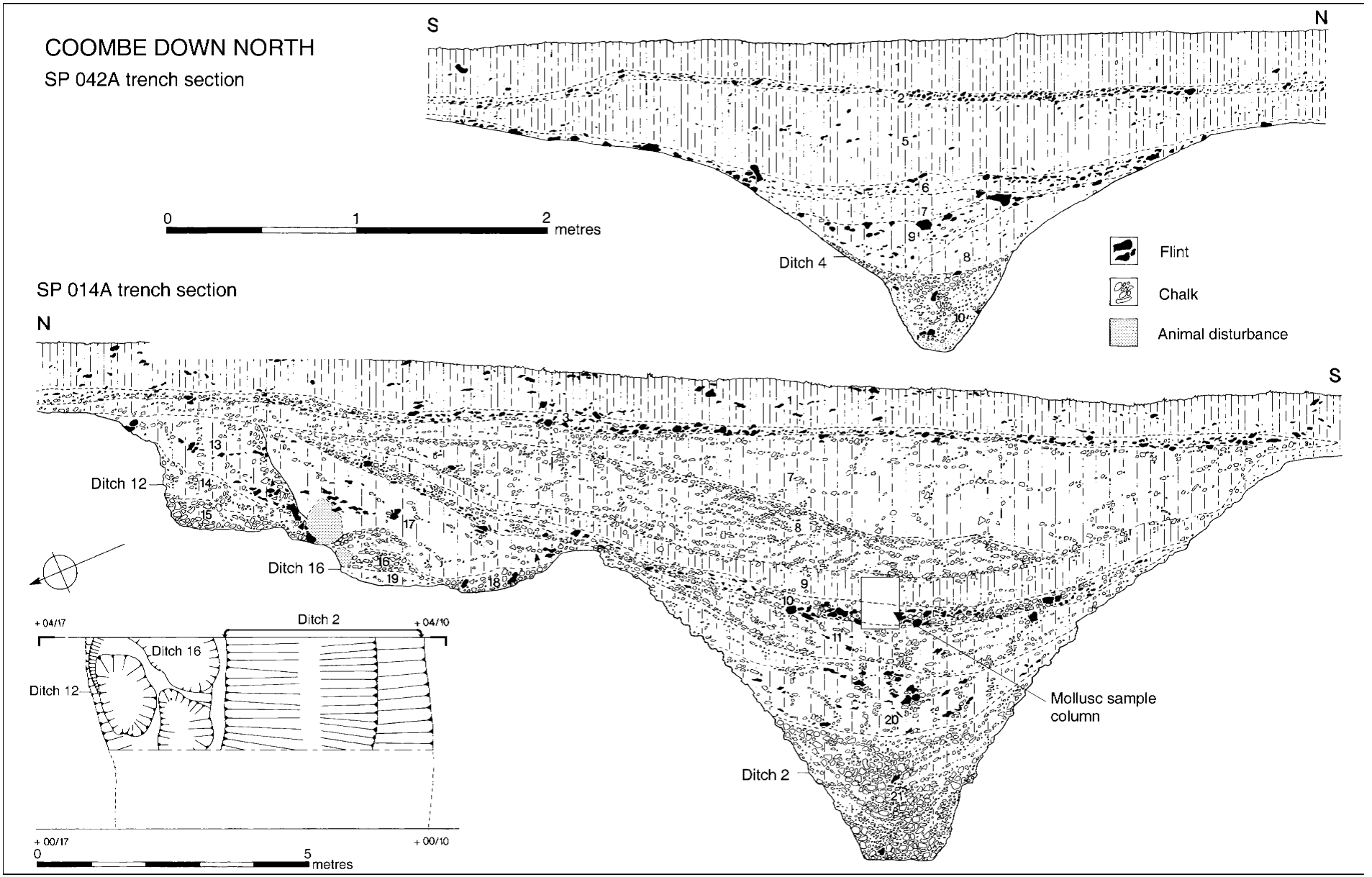

Figure 3.7 Coombe Down North enclosures SP 042A and SP 014A

that it is partly obscured by an overlapping field system. It covers *c.* 1.4 ha and there appear to be two gaps in its circuit, at the south-west and south-east. Auger traverses were used to locate the ditch, but due to the variable geology across this part of the hilltop, which made it difficult to follow the course of the ditch for any distance, the final selection of a location for the excavation was an apparently isolated stretch of ditch on the southern side, between the gaps, where the augering clearly revealed the presence of ditch silts.

The ditch (4) had a broad and gently shelving v-shaped profile, 3.5 m wide at the top and 1.7 m deep with a rounded base (Fig 3.7). This suggests that the enclosure had relatively slight earthworks, nowhere near as monumental as those indicated by the much larger ditches at the adjacent enclosures (SP 009 and SP 014A, below). No other archaeological features were revealed in the trench, although the ditch did produce sufficient pottery to suggest an Early/Middle Iron Age date for the enclosure. The primary silts (10) produced a few Late Bronze Age and undiagnostic Iron Age sherds, and although most of the 31 sherds from the layer above (9) show affinities with Middle Iron Age pottery, they include Late Bronze Age sherds and three from Early Iron Age scratch-cordoned Bowls. Context 7 also produced 13 Middle Iron Age sherds, while those from context 6 were mostly small and rather abraded and were accompanied by a single Late Bronze Age sherd, indicating that the finds from this level were mostly residual. As at Widdington Farm (SP 052), there is an absence of Late Iron Age pottery, and a deep ploughsoil (5) containing early Roman pottery (along with a large number of very abraded Middle Iron Age sherds) reflects a period of Romano-British cultivation also seen in the other enclosure ditches.

SP 014A and SP 014B Coombe Down North

The enclosure at SP 014A is subcircular enclosing *c.* 1.9 hectares, with the ditch following a sinuous line around the eastern part of its circuit (Fig. 3.4), a similar feature being noted at SP 009 (below). There appear to be two gaps in its circuit, a narrow possible entrance on its south side, and a wider break to the north-west, where it lies adjacent to a major element of the field system and enclosure SP 042A. As the ditch was not visible on the ground it was located by augering, and a 26.5 m by 3.5 m trench was excavated just west of its southern entrance, spanning the ditch and extending a short distance into the enclosure.

As well as the enclosure ditch, the trench revealed two earlier, smaller ditches just inside it, but no other features within the enclosure (Fig. 3.7). A 0.6 m deep ditch (12), with a flat but uneven base, was stratigraphically earliest, although its uppermost fill (13) produced only five undiagnostic Iron Age sherds (and two residual Late Bronze Age sherds). It was truncated on the outside by a slightly deeper (0.8 m) ditch (16), also with an uneven base, which yielded no dating evidence, and which was cut, in turn, by the main enclosure ditch (2).

Ditch 2 was approximately 4.0 m wide at the chalk surface and 2.5 m deep with a symmetrical, v-shaped profile. The earliest dating evidence from it consisted of a small number of well preserved Iron Age sherds from the primary silts (21). With the exception of a single rim sherd these were undiagnostic, although on fabric grounds the closest parallels are with transitional Early–Middle Iron Age assemblages in the date range of 450–350 BC. Further Iron Age sherds, exhibiting various degrees of abrasion, were recovered from the secondary silts (11 and 20), above which was a well developed soil profile (contexts 9 and 10) representing a significant period of stability in the environment of the ditch. The lower part of this soil (10) contained 22 sherds similar in date range to those from the secondary silts and 12.5 kg of burnt flint. The fine textured upper soil horizon (context 9) representing a buried turf line was devoid of finds.

The presence of a small number of Romano-British sherds in an overlying colluvial deposit (8) and fossil ploughsoil (7) at the top of the enclosure ditch may date the earliest stages of Romano-British cultivation on the site (Chapter 4).

A small sub-square enclosure, SP 014B, lies within the south-western quadrant of enclosure SP 014A. It is approximately 35 m across, with an east facing entrance. The excavation of an 8 m by 2.5 m trench on its south side revealed a v-shaped ditch (5), approximately 2.5 m wide at the chalk surface and 1.8 m deep (Fig 3.8), and therefore considerably slighter than enclosure SP 014A. Its outer side cut a small circular pit (18) that produced a fragment of Late Bronze Age/Early Iron Age pottery, as well as large quantities of 'twig-sized' charcoal. Exclusively Early Iron Age sherds were found throughout the ditch's primary and secondary silts, including a large assemblage (116 sherds) from context 14. This layer was overlain by a spread of large pieces of flint (12, not visible in section) above which had formed a soil (11) containing Early Iron Age sherds.

There was a large, roughly cylindrical pit (3) less than a metre inside the ditch. It was some 2 m in diameter and 1.95 m deep with a flat base 1.65 m across. Below the chalk surface the stratigraphy was composed of a series of dumps and tip-lines spilling in from various angles, interrupted in places by lenses of chalk rubble caused by the collapse of the sides, but with no sign of any prolonged period of natural silting. The pit produced a sizeable assemblage of Late Bronze Age/Early Iron Age All Cannings Cross

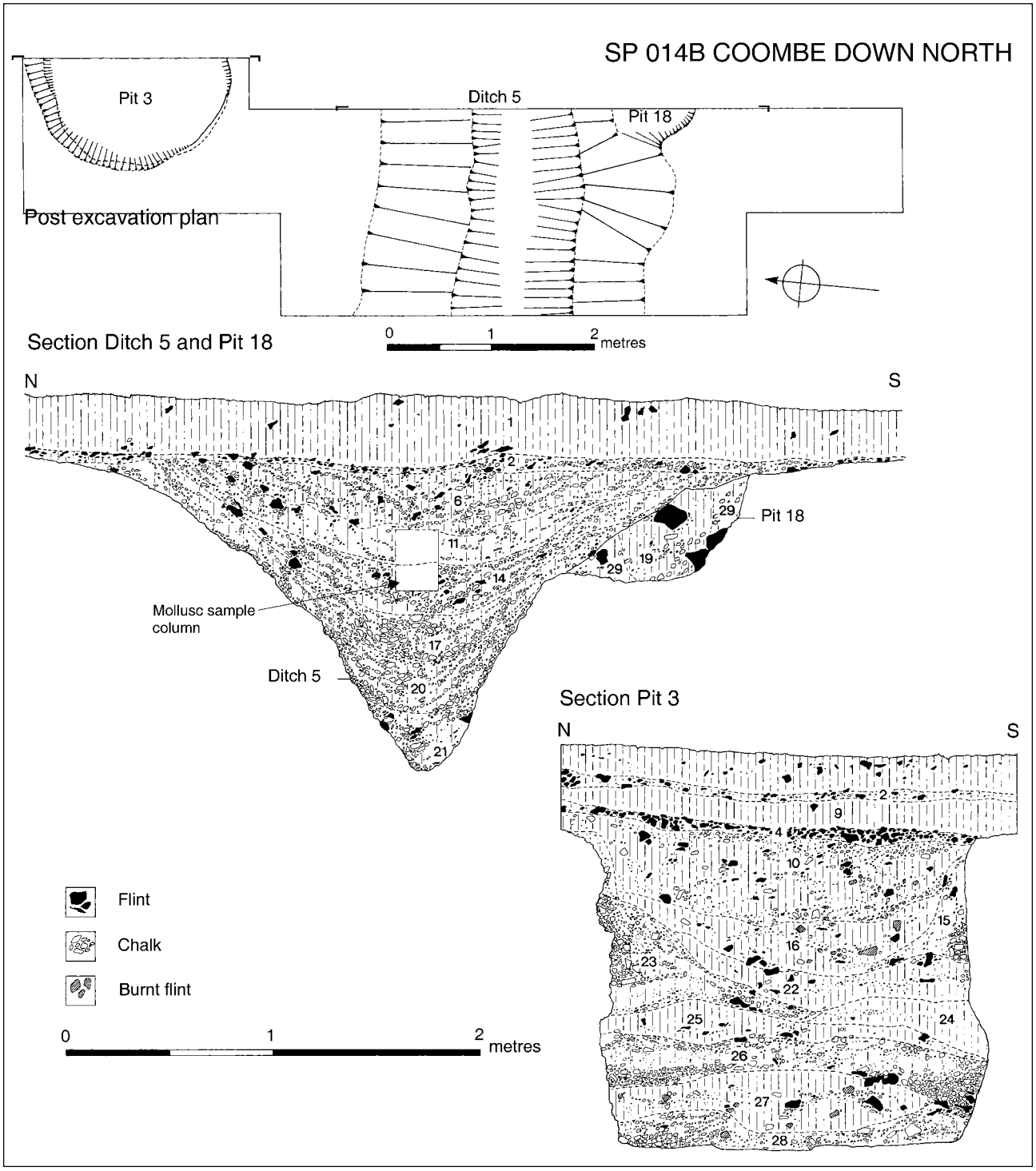

Figure 3.8 Coombe Down North enclosure SP 014B: plan and sections of enclosure ditch and Late Bronze Age/Early Iron Age pit

pottery (800–400 BC), several groups of articulated animal bone, over 59 kg of burnt flint and a large sandstone quern fragment. Unless the pit had cut through an internal bank associated with the ditch, it is likely that it (like pit 18) represents Late Bronze Age or Early Iron Age activity pre-dating the establishment of the enclosure. The air photographic transcription also indicates a large circular feature near the centre of the enclosure, which may or may not be associated with it.

A thin band of flints (4), representing the truncated lower horizon of a buried soil surviving in the hollow of the pit, produced Roman pottery, reflecting the long history of Romano-British cultivation more clearly recorded at SP 014A.

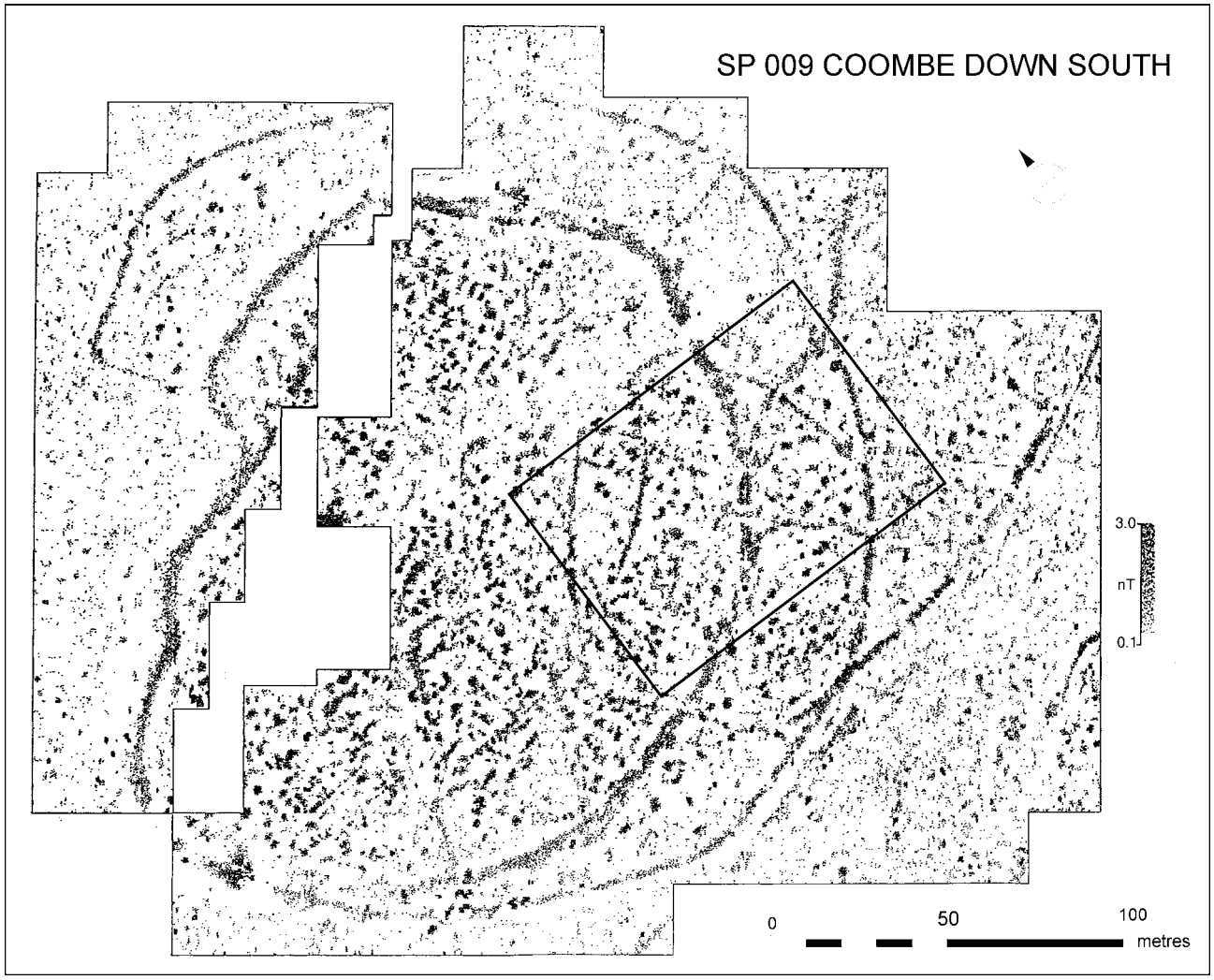

Figure 3.9 Geophysical survey of Coombe Down South enclosure SP 009

SP 009 Coombe Down South

The most easterly enclosure of the group (the bivallate enclosure) occupies a south-east facing spur overlooking a broad coombe that forms part of the northern drainage of the Nine Mile River, a tributary of the River Avon. As revealed by the geophysical survey (Fig. 3.9), the substantial inner ditch (enclosing 2.5 ha) follows a largely regular curve around its southern half, but at the west it turns inwards and follows a more sinuous line around the north side (where there is evidence its course was altered) towards the slightly in-turned east-facing entrance. The less substantial outer ditch, enclosing some 4 hectares, lies 30–40 m outside, matching closely the line of the inner ditch around the north and east, but gradually converging on it at the south, and turning inwards sharply at the north-west to form an entrance/gateway. Two large pits at this point might be associated with some form of entrance structure. The inner ditch also turns inwards at this point, but there is no outer ditch along the sinuous section of the inner ditch to the south-west. There is no apparent topographical cause for the irregular shape of the enclosure in this sector, although it is comparable to the eastern side of enclosure SP 014A.

The geophysical survey also showed a number of ditches running between the outer and inner ditches. Some extend beyond the outer ditch and appear to be later features associated with the settlement earthworks. Others, however, may be associated with the enclosure, one running perpendicular between the inner and outer ditches, *c.* 25 m north of the inner ditch entrance, another running from just south of the entrance, curving towards the south to meet the outer ditch at an angle of *c.* 45°. Although the latter appears to combine with a number of linear anomalies inside the enclosure (as well as the outer enclosure ditch), possibly forming a small subcircular enclosure with an inturned entrance on its north side, the lines of the ditches do not match up precisely, and the interpretation of these features must remain in some doubt.

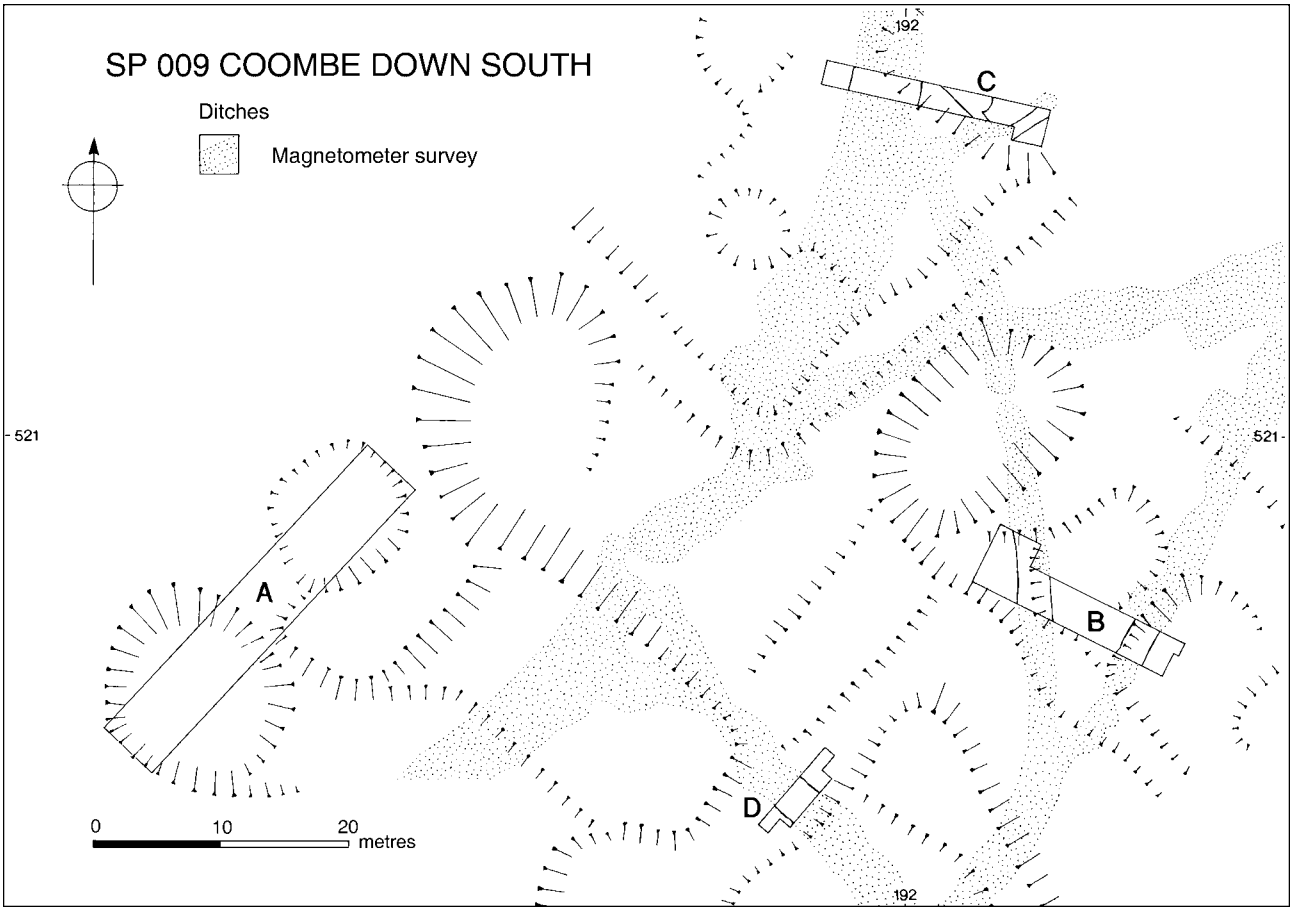

Figure 3.10 Trench locations at Coombe Down South SP 009

The entrance in the inner ditch is associated with a broad strip, devoid of geophysical anomalies, running west into the interior. To the north and south of this are clusters of probable pits, their distribution giving the impression of extensive and orderly activity. Very few anomalies were noted between the inner and outer ditches on the north and east sides, although south of the entrance there are a range of other linear features, both within the enclosure, between the inner and outer ditches and extending beyond the enclosure towards the east, some of them intersecting. Some of these give the appearance of sub-enclosures within the main enclosure, or smaller enclosures overlapping the south-eastern sector of the enclosure boundary.

Four trenches were excavated. Trench A, measuring 30 x 5 m within the interior of the enclosure, was sited primarily to investigate the earthworks of the Romano-British open settlement (Fig. 3.10, Plate 1). The other three trenches were positioned so as to cross the inner and outer ditches of the Iron Age enclosure and two of the other linear anomalies. Trench B was 18 x 3 m, spanning the outer enclosure ditch and the ditch running at an angle between the outer and inner ditches. Trench C was 17 x 2 m spanning the inner enclosure ditch. Trench D was 6 x 2 m, spanning a ditch that runs between the inner and outer ditches but may also extend over them to join two other linear features which run eastwards from the enclosure. None of the trenches, however, crossed the intersections of the ditches, with the result that no stratigraphical relationships between the ditches were recorded; the interpretation of the sequence of features, therefore, relies entirely on the dating provided by the pottery.

Plate 1 Coombe Down SP 009 view of trenches from south-west

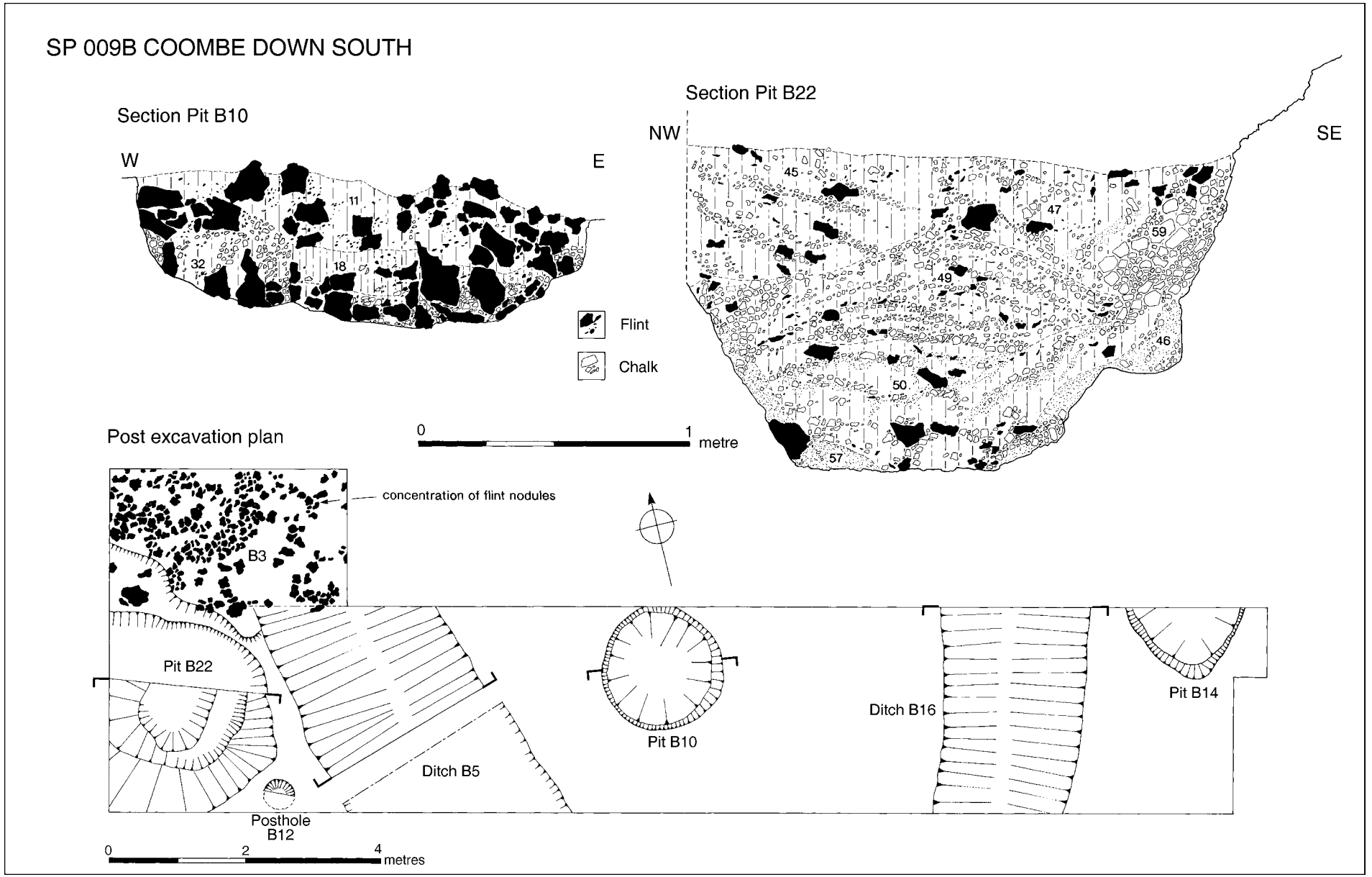

Figure 3.11 Coombe Down South SP 009, Trench B

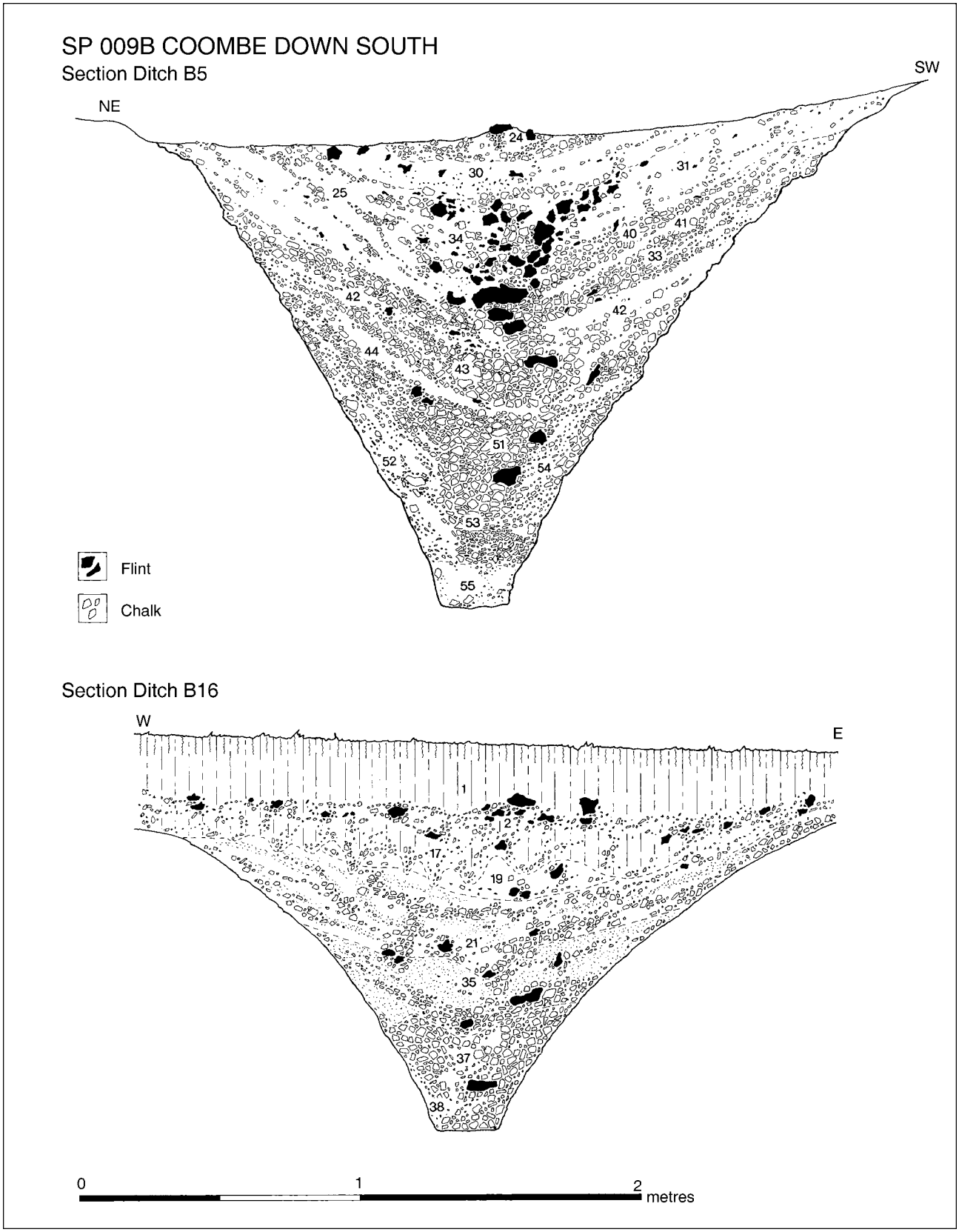

Figure 3.12 Coombe Down South SP 009, Trench B, ditches B5 and B16

Trench B

If the ditch running at an angle between the inner and outer ditches did form part of a subcircular enclosure, its position suggests that such an enclosure pre-dated the bivallate enclosure (Fig. 3.11). A section of the ditch (B5) was excavated in Trench B close to where it joins the line of the outer enclosure ditch (Fig. 3.12). It was approximately 3 m wide and 2 m deep with a V-shaped profile and a 0.2 m wide

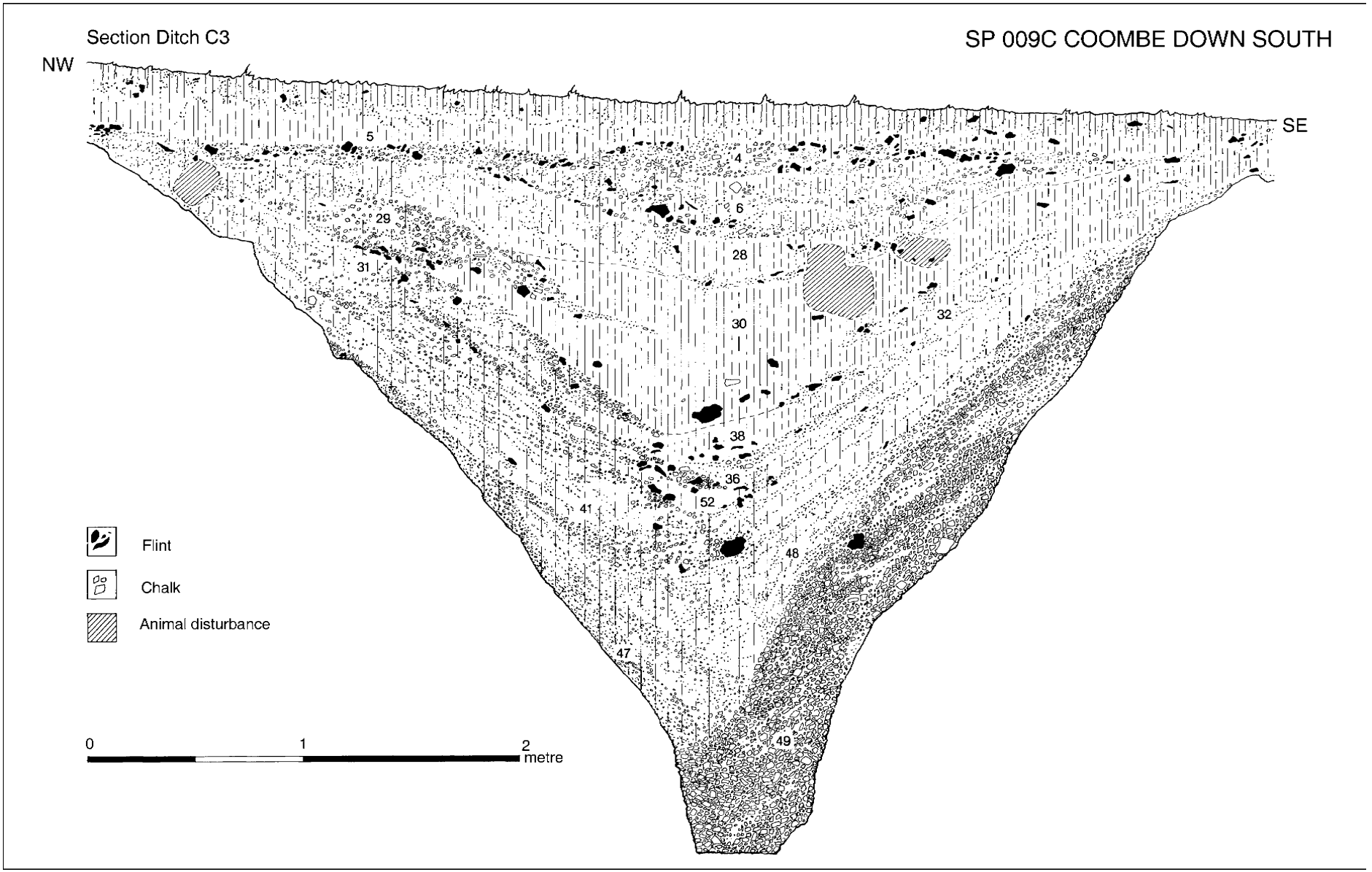

Figure 3.13 Coombe Down South SP 009, Trench C, ditch C3

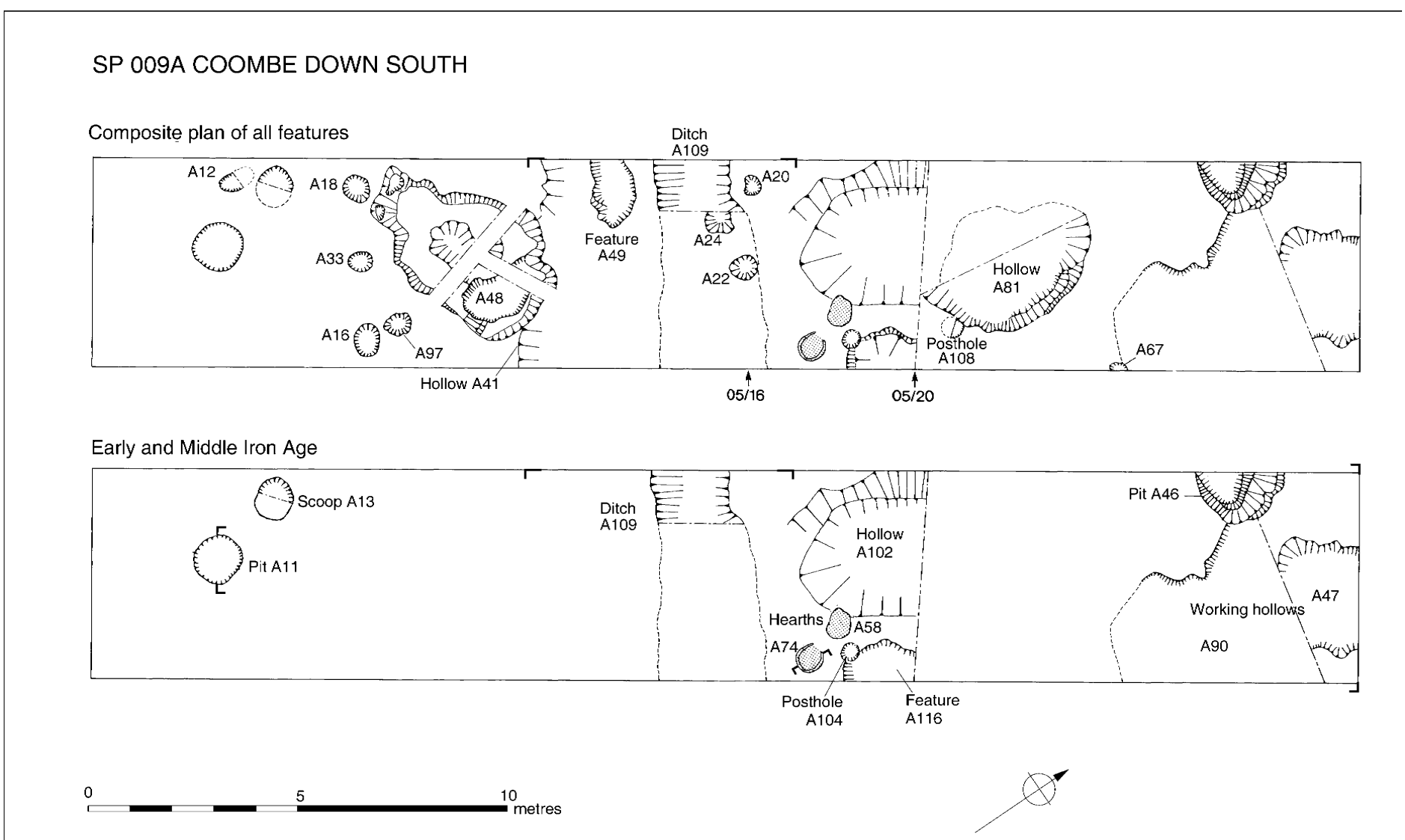

Figure 3.14 Coombe Down South SP 009, Trench A, composite plan and combined Early and Middle Iron Age features

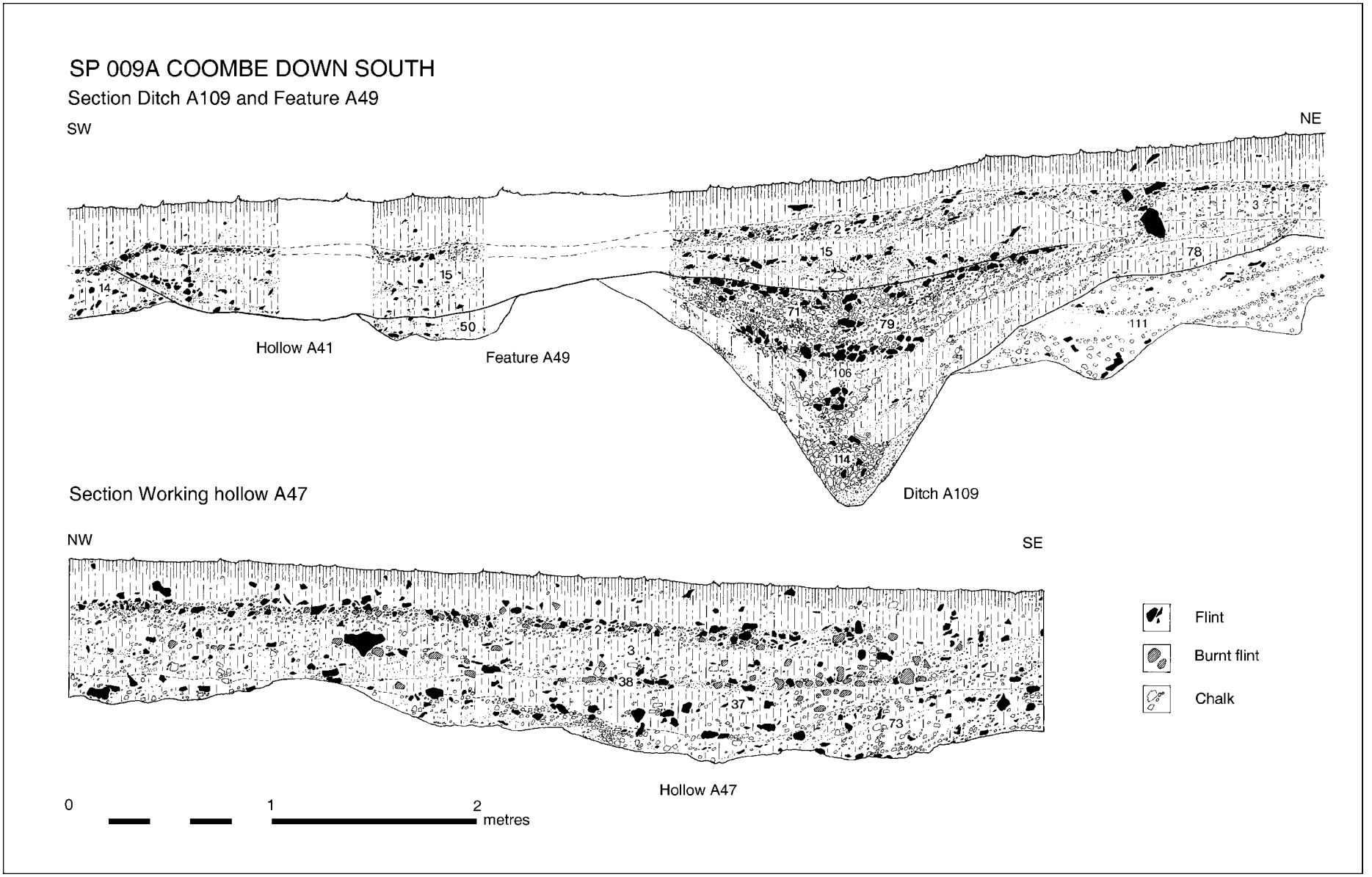

Figure 3.15 Coombe Down South SP 009, Trench A, sections of ditch A109 and hollow A41, and working hollow A47

flat base, although its uppermost fills had been completely truncated by one of the hollow platforms within the later open settlement. It had filled naturally with alternate layers of coarse and fine silt. There was no dating material from the primary silts, although a single sherd of Roman pottery is recorded as coming from a lower secondary silt (B44). The bulk of the sherds, however, were of Early/Middle Iron Age date, suggesting that the Roman sherd is almost certainly intrusive (despite being the stratigraphically earliest find). No other Roman pottery was found in the ditch, apart from in the uppermost, tertiary fill (B6, not shown in section).

The outer ditch of the bivallate enclosure (B16), excavated in the same trench, was shallower in profile, being approximately 2.5 m wide and 1 m deep, with a convex V-shaped profile and a 0.2 m wide flat base (Fig. 3.12). Again, there was no dating for the primary silts, although two sherds from the middle fills were of Early and general Iron Age date. As the intersection of the ditches B5 and B16 was not investigated, the chronological relationship between them remains unresolved. (The other features revealed in the trench were of Romano-British date – see Chapter 4.)

Trench C

The inner ditch (C3) of the bivallate enclosure was excavated in Trench C, close to, but again just beyond, the intersection with ditch B5. It was a massive V-shaped cut, some 5 m wide and 3.5 m deep, with a 0.3 m wide flat base (Fig 3.13). Despite the huge amount of chalk that would have been extracted from the ditch, no trace of an inner bank remained, although the primary silt (C49), which produced a single Early/Middle Iron Age sherd, comprised loose chalk rubble lying against the outer (eastern) side of the ditch. The lower secondary silt (C41) produced a group of fresh sherds comprising approximately one third of a highly burnished Middle Iron Age Saucepan Pot (eight Late Iron Age/early Roman sherds from this layer would appear to be intrusive). Further Middle Iron Age and Iron Age sherds were recovered from the overlying secondary fills (C36 and C38).

The rate of erosion and silting then appears to have slowed, as represented by a thick deposit (up to 0.7 m) of fine textured silt with a high organic content (C30) possibly indicating a period of inactivity during the Late Iron Age. A chalk lens extending into this layer produced two fragments of AD 1st–2nd century pottery, but the earliest secure Roman sherds are of late Romano-British date from the overlying tertiary silts (C28 and C6) which have the appearance of a ploughsoil (see Chapter 4).

Trench A

Trench A, positioned some 10 m inside the enclosure's inner ditch and 50 m south of the entrance, revealed a range of features associated with the occupation of the enclosure (Fig 3.14). Among the earliest of these was a series of irregular hollows (A47, Fig 3.15, and A90), and a large pit (or ditch terminal) (A46) at the north-east end of the trench. The three fills in hollow 47 (A80, A73, and A37) produced over 4.2 kg of Early Iron Age pottery, including scratch-cordoned Bowls and other fine 'red-coated' wares, as well as a small quantity of iron slag. There was another hollow (A102) towards the centre of the trench, close to ditch A109. It was not fully excavated and its full extent is not clear, either to the north-east or adjacent to the ditch. Its lower and upper fills (A94 and A62) produced between them *c.* 1.7 kg of Early Iron Age pottery (the upper fill also containing a few intrusive Roman sherds). These hollows resemble the amorphous structures described as 'working hollows' that have been recorded at a number of Early Iron Age sites.

On the south-west side of hollow A102, the chalk bedrock dropped down in irregular steps towards ditch A109, these being filled with two layers of stony orange/brown silt with an intervening stone-free layer (recorded collectively as A111) (Fig. 3.15). Although these layers (which were not fully excavated) produced three sherds of Early/Middle Iron Age pottery, the layers, which were cut by the upper part of the ditch, were interpreted as possibly natural in origin and the pottery intrusive.

Ditch A109, running south-west–north-east across the trench, was some 2.5 m wide and 1.2 m deep with convex sides, very shallow at the top, and a narrow rounded base. The primary silts (A114) contained no finds, but the secondary silts (A106) produced 55 Early Iron Age sherds, while the overlying layer (A79), produced over 3 kg of Middle Iron Age pottery and 609 g of iron slag. Further Middle Iron Age pottery was recovered from a layer (A78) overlying the north-eastern edge of the ditch (above A111), although its stratigraphical position in relation to both the ditch and hollow 102 was not firmly established.

The only feature securely dated to the Middle Iron Age was a cylindrical pit (A11), *c.* 1.2 m in diameter and 0.65 m deep, at the south-western end of the trench. A number of animal skulls (horse, cow, and dog) had been placed on the base of the pit and covered with soil (A51), filling the pit to a depth of up to 0.2 m (Plate 2). The upper fill (A27) contained abundant burnt flint, and further animal bone including another dog skull, together with fragments of a human jaw from an adult aged 30–35 years. The pit also produced approximately half of a Middle Iron Age developed saucepan pot with a burnished exterior and holes drilled in the base post-firing suggesting that it was adapted as a strainer (Fig. 5.2, P45). Although this feature was small for a Middle Iron Age storage pit, its contents reflect the Iron Age practice of making special deposits in pits. An adjacent shallow circular scoop (A13), producing pottery of general Iron Age date, may be associated.

On the other side of the ditch, a series of adjacent hearths or oven bases may also belong to the Middle Iron Age (Fig. 3.16). Feature A58, overlying the edge of Early Iron Age working hollow A102, consisted of a burnt clay surface, 0.5 m by 0.8 m, above a layer of burnt flints, while feature A74 consisted of a circular baked clay basin, 0.8 m in diameter and 0.3 m deep, containing a layer of burnt

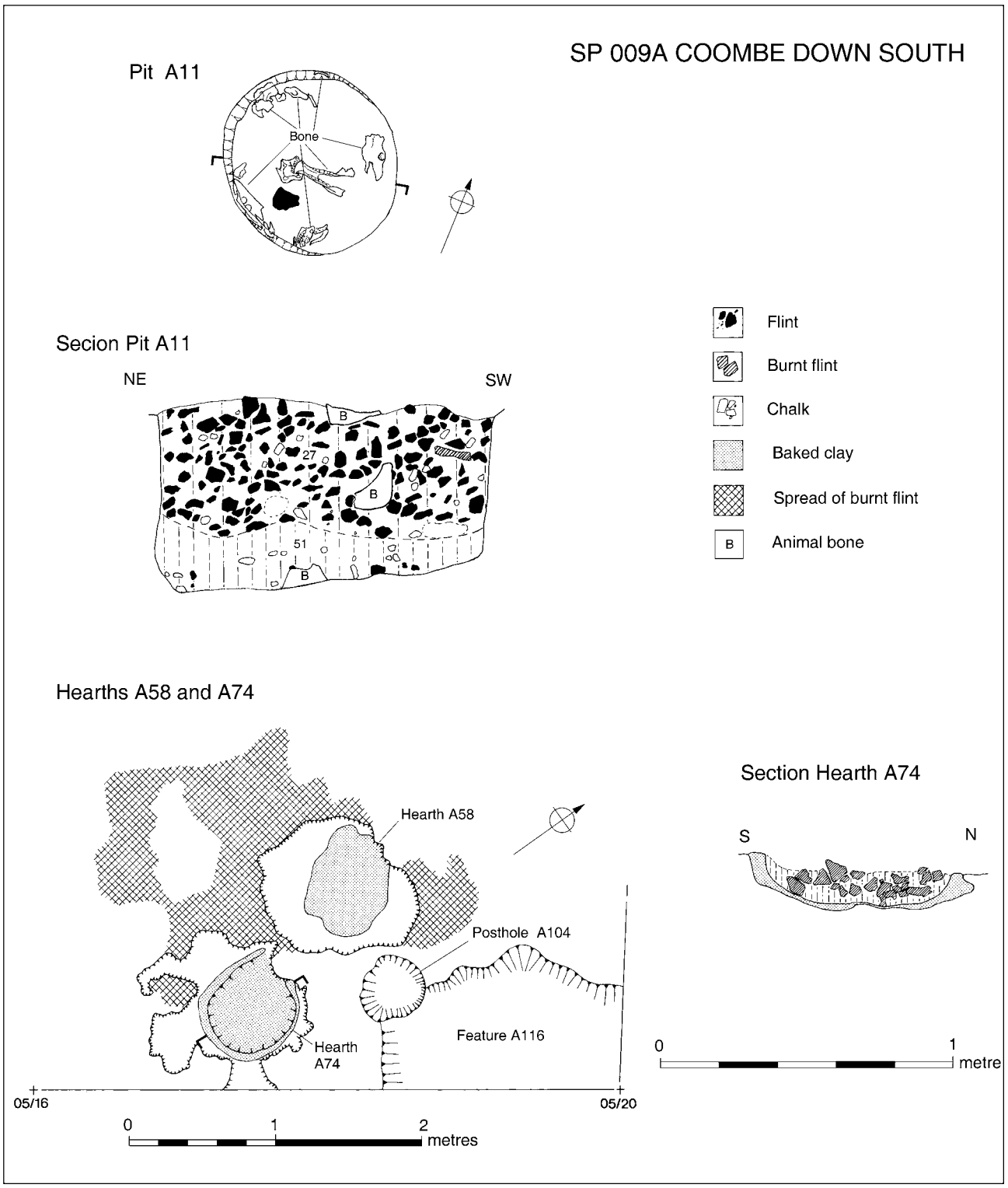

Figure 3.16 Coombe Down South, SP 009 Trench A, plan and section of pit A11, plan of hearths A58 and A74, and feature A116, section of A74

flints overlying a charcoal rich soil. There was a larger feature (A116) only partially excavated, immediately to their east. It was 0.35 m deep and its base was filled with a brown soil (A115) sealed by a charcoal-rich layer (A112), above which was a basin of compact burnt clay (A103) containing another dark charcoal-rich soil (A101) containing six Iron Age sherds, indicating the re-use of the feature. On its west side, and possibly associated with it, there was a small circular cut (A104), probably a posthole, 0.4 m in diameter and 0.2 m deep. These features are likely to be associated with the vestiges of a cobbled surface composed of compacted burnt flints (A59, A72), containing Iron Age pottery. The precise phasing of these contexts is uncertain, however, because of the disruption caused by subsequent cultivation.

Plate 2 Coombe Down SP 009, pit A11 with bone deposit

Summary
Although the geophysical survey of the Iron Age enclosure (Fig. 3.9) provides considerable details as to its shape and internal layout, the complex of intercutting ditches on its eastern side remains hard to interpret. While the various ditch sections excavated in Trenches B, C, and D have provided some information about their dating, many basic questions remain unanswered, such as the relationship of ditch B5 to the enclosure ditches, and the possibility that it formed part of a smaller subcircular enclosure pre-dating the bivallate enclosure. The lack of excavated sections at the ditch intersections means that any relative dating relies on the pottery recovered from the ditch fills, but this only points to the fact that ditch B5, like the outer and inner enclosure ditches, was of probable Early/Middle Iron Age date.

Nevertheless, the series of working hollows in Trench A point to a significant level of Early Iron Age activity on the site potentially pre-dating the construction of the main enclosure (a number of sherds suggest that this may have originated in the Late Bronze Age). Trench A, as well as lying inside the bivallate enclosure, lies also within the suggested boundary of the possible smaller enclosure raising the possibility that this area was an early focus for activity on the site.

Whether the Early/Middle Iron Age ditch crossing Trench A relates to such pre-enclosure activity, possibly forming a field boundary, or represents an internal division within the bivallate enclosure (a number of such divisions being suggested by the geophysical survey), is uncertain. What is evident, however, is that this trench witnessed varied forms of activity through the Early and Middle Iron Age, with working hollows, occupation horizons, the deposition of animal bones in a pit, a series of hearth features associated with a cobbled flint working surface, and a possible structure as indicated by a post-hole. The large number of pit-like anomalies recorded by the geophysical survey within the interior of the enclosure, extending well beyond the limits of the later Romano-British settlement, point to the intensity of Iron Age settlement activity on the site.

The inner ditch of the bivallate enclosure was of considerable size and was presumably accompanied by an equally imposing internal bank, creating a monument comparable in scale with some of the smaller hillforts. The smaller, yet still substantial, outer ditch would have created an outer, possibly subdivided, buffer zone entered from the north-west. This appears not to have been primarily defensive, completing only part of the circuit of the enclosure, but could have been used for the corralling of animals outside the main settlement area. The lack of dating for the outer ditch means that the question remains as to whether it was constructed at the same time as the inner ditch, or was a later addition, possibly contemporary with a small extension to the inner ditch on the north-west side of the enclosure.

The absence of any clearly Late Iron Age features suggests that that occupation of the enclosure was abandoned during the 3rd century BC, the subsequent phase of relative inactivity possibly being reflected in the thick organic soil in the upper part of the inner ditch. The recovery, however, of small quantities of residual Late Iron Age pottery from the ploughsoil in Trench A and from a number of features does indicate some level of activity in the area resulting in the distribution of this material, possibly through the manuring of fields.

SP 023A/B Everleigh

The enclosure at Everleigh is situated on the broad low downland plateau between the Bourne valley to the east and the Nine Mile River valley to the west, but overlooked by the higher ground of Sidbury Hill some 2 km to the south (Fig. 1.2). The RCHM(E) surveyed a series of earthworks alongside the enclosure, comprising small rectangular hollows and platforms arranged along a north-west–south-east aligned hollow-way with a regular arrangement of 'Celtic fields' abutting them. While these earthwork features suggested the presence of an open settlement, an array of test pits excavated over them revealed no evidence of such. However, a number of Late Neolithic/Early Bronze Age sherds recovered from one of the test pits may reflect the proximity of a small henge monument (SMR no. 8404) immediately adjacent to the enclosure.

A number of sherds of Late Bronze Age pottery were also recovered from the test pits, and from the enclosure ditch itself, although the latter seem likely to be residual, belonging to a phase of settlement pre-dating the enclosure. However, they may represent the start of a period of occupation continuing into the Early Iron Age, the enclosure boundary being

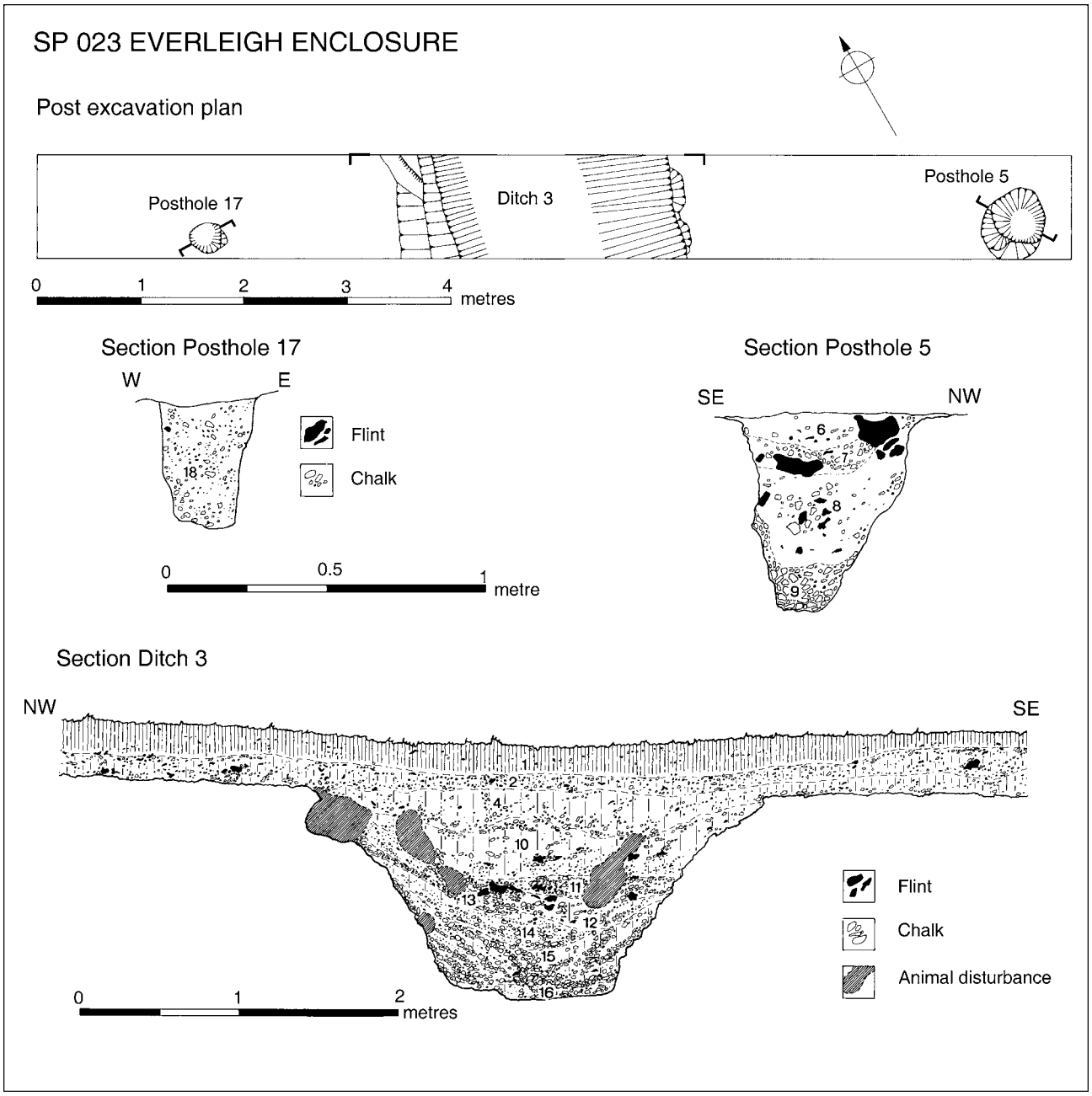

Figure 3.17 Everleigh enclosure SP 023, sections of post-holes 17 and 5, and ditch 3

constructed in a location that was already of some significance. Although no trace of an enclosure bank remained, the subcircular enclosure ditch was clearly visible on the ground. It had a maximum diameter of 100 m, with an entrance on the south side (Fig. 3.1), the eastern ditch terminal being exposed (but not excavated) in a 4 x 4 m trench (SP 023B).

A 10 x 1 m trench (SP 023A) was excavated on the eastern side of the enclosure, at the point where the adjacent earthworks encroached on the enclosure ditch (Fig. 3.17). This revealed that the ditch was 2.0 m wide at the top and 1.5 m deep, with a broad flat bottom approximately 1 m across. It had silted naturally in an uninterrupted sequence with no sign of recutting. Apart from a few sherds of Romano-British pottery in the upper fill and topsoil layer (contexts 1, 2, and 4), the majority of diagnostic sherds from the primary (15 and 16) and secondary fills (11–14) were of Early Iron Age date. The absence of diagnostically Middle Iron Age pottery suggests early abandonment of the enclosure.

The excavation also revealed two post-holes. Post-hole 5 was some 3 m outside the enclosure ditch and may be associated with the earthwork features that are recorded outside the ditch at that point. It was 0.6 m in diameter and 0.6 m deep with traces of flint post-packing, and it produced four sherds of Early and Early/Middle Iron Age pottery. The other post-hole

(17), some 2 m inside the enclosure, was 0.3 m in diameter and 0.4 m deep.

The Bourne Valley and the Eastern Sample Area

SP 004–006 Tidworth lynchets

Excavations at the Tidworth lynchets (SP 004–006) (Fig. 1.3), which are broadly Romano-British in date, showed that the Bourne ridge, on the eastern side of the valley, was occupied from the Late Bronze Age through to at least the Late Iron Age. The excavation of one of the lynchets (SP 005) revealed an underlying ditch (5), identified as the so-called Quarley High Linear Ditch, with Late Bronze Age pottery from its silts providing a date for its origin. The ditch is thought to connect the Quarley Hill hillfort with Windmill Hill, and late prehistoric activity associated with it was identified during the Linear Ditches Project (LDP) just over 1 km to the north (LDP 091). There, a fragmentary horse skull deposited in a shallow scoop cut into the upper secondary silts, gave a radiocarbon date of cal 385 cal BC–AD 5 at 2 sigma (OxA-3047). Although this corresponds to the broad date range of the pottery recovered from the upper ditch fill at SP 005, it is unlikely that the boundary retained its significance throughout this time. The predominantly colluvial character of its silts suggests that the ditch was subjected to a prolonged period of cultivation that may have levelled the earthwork by the 1st century AD.

SP 049 Warren Hill enclosure

The Early to Middle Iron Age activity on the Bourne ridge is likely to be associated with the Warren Hill enclosure, 1.5 km to the south-east. It is sited on a false crest at the end of a steep-sided chalk spur, on the eastern side of the ridge (Fig. 1.3). It was visible only on aerial photographs, which showed it to be subcircular in form with a maximum diameter of 160 m and an entrance on the south-eastern side (Fig. 3.1). It was located on the ground by a combination of geophysical and auger surveys, and a 10 x 1 m trench was excavated across its ditch close to the entrance. The ditch was v-shaped, 5 m wide at the top and 3.2 m deep with a narrow base approximately 0.22 m wide (Fig. 3.18). The chronological sequence was similar to that at Widdington Farm. The ditch (12) had filled by a combination of natural silting and distinct episodes of deposition. Sherds of Early Iron Age pottery in fresh condition, and fragments of a triangular, baked-clay loomweight were recovered from a lower primary silt (41), providing a relatively secure date for its construction.

In addition, a series of five radiocarbon dates spanning the Early to Middle Iron Age (Table 3.1) was obtained from animal bones in the lower fills of the ditch. Three were from a deposit of cattle skulls (context 43) placed in a shallow scoop (42) cut into context 41 and covered with a layer of probable topsoil (40).

Further Early Iron Age sherds were found in a number of the layers above (39, 20, and 38). Context 20, a thick layer of loose chalk rubble lying against the outer side of the ditch, had the appearance of eroded bank material (the sherds within it being abraded and probably residual), but this would require an outer, rather than an inner, bank (there was no corresponding material on the inner side of the ditch section).

The overlying secondary fills (37, 31, and 24), including the fill (25) of a small cut (45), produced Early/Middle Iron Age sherds. The small cut contained a loomweight fragment and a concentration of disarticulated animal bone, the latter providing radiocarbon dates spanning the Middle Iron Age (Table 3.1). These fills were overlain, close to the top of the ditch, by three layers of 'ashy' midden material (22, 19, and 16) containing abundant Middle Iron Age pottery as well as a large quantity of flint knapping debris, a loomweight fragment, a large animal bone assemblage, and over 63 kg of burnt flint, much of it with soot still adhering. The midden deposit was overlain by a possible buried soil (context 15), while layers of coarse chalk rubble (18, 14, and 17) at the top of the ditch may represent its final backfilling with bank material, although it could also have resulted from the Romano-British ploughing that had spread across the site.

Immediately inside the ditch was the terminal of a smaller ditch (27) (or possibly a pit), 0.6 m wide and 0.3 m deep, continuing to the north-east away from the enclosure entrance (but not appearing in the south-western side of the trench – Fig. 3.18). It was undated, and its stratigraphical relationship with the

Table 3.1 Radiocarbon dates for the Warren Hill enclosure (SP 049) in stratigraphic order

Lab. No.	*Radiocarbon age BP*	*Date cal. BC at 2 sigma*
GU-5441	2130±60	380–10
GU-5442	2230±60	400–120
GU-5443	2370±50	760–380
GU-5445	2410±60	780–390
GU-5446	2330±50	520–260
GU-5447	2270±80	520–120
GU-5444	2470±50	800–400

all dates on animal bone

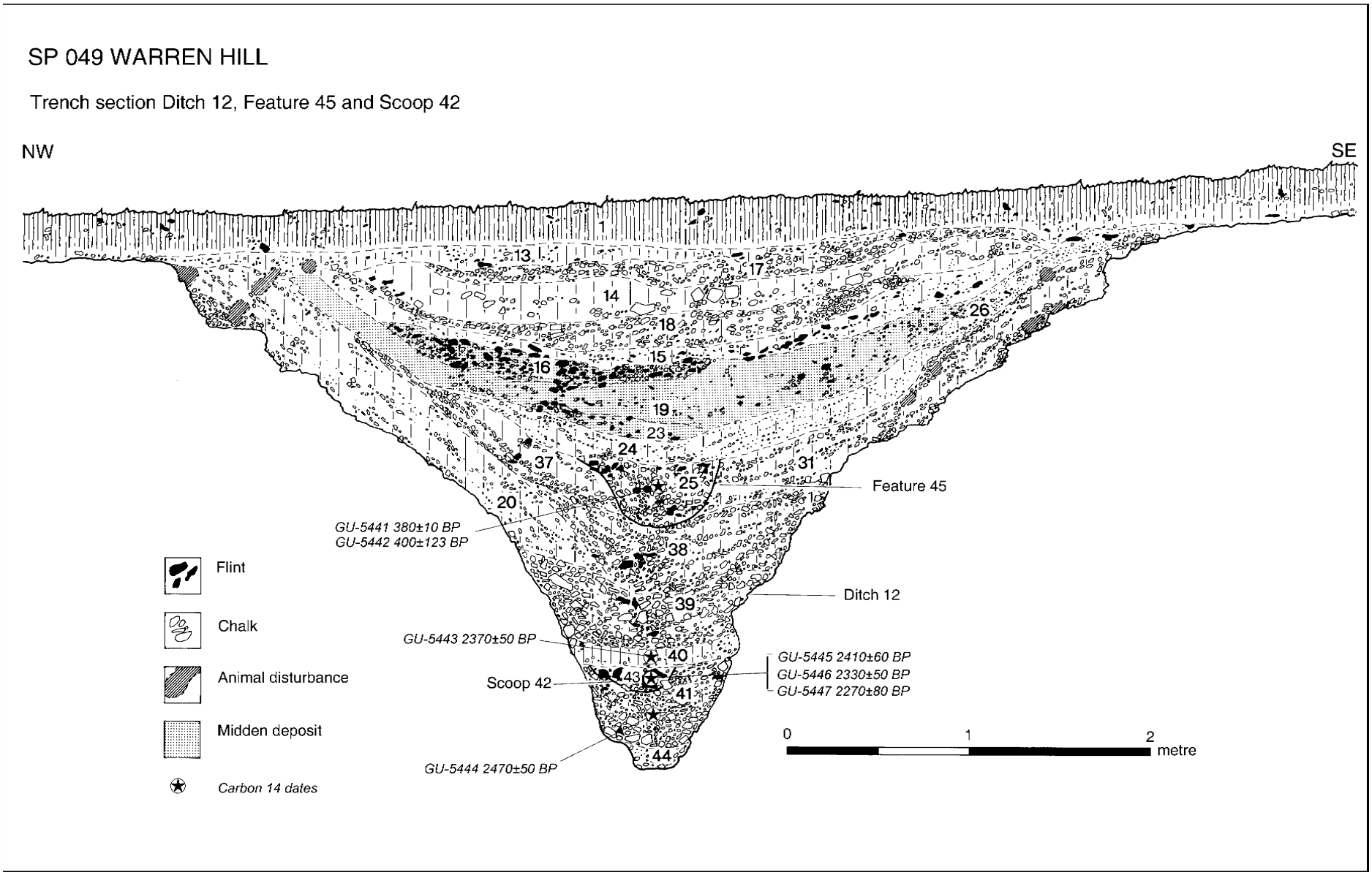

Figure 3.18 Warren Hill enclosure SP 049

main ditch was obscured by a recut (34) of the smaller feature. The recut, however, which produced two Early/Middle Iron Age sherds, cut layer 26 in the large ditch, this layer lying immediately below the midden deposit. Chisenbury Field Barn (SP 050) and Coombe Down North (SP 014A) both had smaller earlier ditches, replaced by larger ditches on the same alignment. Further inside the ditch there was an arrangement of five undated stake-holes averaging 0.05 m in diameter; these formed no recognisable structure.

The accumulation of a Middle Iron Age midden in the upper part of the ditch may indicate that by this time the ditch was no longer important in defining the settlement area. However, in light of recent re-interpretations of deposits on Iron Age sites elsewhere in Wessex (Hill 1995), we can no longer view some of the material in the ditch as the product of casual rubbish disposal, and the successive placement of material associated with the domestic world around the fringes of the settlement may have been one of a number of ways of reinforcing the significance of the boundary. As the radiocarbon dates show (Table 3.1), these deposits span several centuries and testify to the continuing significance of the ditch even though its monumental scale seems not to have been maintained.

The Eastern Sample Area

Surface artefact collection showed that the Bourne ridge continued to be the main focus of settlement in the Eastern Sample Area during the Late Iron Age (Fig. 1.3). Snoddington Down (SP 008) produced Late Iron Age pottery, including a single Gallo-Belgic sherd, as well as a bone weaving comb with Late Iron Age decorative motifs; excavations in the 1920s had also produced structural evidence for an Iron Age hut, with finds including Late Iron Age pottery, a bronze fibula, a spearhead, and bone weaving combs (Williams Freeman 1927, 397). Three other sites on the ridge with assemblages dominated by 1st century BC/AD pottery were identified by the fieldwalking – Shipton Plantation (SP 007) (where two concentrations of Late Bronze Age Plain Ware were also recorded), Bedlam Plantation (SP 030A), where the SMR records a possible enclosure (SMR 17271), and Furze Hill (SP 046A). Both Snoddington Down and Shipton Plantation appear to have been occupied from the 4th century BC through to the 1st century AD, but not necessarily continuously. All four sites continued in use during the 1st–2nd centuries AD (see Chapter 4).

Off the Bourne ridge, evidence for Iron Age settlement is far more intermittent. In the Bourne valley, sherds of Early/Middle Iron Age pottery have been found in tree casts and thrown up by animal disturbances in the Tidworth area to the west, while at Collingbourne Ducis (SP 101), to the north, Middle and Late Iron Age sherds and scatters of burnt flint were recovered during fieldwalking across two enclosures. To the east of the ridge a few sherds of Late Iron Age pottery were recovered at Shoddesden Grange (SP 134).

Land Use

There is very limited evidence for Iron Age land use. As mentioned above, the colluvial character of the silts in the Linear Ditch beneath the Tidworth lynchets suggests that the associated earthwork had been levelled by a prolonged period of cultivation before the 1st century AD. The other main evidence comes from lynchet excavations around the Romano-British settlement at Chisenbury Warren, although, as discussed in Chapter 2, the dating of such lynchets is hampered by the repeated reworking of soils and the pottery assemblages within them.

The Chisenbury Warren settlement is in a dry valley on the north-west side of the ridge bearing the Iron Age enclosures on Coombe Down and Longstreet Down. It is surrounded, and appears to be closely connected to, a field system comprising a series of largely rectangular fields defined by lynchets, banks, and ditches that are best preserved to its south-east (Fig. 4.4). Ten trenches were excavated across these features with the primary aim of establishing the relationship between Romano-British settlement and agriculture. The four trenches (SP 063–066) to the south-east of the settlement, however, provided evidence suggesting an Iron Age origin for at least some of these features (although the small pottery assemblage allows an alternative interpretation – see Chapter 4).

The most southerly trench (SP 065), revealed three layers within the positive lynchet below the topsoil – a layer of disturbed chalk natural with ploughmarks visible running parallel to the lynchet, a largely stone-free lower colluvium and a stony ploughsoil. The downslope edge of the lynchet was not recorded, possibly truncated by a modern pit that produced the only pottery from the trench – four Iron Age sherds.

Some 80 m to the north-east, trench SP 066, measuring 2 x 1 m, crossed the south-western side of a low bank. Two fossil ploughsoils were recorded – a basal layer with weathered chalk natural at its base, producing Early and general Iron Age pottery, was overlain by an upper layer also producing Iron Age pottery. A thick stony layer at the base of the topsoil produced Middle and Late Iron Age sherds.

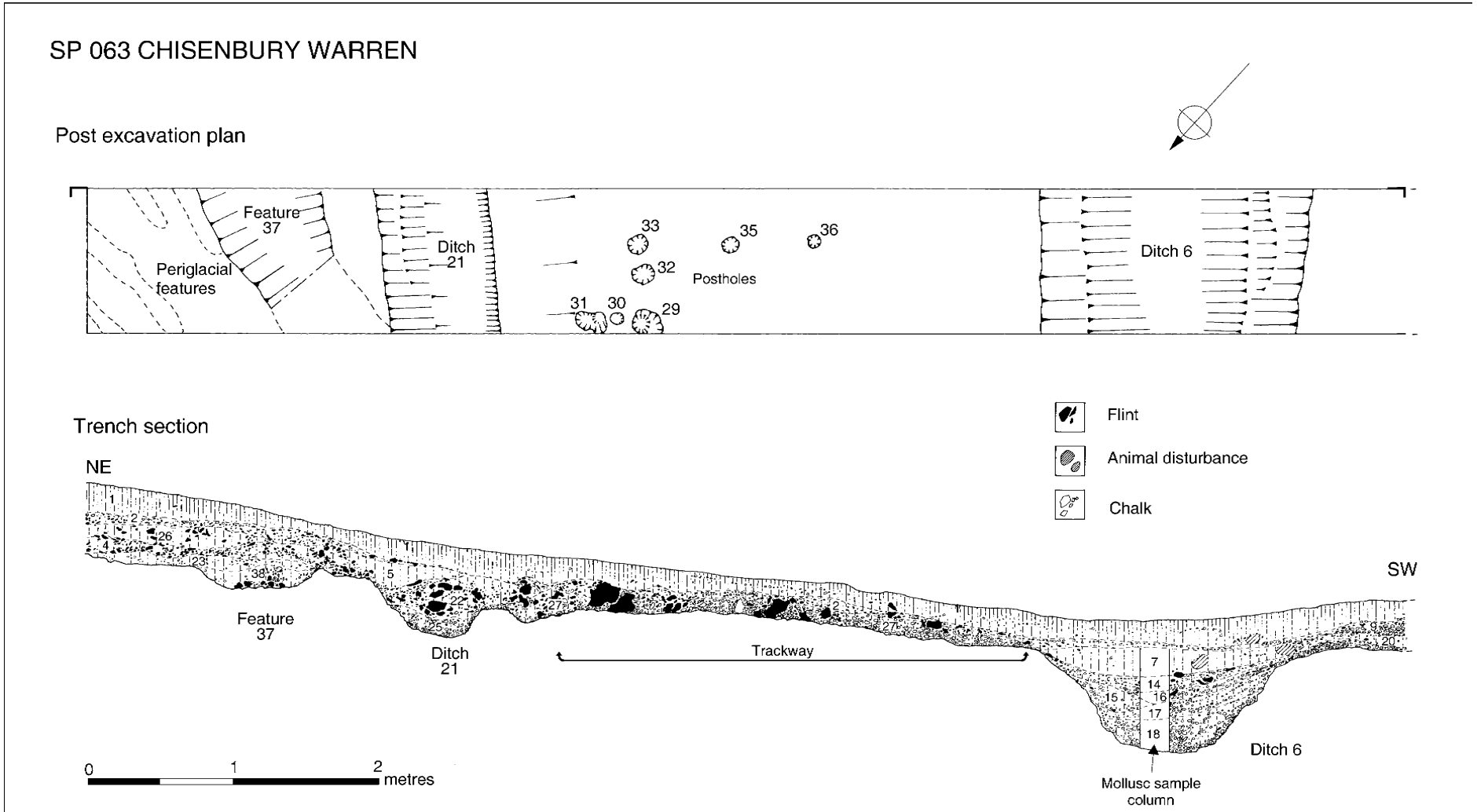

Figure 3.19 Chisenbury Warren SP 063 lynchet excavation

Trench SP 063, measuring 15 x 1 m, was excavated across a series of parallel earthworks some 100 m east of SP 066 (Fig. 3.19). These appear to represent a trackway between fields running from the dry valley up onto the ridge to the south-east. The excavation revealed that the trackway was flanked by a pair of parallel ditches *c*. 3.7 m apart. The ditch (6) on the south-west side of the trackway was 1.8 m wide and 0.9 m deep with moderately steep sides and a wide slightly concave base, its primary fill (18) producing a single Iron Age sherd (a secondary fill (15) produced a single Roman sherd). The ditch on the other side of the trackway (21) was smaller – *c.* 0.8 m wide and 0.37 m deep – although with a similar profile. Between the ditches, although possibly predating them, there was an arrangement of seven stake-holes (29–33, 35–6), between 0.08 m and 0.16 m in diameter and up to 0.22 m deep, some lying across the trackway, others parallel to it, their arrangement suggesting some form of slight structure. They were overlain by a stony soil that extended across the trackway but not over the ditches.

Two further small trenches were excavated across the projected line of a lynchet, 100 m north of trench SP 063, and appearing to form the opposite side of the same field. In SP 064A (3 x 1 m) the lynchet, comprising a basal layer of ploughed natural clay overlain by a flinty ploughsoil, was bounded to the south-west by a small U-shaped field boundary ditch. The edge of the lynchet was truncated by a negative lynchet that extended over the ditch. The only finds were single Late Bronze Age and Iron Age sherds from the stony layer at the base of the topsoil. The adjacent trench (SP 064B – 2 x 1 m) revealed similar ploughsoil layers, the lower here producing Early/Middle Iron Age pottery.

Given the proximity of the Romano-British settlement, the dearth of contemporaneous pottery from these features is surprising as one would expect these fields to have been manured with waste from the settlements. The presence of exclusively Iron Age pottery within trenches SP 064A and B, SP 065, and SP 066, and from the primary fill of ditch 063/6, at least raises the possibility that these features are Iron Age in origin. The trackway in SP 063 appears to have had banks outside the ditches, but these may have been later additions, comparable to the early Romano-British banked boundaries that were constructed within the settlement (see Chapter 4).

It is quite possible, therefore, that the trackway in SP 063 is of Iron Age or earlier date, and that the arrangement of stake-holes across its line represents some barrier for controlling the movement of stock along the track and into the adjacent fields bounded possibly by hedges. The Romano-British hollow-way that flanks the Chisenbury Warren settlement may also reflect the line of a pre-existing trackway, to which the trackway in SP 063 joins. The edge of a similar trackway, running east from the hollow-way at the northern end of the site was investigated in Trench SP 070 (2 x 1 m). Although no features were revealed, the two layers of colluvium recorded produced, again, exclusively Iron Age and Late Iron Age pottery.

4. Romano-British Settlement and Landscape

While the most visible manifestations of Iron Age settlement with the Study Area, as in the wider SPTA, are the various forms of enclosure, the largest of which are represented by the hillforts, it has long been recognised that the series of open settlements surviving on the downs as 'village' earthworks represent an important component of the Romano-British settlement pattern. Two of these sites, within the Western Study Area at Chisenbury Warren and Coombe Down South (Fig. 4.1), were selected for major investigations, the scale and complexity of their earthworks having been recently revealed by the analytical earthwork surveys undertaken by RCHM(E).

The overlapping of the Iron Age enclosure by the Romano-British settlement at Coombe Down South provided the greatest time depth at any of the sites within the Study Area, and offered the unique potential to elucidate the Late Iron Age–early Roman transition, and so throw light on the origins, development, and duration of such settlements. In addition, the earthworks at Chisenbury Warren appear to be closely integrated within a regular pattern of 'Celtic' fields, as represented by banks, ditches, lynchets, and tracks, the investigation of which was aimed at placing the settlements within the broader context of their agricultural hinterland.

The presence, at Beach's Barn, of a third site on the same ridge, noted by William Cunnington in the late 19th century, was confirmed by a test pit survey, although its scale was only revealed subsequently by geophysical survey (Fig. 4.2).

Settlement

The River Avon Valley

There are a number of possible Roman villa sites recorded in the River Avon valley, such as at Netheravon (Grinsell 1957, 91; Graham and Newman 1993) and Enford. Further evidence for Romano-British settlement was recorded at three locations on the slopes flanking the valley (Fig. 1.2).

SP 130 Fifield Folly
West of the valley, the 4 ha site at Fifield Folly (which is also that which produced Middle–Late Iron Age pottery), saw continued occupation through the Romano-British period, producing 1st–2nd century AD bead rim sherds as well as 3rd and 4th century pottery.

SP 116 and SP 143 Enford Farm
Approximately 1 km to the north, two smaller sites were recorded on Enford Farm, each defined by very limited scatters of building material and pottery, 0.25 ha in extent, and apparently representing single buildings. The building at SP 116, however, seems to have been relatively elaborate, as the material included fragments of hypocaust tile and a piece of painted wall plaster. Neither site produced Late Iron Age or early Roman bead rims, but both samian and Savernake ware were present perhaps indicating a 2nd century AD origin, with occupation, as at Fifield Folly, continuing through the 3rd and 4th centuries

SP 082 Littlecott
Two previously known sites on the eastern fringes of the Avon valley were also subject to fieldwalking. Littlecott, occupying a prominent position with an extensive view across the floodplain to the higher downland to the west, consisted of a dense spread of pottery and limestone and sandstone roofing stone covering some 4 ha. The pottery indicates that the site was occupied between the 1st and 4th centuries AD (with a single 1st century BC/AD sherd hinting at earlier activity). Despite the long history of cultivation in the area, a possible building platform, associated with a concentration of stone tile fragments and roughly shaped chalk blocks, may have survived on the line of a recently removed field boundary. Similar chalk blocks at Beach's Barn (SP0 026) had been used in the construction of flint and cob walls.

SP 107 Upavon Hill
A more confined spread of building material and pottery, 2 ha in extent, marked the location of another settlement on Upavon Hill, 3 km to the north of Littlecott, and in a similar topographical position. The pottery from the widely spaced fieldwalking covered the 1st–4th centuries AD (again with a single 1st century BC/AD sherd). The surrounding area has attracted the attention of metal-detector users over a number of years, although the imprecise grid references for their finds make it difficult to determine how closely they were associated with the area of settlement. Among the finds were a pot hoard containing 111 folles of Diocletian, Maximianus I, Galerius, and Constantius I, giving a central date of c. AD 300, and 39 stray coins of Julia Domna to Gratian spanning the early 3rd–late 4th century AD. Other finds include a base gold stater of type Mack 62 dating to the second half of the 1st century BC, and fragments of a bronze brooch of Collingwood Type Q

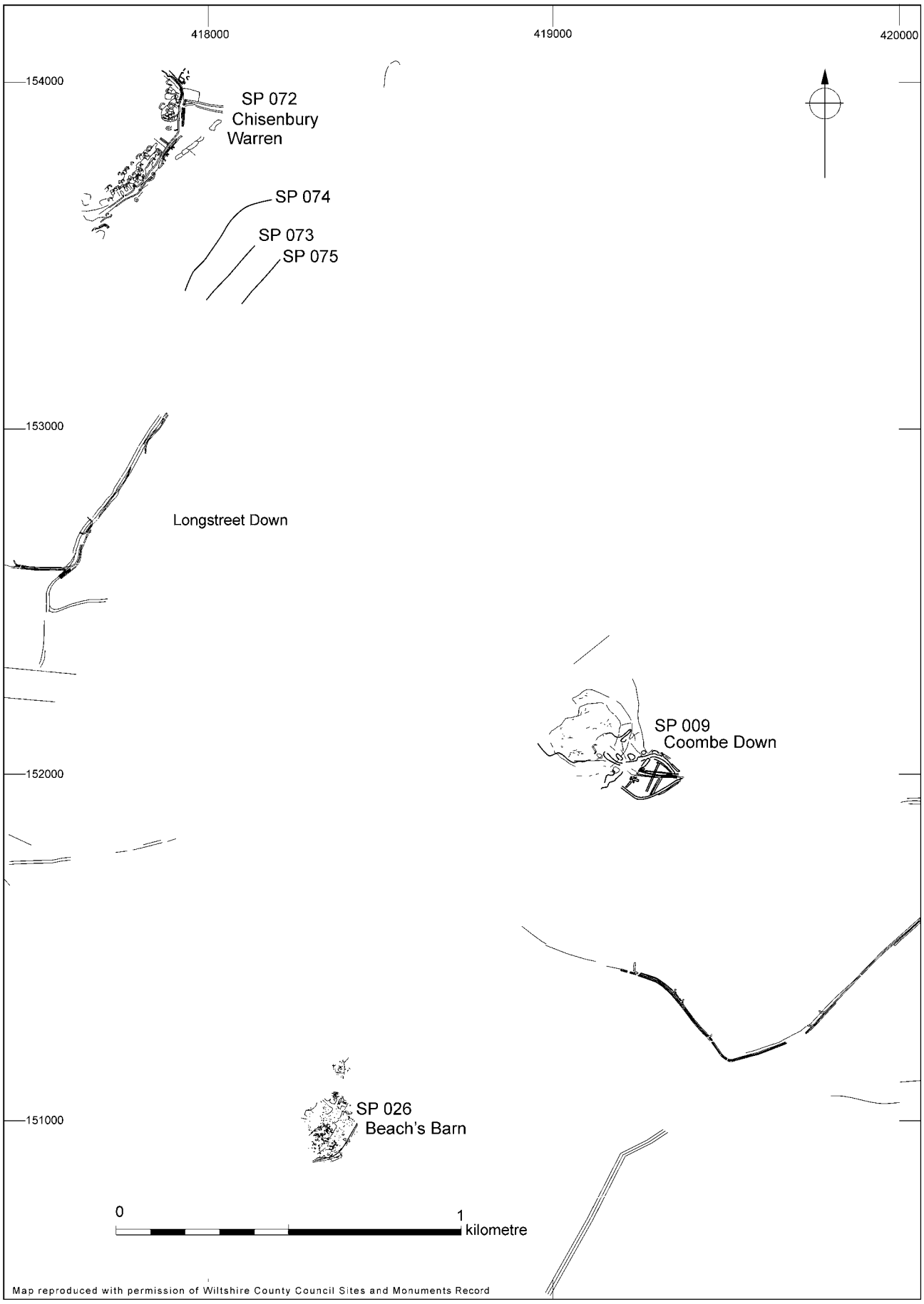

Figure 4.1 General location of Chisenbury Warren, Coombe Down, and Beach's Barn

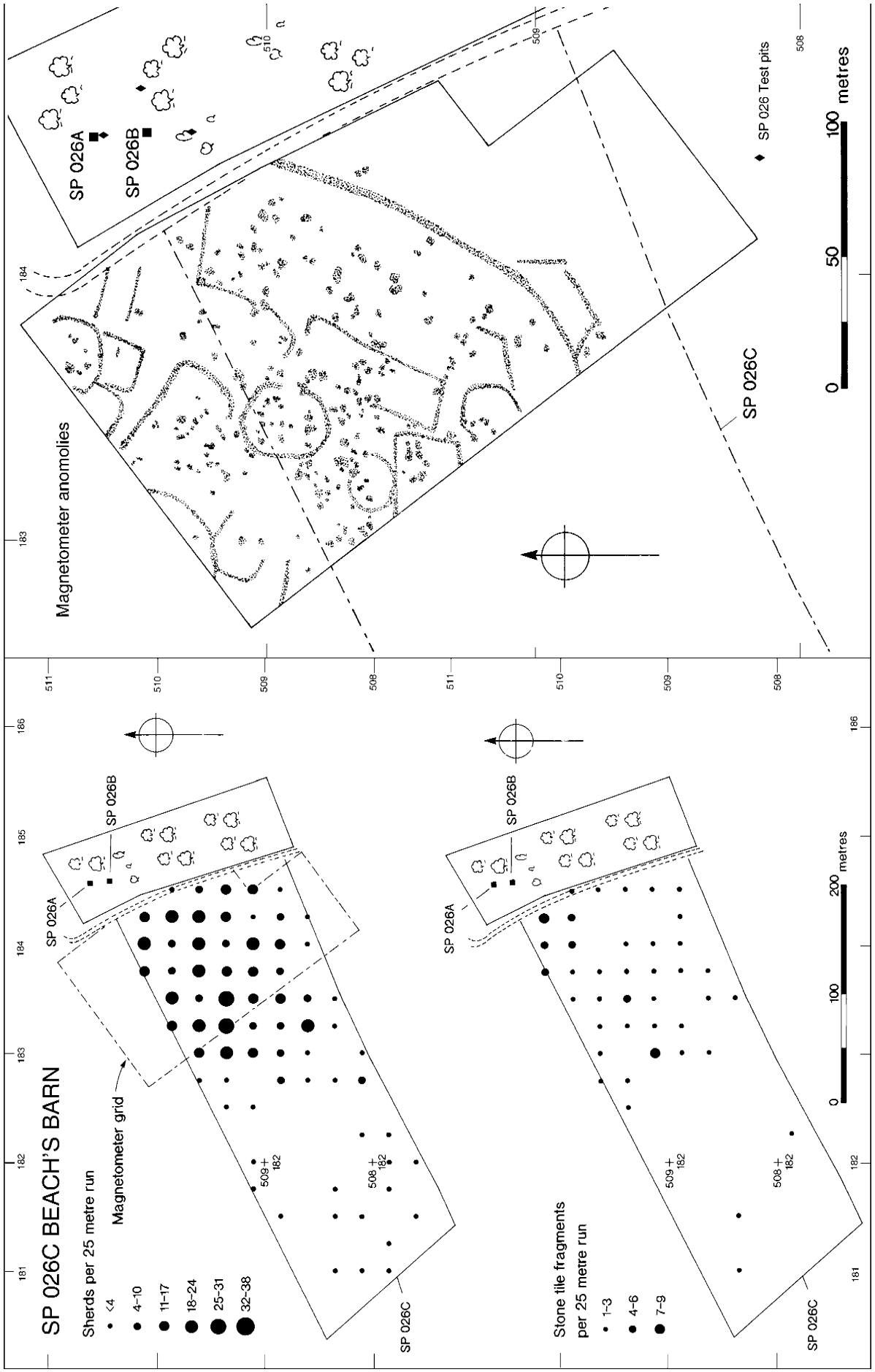

Figure 4.2 Beach's Barn fieldwalking results (SP 026C), geophysical survey and test pit locations

dating to the 2nd century AD (SMR nos 6067 and 6075).

The Western Sample Area

SP 026 Beach's Barn

William Cunnington had noted the discovery of a Roman building at Beach's Barn (1894). However, as he provided only a vague reference to its location, a series of 1 metre square test pits (SP 026), spaced at 30 m intervals, was excavated over the general area shown in the SMR record. One of these revealed a substantial structure, with flint, chalk, and cob walls, buried beneath a considerable depth of colluvium. Extending the excavation (to 2 x 2.5 m) (SP 026B) revealed the corner of a small building with a wall dividing two rooms (Fig. 4.3; Plate 3). Below the compacted chalk floors were two flues (13 and 26) and a possible beam slot (21) cut into the chalk bedrock, lined with flint and cob and capped with re-used limestone roof tiles, both flues containing deposits of ash, charcoal, and carbonised cereal grains. These indicate that the excavated features form part of a corn drier. Fresh sherds of Black Burnished ware and New Forest pottery from the occupation deposit lying directly on the chalk flooring suggest a 4th century date for the final use of the building, although residual early Roman pottery indicates earlier activity on the site.

Further work at the site was necessary in order to determine the extent of the building and whether it was part of a larger complex, so that it could be protected more effectively from military damage. That the building was part of a more extensive area of settlement was demonstrated by the results of surface collection work in an adjacent arable field (SP 026C), which produced a concentration of pottery, stone, and ceramic building material along its eastern side, close to the corn drier (Fig. 4.2). The pottery assemblage included forms dating from the 1st through to the 4th century, matching that from the test pits. The extent of the settlement was further brought into sharp relief by a magnetometer survey undertaken by the Ancient Monuments Laboratory, which revealed a dense array of features bounded to the south by a wide curved ditch (Fig. 4.2). The distribution of features, which included numerous pit-like anomalies and several rectangular and circular ditched enclosures, corresponds closely to the surface distribution of pottery and building materials, and while the full extent of the settlement has yet to be ascertained, it appears to be comparable with the Romano-British settlement on Coombe Down South, just over 1 km to the north-east.

A resistivity survey across the area of the corn drier, and a second excavation trench across a terrace to the north (SP 026A), both failed to detect any further features.

Further geophysical survey and small-scale excavation by *Time Team* in 2000 produced evidence of one, possibly two, banjo enclosures dated by large quantities of pottery to the Middle–Late Iron Age to the south-west of the corn drier. Closer to the latter, and to the west, an area of higher magnetic response with linear, high resistance anomalies from the geophysical survey suggested the presence of a Roman building of a scale consistent with a small villa. Subsequent, limited excavation produced evidence of a chalk/mortar floor and a partly robbed wall of flint construction. As well as two later fourth-century coins of Magnentius and Valens, structural materials included ceramic building material, among which were a large number of fragments of flue-tile, hexagonal stone roof-tiles, and some, mostly plain, wall plaster. While the pottery spanned the Romano-British period, the emphasis of the collection was on the 3rd and 4th centuries (Wessex Archaeology 2006). The corn drier can thus be seen in the context of a villa complex at the head of a dry coombe which descends towards the Avon, but is otherwise located towards the heart of the chalk upland between the Avon and the Bourne valleys.

Plate 3 Beach's Barn SP 026, corn drier flues

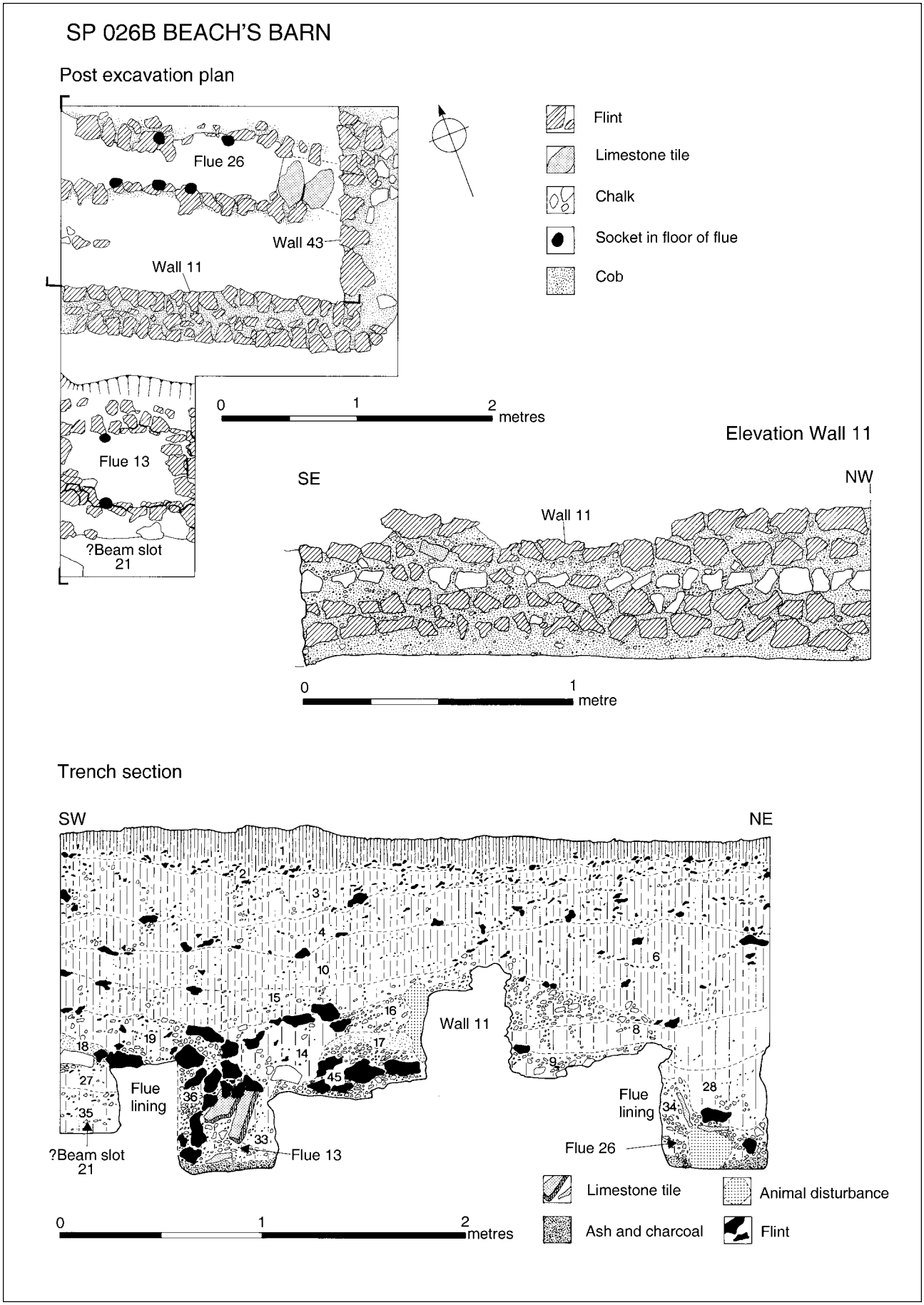

Figure 4.3 Beach's Barn excavation (SP 026B), plan and section of building and adjacent corn drier

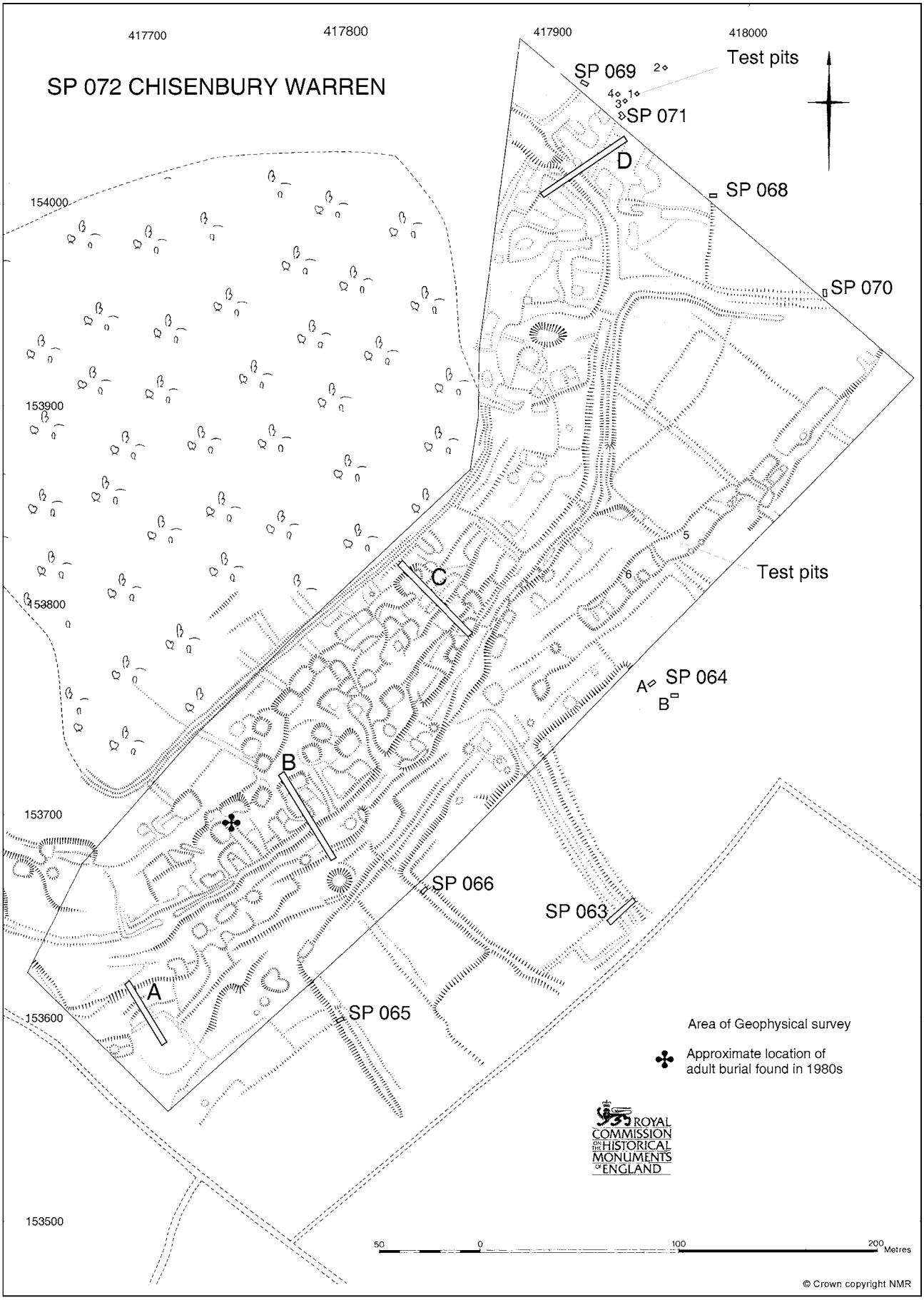

Figure 4.4 Chisenbury Warren earthwork survey with trench locations

Plate 4 Chisenbury Warren SP 072 aerial view looking north-east during excavation in 1993

SP 072 Chisenbury Warren

The Romano-British open settlement at Chisenbury Warren lies at the head of a narrow dry valley that joins the Avon valley 4km to the south-west (Fig. 3.5; Plate 4). It shows as a strip of earthworks some 500 m long, situated just above the valley bottom at 140 m OD, and bounded on its southern side by a prominent hollow-way, beyond which there is a regular pattern of Celtic fields. The earthworks are now within a permanent penning which defines the limits of the Scheduled area.

Chisenbury Warren is the only Romano-British settlement in the Study Area that has not been extensively damaged by medieval or later ploughing. Apart from some military damage, the only obvious sign of post-Roman activity is the ditch of a medieval rabbit warren which surrounds an area of scrub immediately behind the settlement. There is no record of excavation ever having taken place, although over the years isolated finds have been made. The remains of an adult female (aged *c.* 30–45 years), presumed to be Romano-British, were found outside a house platform west of Trench B in the 1980s (McKinley 1989; Mrs Nell Duffie, pers. com.), and a single burial was cut through by an infantry trench at the northern edge of the settlement in the 1980s, but it is not known whether this was part of a cemetery or an isolated internment.

The RCHM(E) earthwork survey (Fig. 4.4) shows that its principal unifying feature is the hollow-way running the length of the settlement on a generally north-east–south-west alignment, although curving round to the north-west. Numerous small sub-rectangular terraces cluster on the upslope side of the hollow-way, some with the appearance of house platforms, while, on the other side, there are the banks and lynchets of a field system which mostly respects its alignment. The earthworks at the north-eastern end are much slighter and less well defined than those to the south-west. A geophysical survey of parts of the settlement, prior to excavation, for the most part echoed the results of the earthwork survey, and it also revealed numerous pits and a fragmentary pattern of ditches.

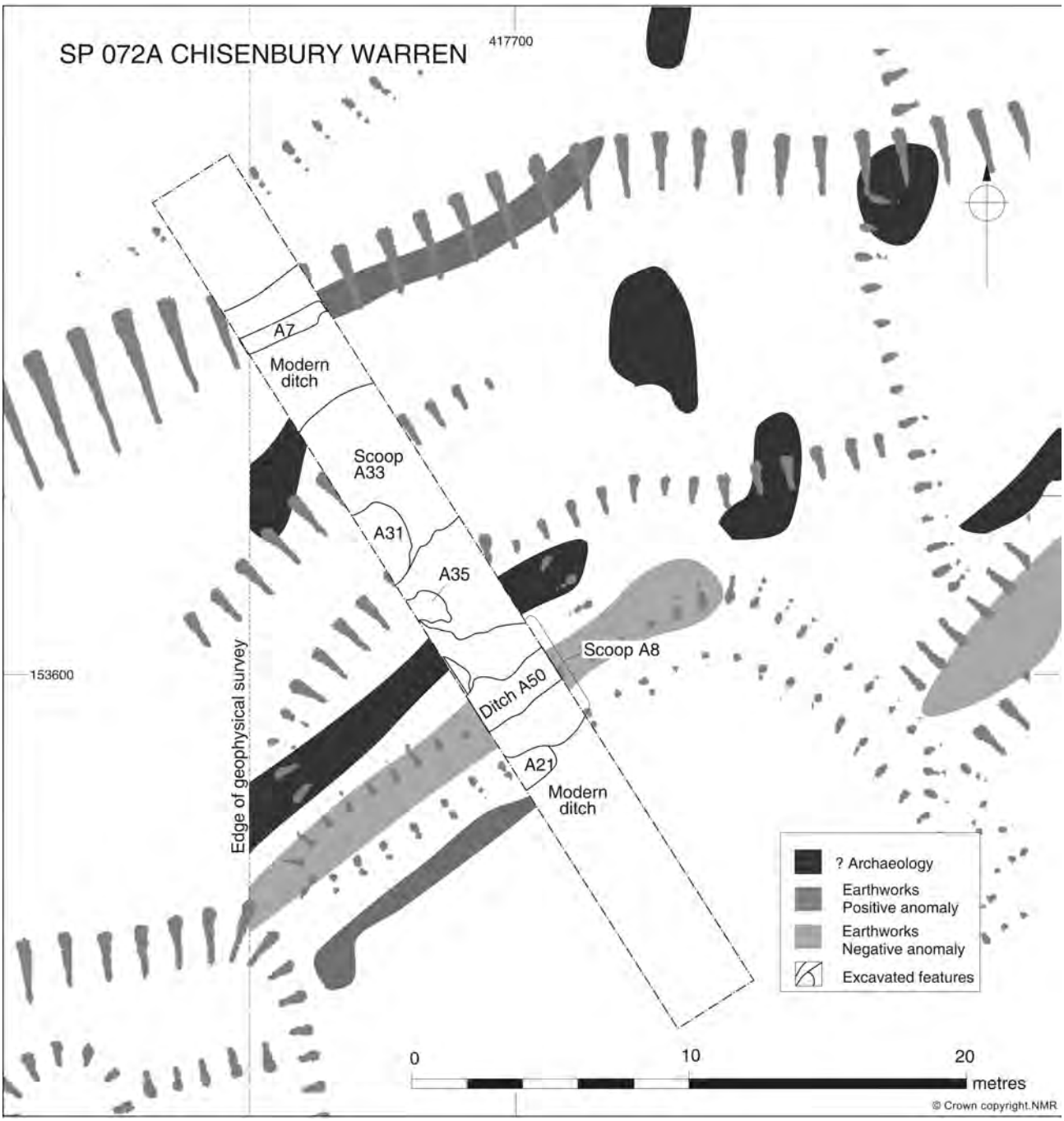

Figure 4.5 Chisenbury Warren SP 072, Trench A, composite plan of excavated, earthwork, and geophysical features

Four trenches were excavated across the main axis of the site, in locations designed to sample the three principal zones identified in the earthwork survey. Trench A, at the southern end of the settlement, was 35 x 3 m, while Trenches B, C, and D, spaced towards the north-east, were each 50 x 3 m. In addition, two test pits (SP0 072/1–2; TP5–6 in Fig. 4.4) were excavated in the coombe bottom to the east of the settlement to investigate a number of rectilinear hollows.

As well as seeking to determine the chronology of the site's occupation, the excavation sought to establish whether the earthworks were all of broadly the same date, or whether settlement drift and fluctuations in scale over a long period had created the impression of a larger settlement than actually existed at any one time. A further aim was to establish whether the apparent house platforms had in fact supported buildings and, if so, what was the level of structural preservation and how much stratigraphy survived. Answers to these questions could provide means of assessing the vulnerability of other Romano-British settlement earthworks on Salisbury Plain to even the most superficial disturbance.

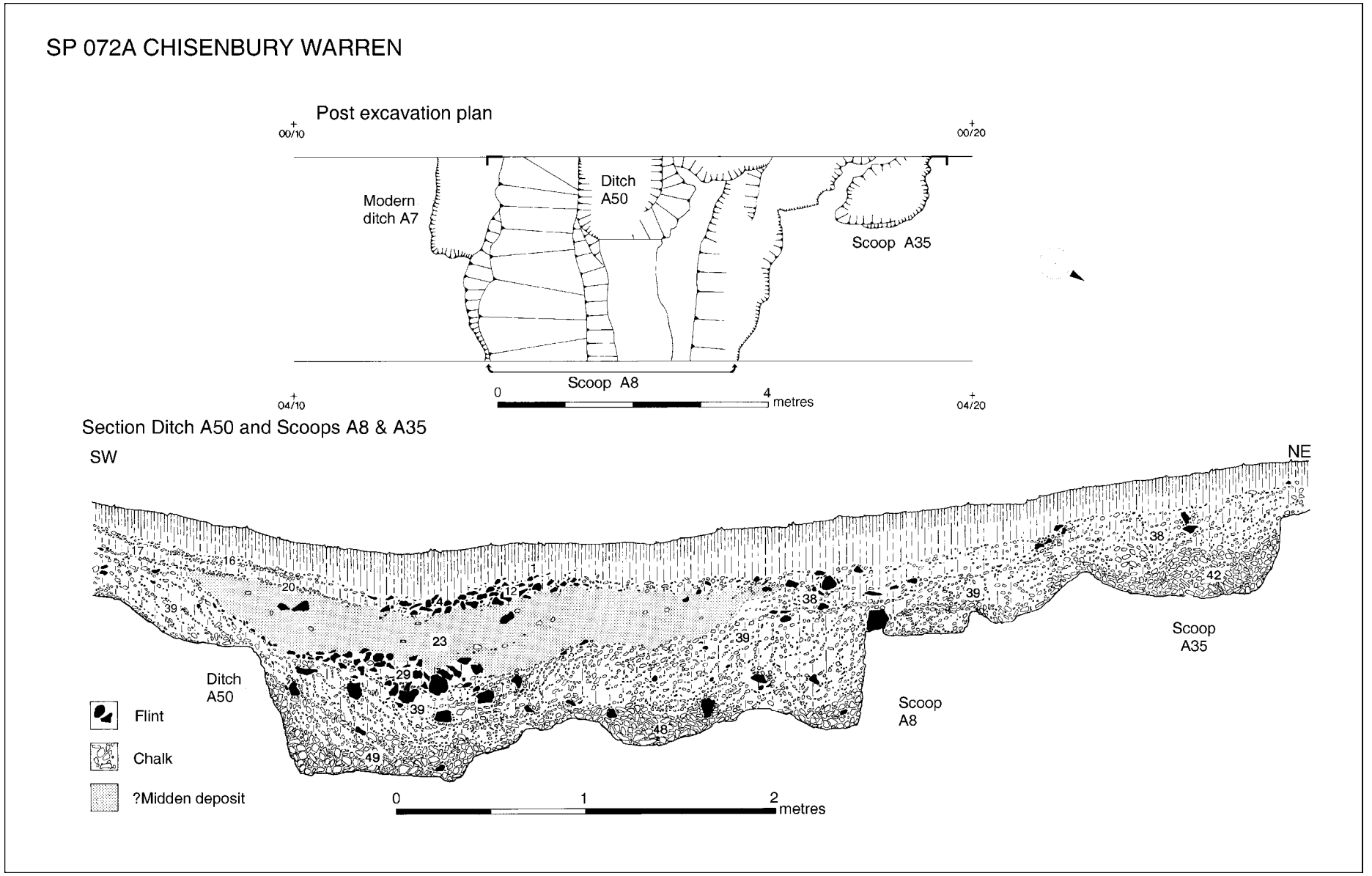

Figure 4.6 Chisenbury Warren SP 072, Trench A, ditch A50 and quarry scoops A8 and A35

Trench A

One of the most coherent features at the south-western end of the site was what appeared to be a low L-shaped bank forming the northern edge of a small enclosure, with the other sides defined by a slight scarp (Fig. 4.5). Corresponding features were revealed by the results of the magnetometer survey. To the north of the bank was a hollow in which animal burrows had disturbed and exposed a black soil charged with comminuted charcoal. To the north of the hollow was a slight terrace, then a more prominent terrace. Trench A was located to provide a section across these features.

There were, however, no traces of a bank; instead there was a ridge of natural chalk, aligned north-east/south-west, between the hollow and a negative lynchet (A10) to the south. Nor were features relating to an enclosure identified. It is possible, however, that the chalk ridge owes its preservation to the former presence of a now plough-levelled bank, and that the visible topography, and the features identified by the magnetometer survey, do indeed represent a small enclosed compound. Given the level of cultivation indicated by the negative lynchet, it is perhaps not surprising that no features were recorded in the small area of the anticipated enclosure covered by the southern end of the trench.

The hollow and the adjacent slight terrace to the north of the 'bank', however, proved to be a series of back-filled quarry scoops of variable size (A8 and A35 in the south and A31 and A33 to the north), the most southerly scoop (A8) truncating a flat-bottomed ditch (A50) (Fig. 4.6). The ditch, recorded also by the magnetometer survey, ran parallel to the chalk ridge, and it is possible, therefore, that the ditch and the 'enclosure' are associated and contemporary features. Although the ditch is undated, all the scoops incorporated small numbers of early Roman sherds in their backfills.

The purpose of these scoops is unclear, although it is possible that they were dug to extract chalk for use as a building material or in the manufacture of cob. Although drystone walling seems to have been the usual form of construction elsewhere on the site (below), it is possible that this was once faced with cob which has since decayed and become unrecognisable.

Spread over the top of the backfill in scoop A8 was a thick layer of dark humic sediment (A23), probably a dump of rubbish, containing large fragments of animal bone, oyster shell, and late Roman pottery. Overlying the fills of the adjacent scoop to the north (A33) was a thick layer of fine soil (A22), probably colluvial, which produced pottery of a similar date. This may be a product of a period of cultivation represented by the negative lynchet south of the chalk 'bank', and by the more prominent lynchet towards the north end of the trench, the soil in the lynchets producing residual early and late Roman pottery (as well as a few Iron Age sherds). Two small linear features (A21 on the southern edge of ditch A50, and A7 below the edge of the northern lynchet) produced modern material and may have had a military function.

Trench B

Trench B was laid out primarily across two adjoining subrectangular terraces (the upper and lower terrace), and the hollow-way to their south (Fig. 4.7). The upper terrace, as indicated by the earthwork survey, measured approximately 7 x 15 m, its long axis having the same alignment as the hollow-way. The adjoining lower terrace was of similar dimensions, but lying perpendicular to the hollow-way. Immediately to their east, outside the trench, were two smaller, less substantial terraces, the whole arrangement being bounded to the east by what appears to be a slightly sunken path running up from the hollow-way. A series of similar possible pathways recorded at approximately even intervals along the hollow-way suggest a regular, modular arrangement of settlement plots in the central part of the site (Fig. 4.4).

Plate 5 Chisenbury Warren SP 072, drying ovens B34

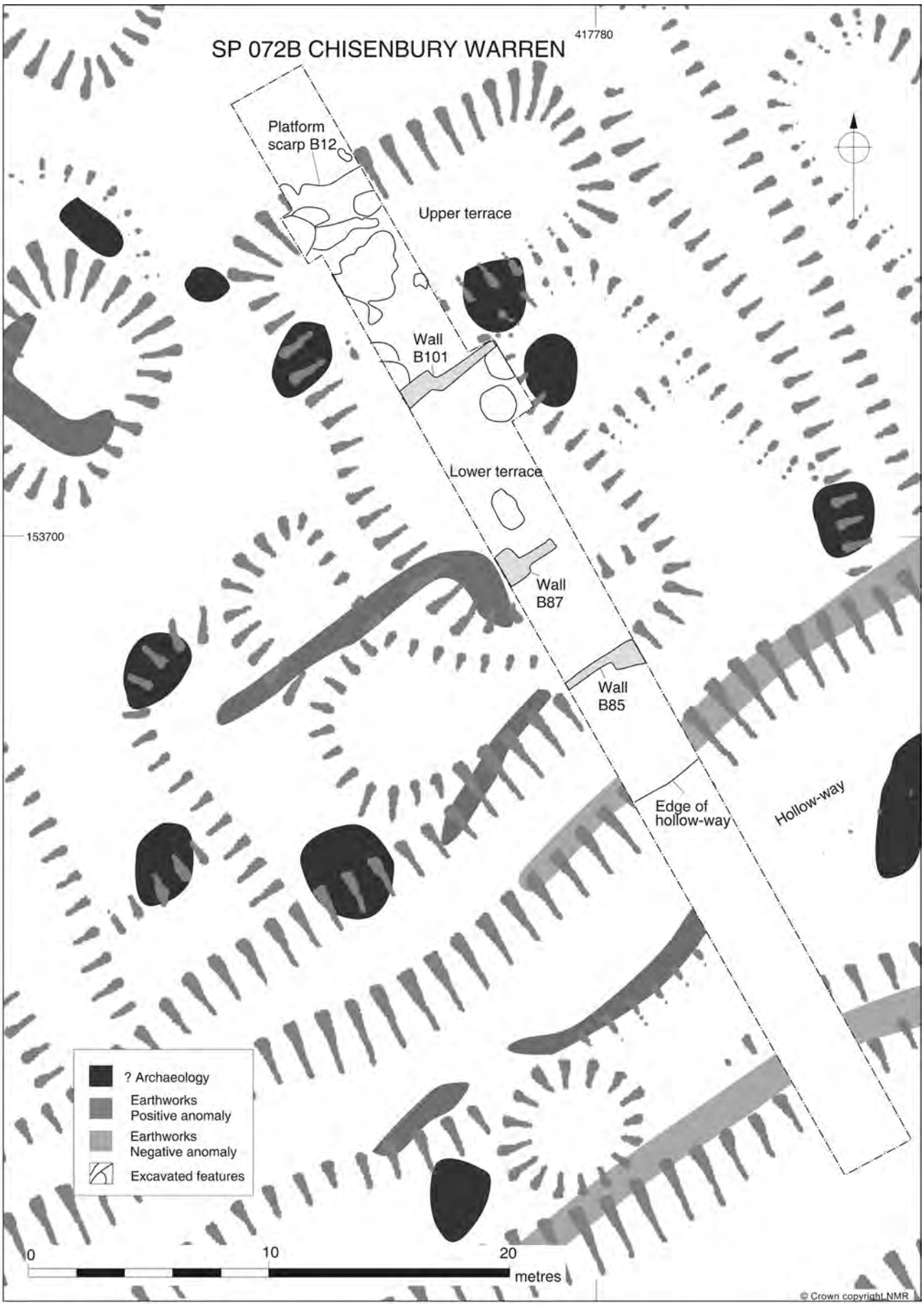

Figure 4.7 Chisenbury Warren SP 072, Trench B, composite plan of excavated, earthwork, and geophysical features

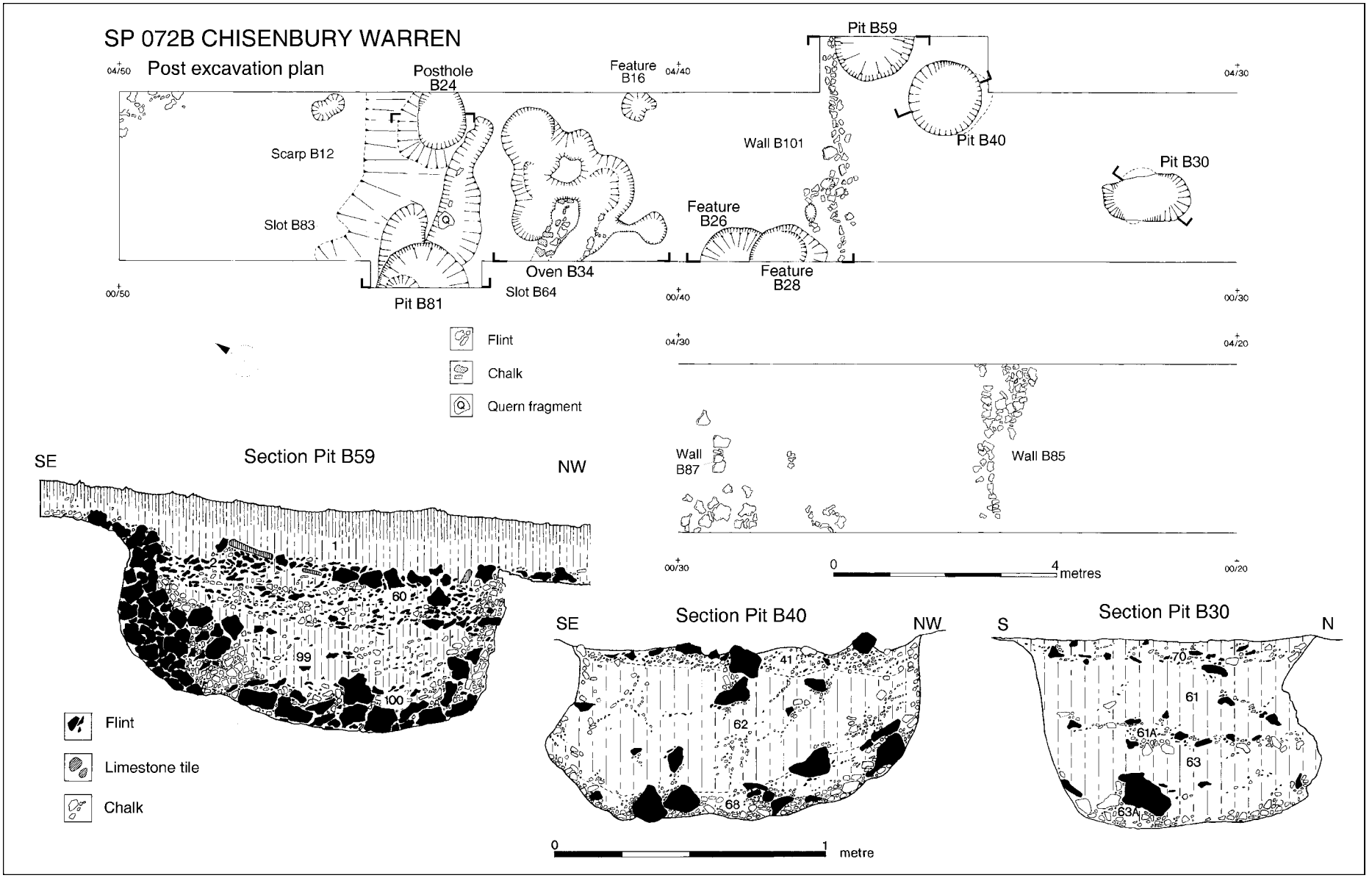

Figure 4.8 Chisenbury Warren SP 072, Trench B, plan and sections of pits B59, B40, and B30

No flint walling was found on the upper platform, but a series of features at the base of its scarp (B12) (Fig. 4.8) could be the foundations of a possible timber structure. These included a large post-hole (B24) (Fig. 4.9) that produced late Roman pottery from below its packing stones, a possible beam slot (B64) containing general Roman pottery, and the terminal of shallow, curvilinear slot (B83). The western ends of the two slots overlapped with a 1.8 m wide, circular flat-bottomed feature (B81) also producing Roman pottery, but no stratigraphical relationship between these features was recorded.

Immediately to their south was an elaborate drying oven (B34) consisting of six dish-like chambers cut into the chalk and linked by narrow flues, the walls being reinforced in places with chalk blocks and cob, and all partly filled with ash and fragments of burnt cob, and containing late Roman pottery (Plate 5). The chalk bedrock in the area around the oven was very worn, indicating that the feature had been the focus of much activity.

The adjoining lower platform was divided laterally by three lines of flint nodules running parallel to the hollow-way (Fig. 4.8). Although disturbed, these lines (termed here, for convenience, as 'walls') appear to have been just one or two nodules wide, and were probably no more than low boundary features. The lower platform also contained a series of pits, at least one of which was probably of early date. Pit B40 produced early Roman pottery from throughout its backfill (B62 and B68), with only its thin upper fill (B41), which probably derived from the overlying dump of later domestic waste, containing late Roman sherds (Fig. 4.8). A relatively early radiocarbon date of 2030±50 BP, 170 cal BC–cal AD 80 (OxA-5455), from a pig molar in fill B68 (Table 4.1) may reflect the presence of residual Late Iron Age material in this area. Some 77% (by weight) of the Iron Age pottery from Chisenbury Warren came from Trench B, one sherd from this context.

A similar, adjacent pit (B59) contained exclusively early Roman pottery in its lowest fill (B100), with unspecific Roman pottery in the middle fill and late Roman pottery limited to the upper fill. The chronological position of this pit is complicated, however, by the fact that it abutted the most northern of the flint walls (B101). In section, there is a mass of flints cascading down the side of the pit below the wall and spreading across its base, giving the impression that nodules from the wall had tumbled into the empty pit (Fig. 4.8). B101, however, rested on the vestiges of a buried soil (B44) that produced pottery of both early and late Romano-British date, suggesting that the pit too is probably of late date.

Wall B101 crossed the full width of the trench (4 m at that point), apparently extending east onto the adjacent terrace, although it was not detected outside the trench by the magnetometer survey. A less complete wall (B87) lay some 8 m to the south, with the third wall (B85) a further 5 m south on the slight ridge between the lower terrace and the negative lynchet on the edge of the hollow-way, both of these corresponding to magnetometer anomalies. Wall B87 consisted of a small number of large flint nodules in a line across the centre of the trench, with a less coherent spread of flints running for 3 m down the west side of the trench. The corresponding geophysical anomaly runs west from the trench for some 12 m but curves towards the south just inside the trench. A similar anomaly appears to continue the line of wall B85 for some 7 m to the south-south-west of the trench (Fig. 4.7).

It is notable that the positions of these magnetometer anomalies do not correspond with the features recorded by the earthwork survey (Fig. 4.7) suggesting that, by the time these walls were built, the individual terraces were no longer significant spaces defining particular activities. Like B101, the two southerly walls rested on the remains of the buried soil (B44 and B86). This soil was best preserved beneath the walls but, between them, particularly between B101 and B87, it had been largely scoured away revealing an intensely weathered chalk surface.

At some point, the main occupation of the platforms was abandoned. The scarp of the upper platform (B12) was then filled with occupation debris (B23), including late Roman pottery (as well as some residual early Roman and Iron Age sherds), fragments of limestone tile, oyster shell, and animal bone, this material spreading across the ovens. On the lower platform, similar midden material (B22), incorporating flint rubble from the disturbed walls and chalk, accumulated on both sides of wall B101 and (B45) to the north of wall B87, suggesting that by this period the area around the northern half of the trench was being used as a dumping place for refuse from elsewhere on the settlement.

If pit B59 on the lower platform was of late Romano-British date, so too were at least two other pits in the same area. Immediately north of wall B101 were two shallow subcircular pits or scoops. The earlier feature (B26), which produced a small quantity of unspecific Roman pottery, was cut on its south side by feature B28 which contained a number of late Roman sherds (Fig. 4.9). Some 6 m to the south, cutting through the buried soil (B44), was a subrectangular pit (B30) backfilled with chalk rubble and accumulated occupation debris, containing early and late Roman pottery, similar to that dumped on the platform (Fig. 4.8).

Abutting the south side of wall B85, and overlying the buried soil on which it rested, there was another thick deposit of dark, organic sediment (B97), but here it was relatively stone free and the pot sherds and

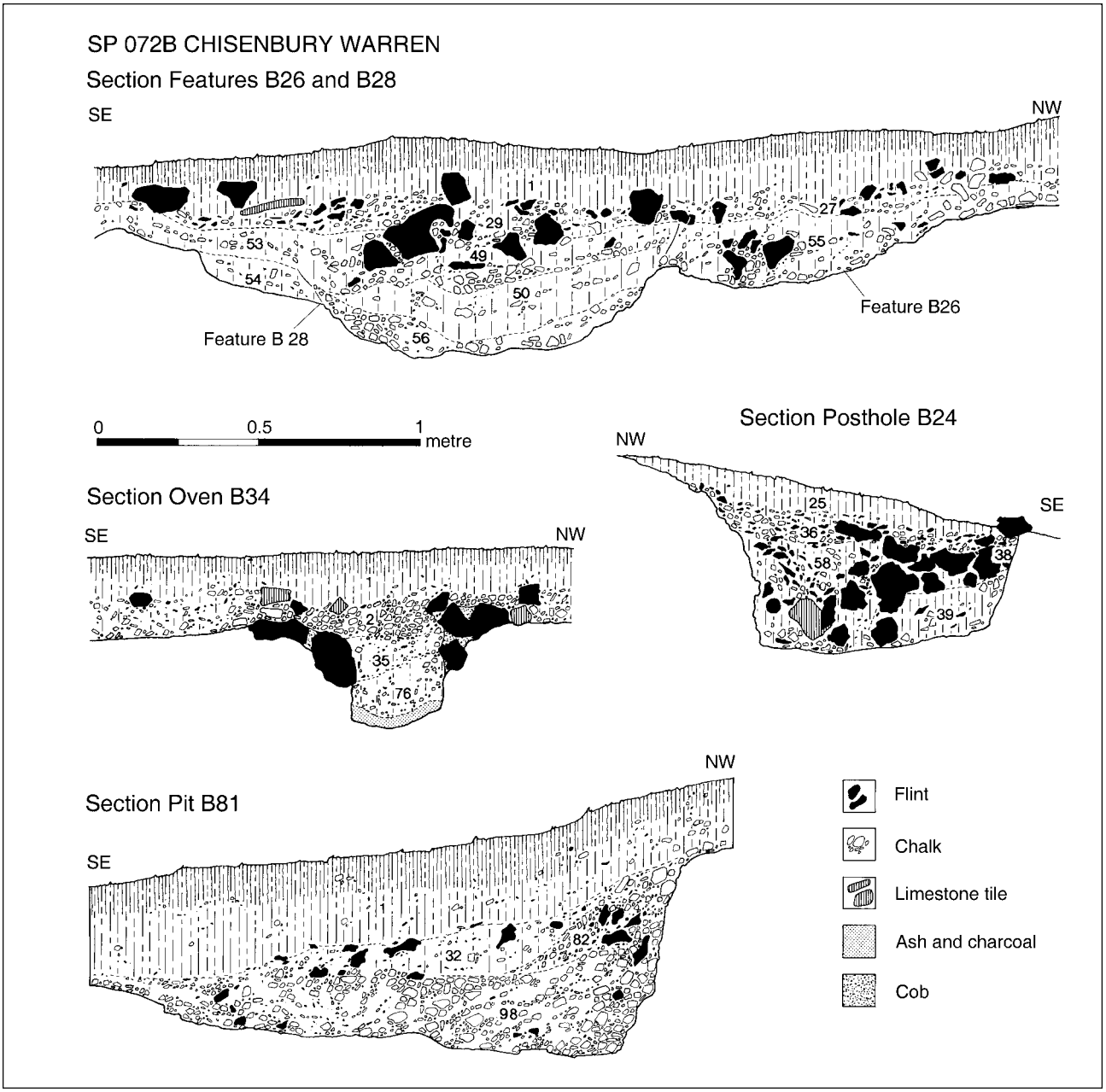

Figure 4.9 Chisenbury Warren SP 072, Trench B, pits B28, B26 and B81, post-hole B24 and part of drying oven B34

bone fragments it contained were small and abraded. This is interpreted as a horticultural soil, suggesting that there was a garden plot below the platform, where material from the adjacent dumps of domestic refuse had been incorporated into the soil. The plot was at least 4 m wide although its full extent is not known as it was cut away at the south by the hollow-way.

The chalk surface of the hollow-way itself showed signs of considerable erosion, although no wheel ruts were noted. It was cut by a negative lynchet filled with chalk rubble, towards the southern end of the trench, where faint traces of plough marks were visible. This suggests that at least part of the hollow-way may have been subject to cultivation during the later occupation of the site.

The excavated features in Trench B, as well as those recorded by the earthwork and magnetometer surveys, represent a complex sequence of activities. The recovery of residual early Roman pottery from the ploughsoil and some of the features indicates early activity in the vicinity of the trench, although within the trench itself this was represented only by a single pit (B59). It is unclear when the terraces were constructed, although the positions of the features possibly forming a timber structure suggest that the upper terrace was of late Roman date. It may be that the upper terrace was also associated with the drying

Table 4.1 Radiocarbon dates for Chisenbury Warren SP 072

Lab. No	*Context*	*Radiocarbon age BP*	*Date range at 2 sigma*
OxA-5455	B68	2030±50	170 cal BC–cal AD 80
OxA-5456	C52	2100±55	360 cal BC–cal AD 30
OxA-5457	C120	1950±50	60 cal BC–cal AD 220
OxA-5458	D70	2050±50	200 cal BC–cal AD 70

OxA-5455 on pig bone, others of cattle bone

oven centrally placed on it. There appears to have been no corresponding structural activity associated with the construction of the lower terrace, where a soil formed incorporating both residual early and late Roman pottery.

At some point in the late Romano-British period, new activities led to the boundaries of at least the lower terrace being over-ridden, with three walls being constructed extending well beyond the terrace and much of the soil between them being eroded down to the natural chalk. The apparent collapse of flints from wall B101 into pit B59 indicates, however, that the walls had only a limited period of use and subsequently, apart from the digging of a number of small pits, much of the trench was used for the disposal of occupation debris. Below the southern wall it is possible that there was a horticultural plot in which some of this debris was incorporated in the soil. This plot would have been bounded to the south by the trackway running along the base of the settlement, although its erosion and widening as a hollow-way is likely to have truncated the southern edge of the plot.

All but one of the 16 coins recovered from the site came from Trench B and these range in date from the early to late 4th century AD, so providing some supporting dating evidence for the sequence of the trench. Those copies dated to the AD 340s provide a *terminus post quem* for the formation of the horticultural soil, and suggest that the garden plot was established some time after AD 340 and continued in use until late in the second half of the 4th century. Three coins recovered from the upper fill of pit B30 were issues of Magnentius (*c.* AD 350–3), Valentinian I (*c.* AD 364–75), and Valens (*c.* AD 364–78) supporting a late 4th century date for this feature.

Trench B also produced a large part of the small assemblage of iron objects recovered at Chisenbury Warren, these coming mostly from superficial deposits. The finds are unremarkable and comparable to those from other rural sites in southern England, including Maddle Farm, Lambourn, Lowbury Hill, and Manor Farm, Beedon. Very little of the material is of high quality, and includes clips, strap fragments, clamps, spuds, and nails.

Trench C

Trench C, which was set back from the hollow-way, crossed a subrectangular terrace, measuring *c.* 15 m long by 10 m deep, at the upper, north-west end (Fig. 4.10). Below this it crossed a series of longer terraces extending mainly towards the north-east of the site, as well as a number of less substantial earthwork features. There was also a second subrectangular platform at the south-east, fronting onto the hollow-way. The excavation revealed a wide range of features, those dating to the early Romano-British period concentrated towards the south-eastern end (Fig. 4.11), with the remains of a late Romano-British structure at the north-west end (Fig. 4.12).

Towards the south-east end of the trench there were numerous large intercutting pits, a sample of which were excavated. Some of these pre-dated, while others post-dated, a ditch (C108) that ran almost perpendicular to the hollow-way. It was *c.* 1.5 m wide and 0.7 m deep with slightly concave sides and base (Fig. 4.11). To the north, before continuing outside the trench, it cut a pair of large storage pits (C106 and C114), while just before the south-east end of the trench it either turned at a near right-angle to the south-west, or was cut by another ditch (C112, visible in the north side of the trench) running parallel to the hollow-way. Both ditches produced early Roman pottery from throughout their fills, and cattle bone from a primary silt in ditch C108 provided a radiocarbon date of 1950±50 BP, 60 cal BC–cal 220 AD (OxA 5457) (Table 4.1).

A second, less substantial gully (C43), producing similar pottery, ran obliquely across the trench just to the north, aligned approximately north-west–south east. It was 0.55 m wide and 0.25 m deep. Despite the slight nature of this feature, and its alignment at an angle to the main earthworks, it appears to have bounded the main concentration of intercutting pits to the south.

The pits were of varying shape and size. Few were circular in plan, most being either subrectangular or square with rounded corners. Most had flat bases and steep to vertical sides – where the sides were undercut, as in pit C39, this was probably the result of the accidental collapse of one side. Most showed signs of having been deliberately backfilled with a mixture of soil and chalk rubble. Among the largest was pit C106, a large storage pit measuring at least 2.5 m wide and 1.4 m deep, with a deep layer of compact chalk rubble at the base, possibly the result of a period of natural silting. Despite a radiocarbon date of 2100±55 BP, 360 cal BC–cal AD 30 (Oxa-5456) from cattle bone in pit C39 (Table 4.1), this feature and pits C41, C53, C98, C106, and C111 (Figs 4.10–12) all produced exclusively early Roman pottery. The most northerly pit (C37) also contained

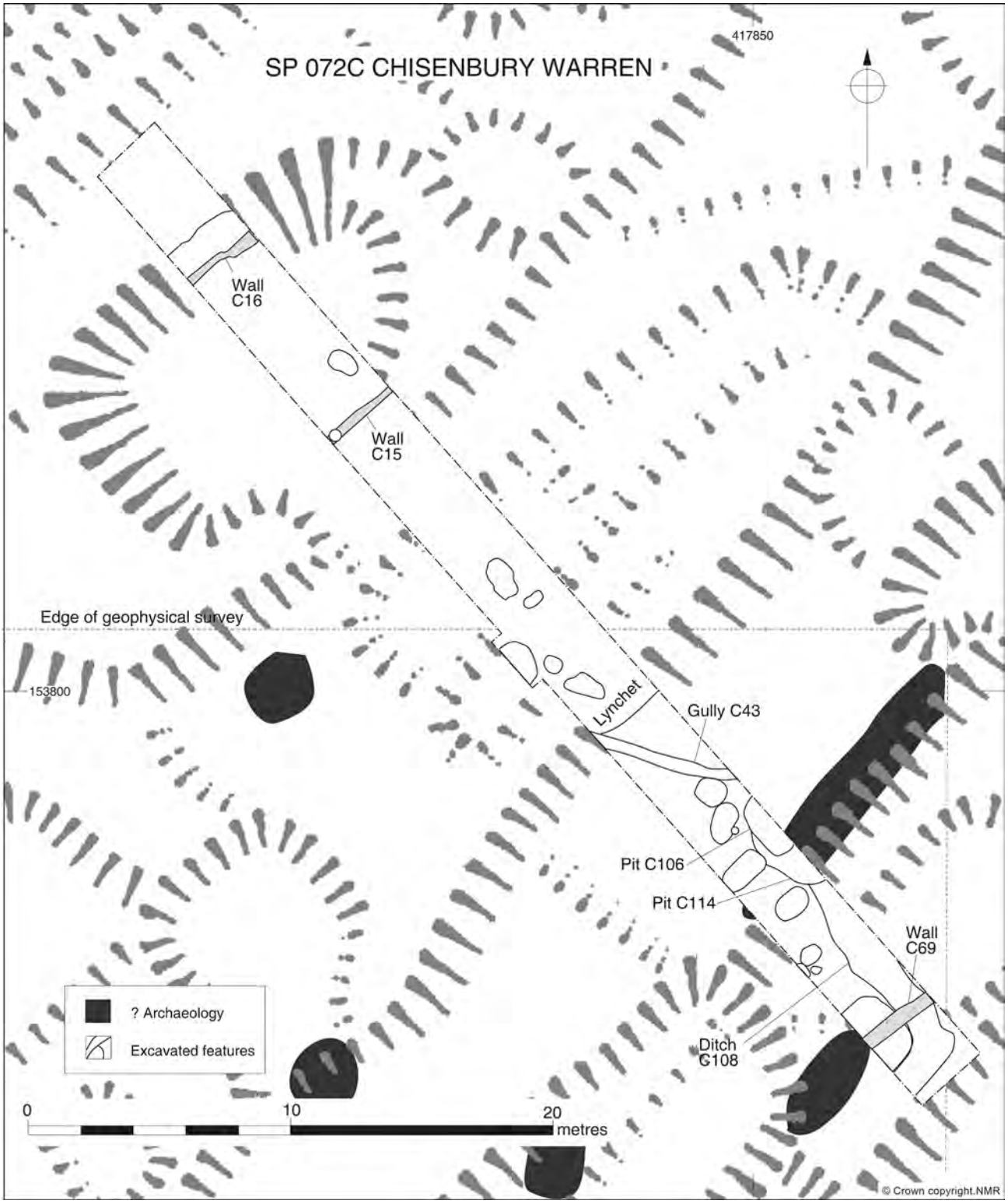

Figure 4.10 Chisenbury Warren SP 072, Trench C composite plan of excavated, earthwork, and geophysical features

pottery of general Romano-British date, while pottery in pit C72 may extend to the early 3rd century (Fig. 4.12).

Other features in the southern part of the trench included an adjacent pair of shallow cuts (C74 and C88) up to 0.75 m across, packed with burnt flint, feature C74 producing pottery of general Romano-British date. Both were cut into the upper fills of intercutting early Romano-British pits C107 and C117. Immediately to their south-east, also cut into

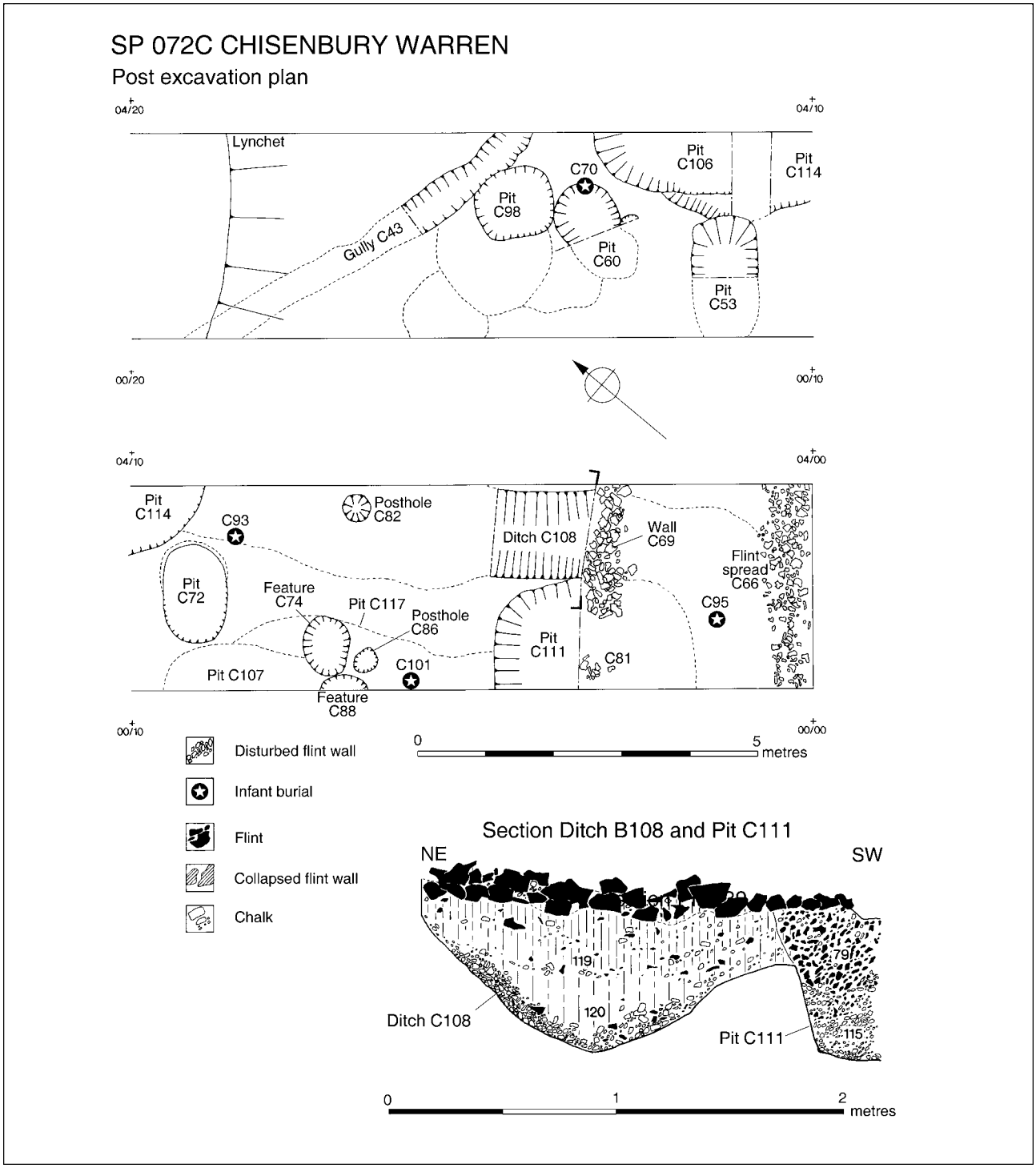

Figure 4.11 Chisenbury Warren SP 072, Trench C (SE end) 0 m–20 m, ditch C108, pit C111, and wall C69

the fill of C117, was an undated but possibly associated post-hole (C86) packed with flint nodules. There was a second post-hole (C82), in which a large quern fragment had been used as a packing stone, some 2 m to the north-east, cutting the upper fill of ditch C108.

Some 3.5 m in front of the post-holes, and parallel to them, there was a linear spread of flint nodules (C69) marking the line of a collapsed wall extending out 2 m from the eastern side of the trench. A small cluster of further nodules and a sandstone tile (C81) on the same line, close to the other side of the trench may be associated, possibly part of the same truncated wall. Together, the post-holes and wall probably represent the remains of a small building and although none of these features provided any dating evidence, the wall was laid across backfilled pit C111, which in turn cut the completely silted up

Plate 6 Chisenbury Warren SP 072, wall C69 over ditch C108

ditch (C108) (Fig. 4.11; Plate 6). Across the end of the trench *c.* 2.5 m to the south-east, there was a second spread of flint nodules (C66) on the edge of the small terrace, and above the edge of the hollow-way. While this might represent a second wall, it did not appear to be so and may represent material, including flints from wall C69, moved to the edge of the terrace by later ploughing.

Distributed among these features were four perinatal infant burials, all of them south of gully C43. Grave C70, measuring 0.45 x 0.35 m and 0.08 m deep, cut the edge of an irregular shaped pit C70, one of a number of intercutting features immediately south of gully C43. The infant skeleton, the only one not substantially disturbed by later activity, lay in the foetal position with its head to the west, facing south. Two burials had been made in shallow scoops (C93 and C95) in the upper fill of ditch C108, with the fourth grave (C101) cut into the upper fill of pit C117, immediately south of post-hole C86. Although a small quantity of early Roman pottery was found in grave C95, this could easily derive from the ditch fill and there was no other dating evidence.

There was evidence for cultivation across the southern half of the trench, and most of the early Romano-British features were severely truncated. The overlying stratigraphy comprised a flinty ploughsoil containing small and heavily abraded sherds of pottery. Two prominent lynchets were recorded by the earthwork survey running across the area, with a third less substantial one just below the north-western house platform, creating a series of broad terraces (Fig. 4.10). A possible buried soil (C45) was recorded below the ploughsoil on part of the middle terrace. The lynchets define a series of cultivation strips, parallel to the hollow-way, that are intersected by a low bank some 40 m to the north-east of the trench. Beyond that, they are visible as slight scarps eventually fading out midway between Trenches C and D, indicating subsequent ploughing over these strips in this area. The lower lynchet appears to correspond to a broad anomaly recorded by the magnetometer survey.

Plate 7 Chisenbury Warren SP 072, wall C16

While this episode of cultivation clearly post-dates most of the early Romano-British occupation it is possible that it pre-dates the construction of the prominent hollow at the north-west end of the trench, as the lynchets (and others at the south-east end of the settlement) appear to be cut by similar hollows and house platforms (Fig. 4.4). The platform at the northern end of the trench appears to have been largely untouched by cultivation. It preserved the remains of a building represented by two walls set 8 m apart, and was largely filled with a mixture of soil and flint rubble among which were numerous fragments of limestone roof tile (Fig. 4.12). The substantial remains of a flint drystone wall (C16), 0.6 m wide and standing to a height of 0.4 m, survived at the rear of the platform, consisting of facings of flints and chalk blocks with a flint and rubble core (Plate 7). The front wall (C15) was less well preserved and only the lowest course of flints remained.

Neither wall had a foundation trench but rested directly on the natural chalk surface. However, unless they were reinforced by a timber frame it seems unlikely that a drystone wall composed of irregular flint nodules, and only 0.6 m wide, could have stood

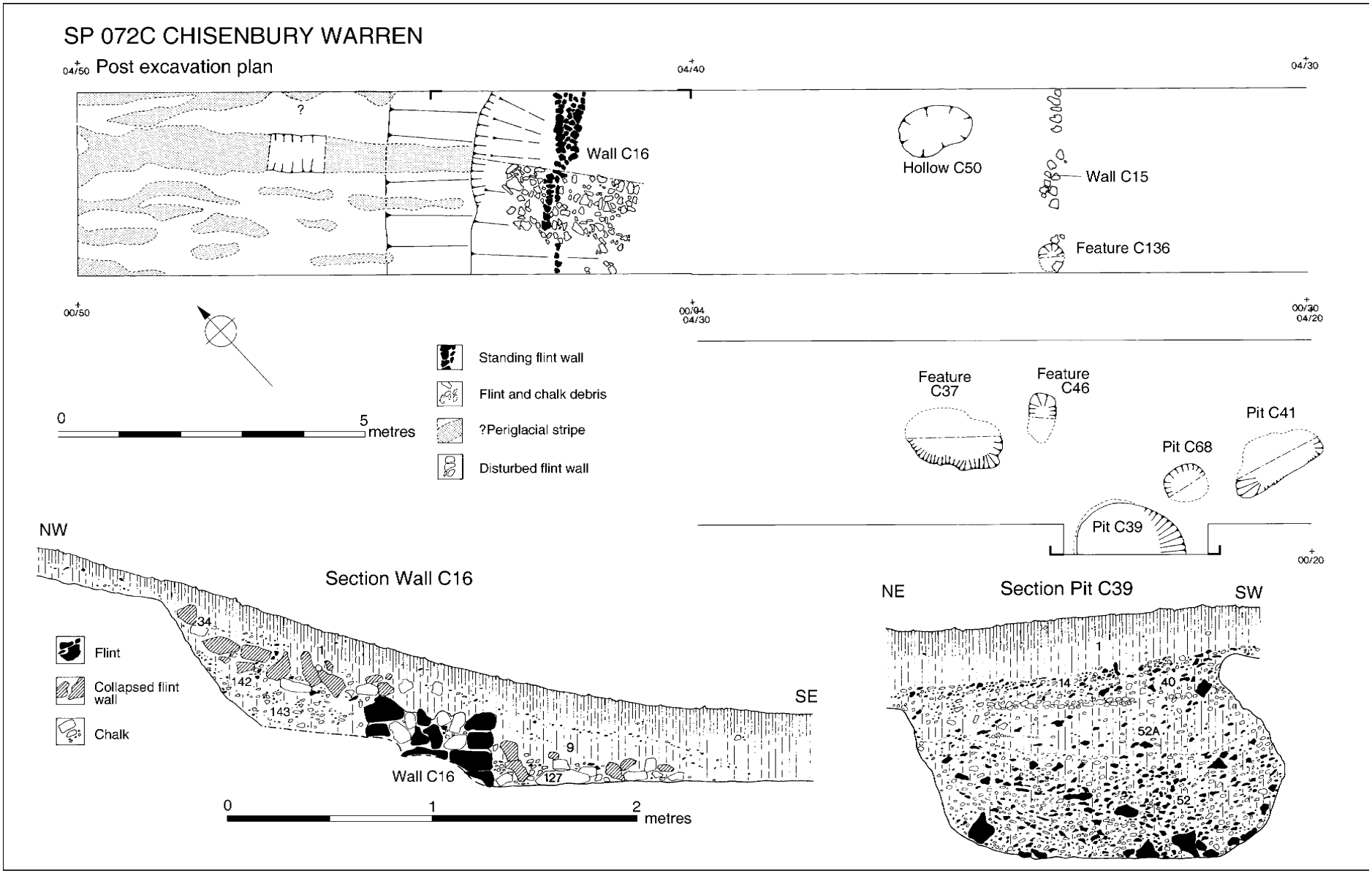

Figure 4.12 Chisenbury Warren SP 072, Trench C (NW end) 20–50 m, wall C16, pit C39

to any great height, let alone supported the weight of a limestone tiled roof. There were, however, no post-holes recorded, only a single 0.45 m diameter cut (C136) overlain by large quern fragment, underlying the front wall, which at 0.08 m deep was too shallow to be a post-hole.

The only feature within the building was an irregular shallow hollow (C50), approximately 1 m across, containing abundant large flint nodules, and producing late Roman pottery, as did the adjacent area of disturbed chalk natural (C139). Late Roman pottery was also recovered from both the rear wall and the collapsed rubble to front (C127) and rear (C34–5). In front, the wall had fallen directly on the natural chalk with no occupation horizon being noted; late Roman pottery was also found in the layer above the rubble (C36) – including, from its surface (C9), much of a South-east Dorset Black Burnished ware 'fish dish'. To the rear, the wall had collapsed on soils (C142–3) that had accumulated between the wall and the steep edge of the platform.

As in Trench B, the excavated features in Trench C, when combined with those recorded by the earthwork and magnetometer surveys, present evidence for varied and localised activities over a long period of time. The arrangement of the early Romano-British ditch, which probably defined the boundary to a field or other plot, and the gully, display no correspondence with the earthwork terraces, and clearly pre-date them. However, the course of the ditch almost certainly reflects the position of a trackway which, over time, developed into the hollow-way. The ditch, however, although representing some episode of organisation in the layout of the settlement was not the earliest feature in this part of the trench, and the density of pits, including the two features filled with burnt flint, indicates intense and long term activity close to this trackway during the early Romano-British period. There was, however, no evidence of early structures associated with the earliest activity.

It may have been towards the end of this period that the small, subrectangular terrace was constructed at the south-eastern end of the trench, its upper edge cutting across the early ditch. It may have been built to accommodate the structure represented by the two post-holes and wall C69, the post-holes situated on the back edge of the terrace. Given that the infant burials lie both within and outside this structure they are unlikely to be associated directly with it and could, therefore, either pre- or post-date it. While the three most southerly graves had been badly disturbed, probably by later ploughing, grave C101 could also have been truncated by the creation of the lower subrectangular terrace.

The abandonment, by the late Romano-British period, of the area flanking the trackway corresponds to the creation of the prominent subrectangular terrace at the north-west end of the trench and the construction within it of a building with stone wall footings. It is possible that the long cultivation strips extending to the north-east were established at this time, with cultivation through the late Romano-British period resulting in the three parallel lynchets, the upper of which formed immediately in front of the building.

Trench D

Trench D, aligned south-west–north-east at the north end of the site, crossed a number of features recorded by the earthwork survey, the most prominent being the hollow-way, here running north-west–south-east (Fig. 4.13). Abutting it on its north side was a bank, running approximately north-north-east, on the south-eastern side of which were two adjoining sub-rectangular terraces. There was another bank running parallel to the hollow-way on its south-west side, beyond which was a series of faint terraces.

Among the earliest features excavated in the trench was a series of ditches whose alignments reflect that of the later hollow-way (Fig. 4.14). On the south-west side, ditch D97, which was 1 m wide and 0.4 m deep with a U-shaped profile, produced Late Iron Age/early Roman pottery from its secondary fill (D98) and from an overlying layer of occupation debris (D70) (Fig. 4.15). A sample of cattle bone from D70 provided a relatively early radiocarbon date of 2050±50 BP, 200 cal BC–cal AD 70 (OxA 5458) (Table 4.1). The line of this ditch corresponds to a linear anomaly recorded by the magnetometer survey that turns sharply to the south-west immediately south of the trench and ends at a terminal immediately to the north-west (Fig 4.13). The survey also showed an approximately matching L-shaped ditch to the west, forming the front of what appears to be a 15 m wide rectangular enclosure with a 5 m wide entrance gap on the north-eastern side. The excavation revealed a feature (D107) in the base of the ditch, extending 0.8 m into the trench on its north side. Initially interpreted as an earlier ditch, cut by ditch D97, this feature could be associated with some entrance structure set in the ditch terminal, its chalk rubble fill possibly comprising packing for a timber post. A series of other linear anomalies in the area may be associated.

Parallel to ditch 97, some 1.5–2 m to the north-east, there was a second slightly larger ditch (D8). It was 1.7 m wide and 0.75 m deep with slightly convex sides and a concave base, it north-eastern side overlain by the hollow-way (Fig. 4.15; Plate 8). The primary and secondary fills (D114 and D113) also produced Late Iron Age/early Roman pottery.

Although the natural chalk across much of the trench had been truncated by later ploughing and

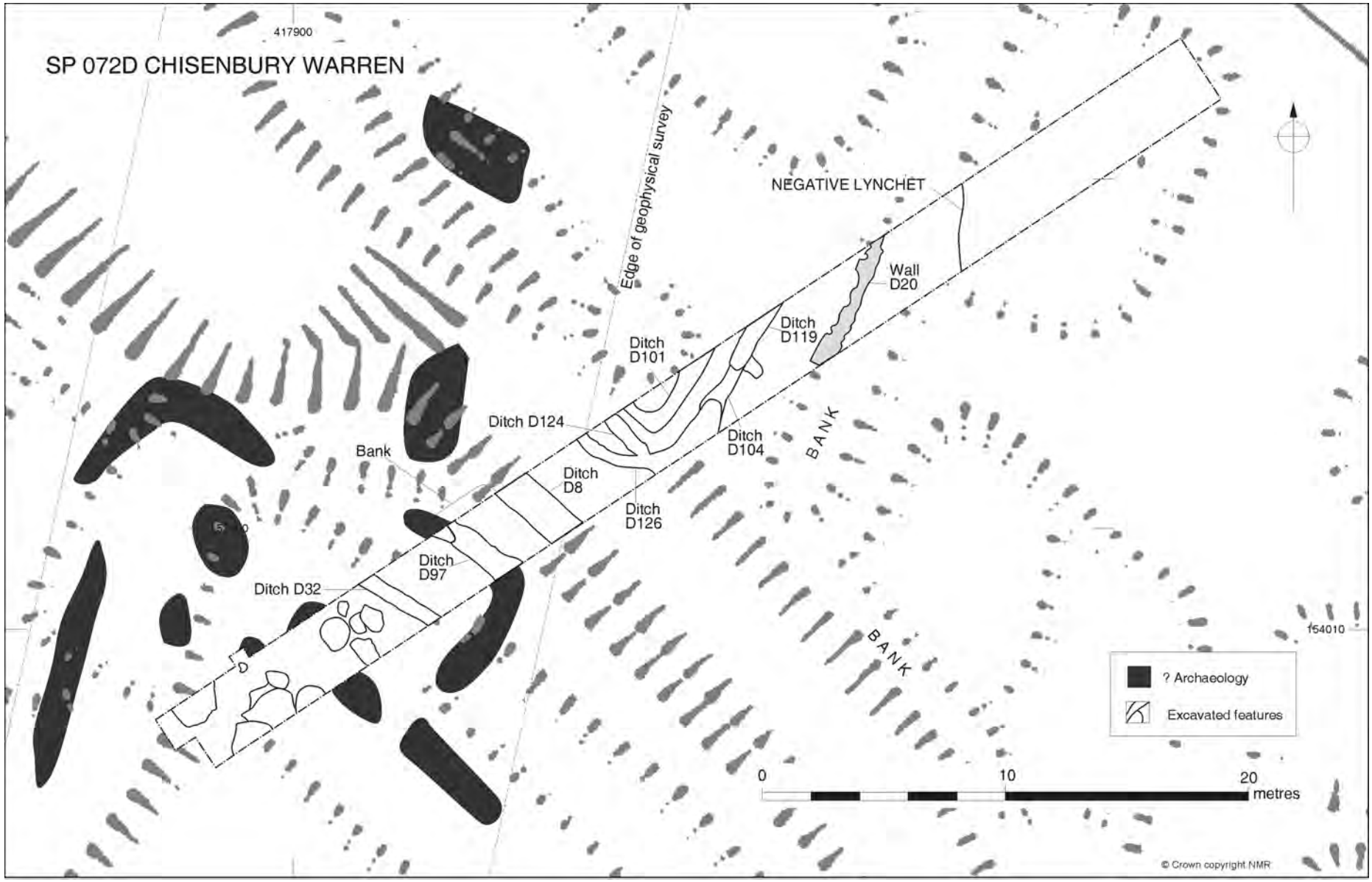

Figure 4.13 Chisenbury Warren SP 072, Trench D, composite plan of excavated, earthwork, and geophysical features

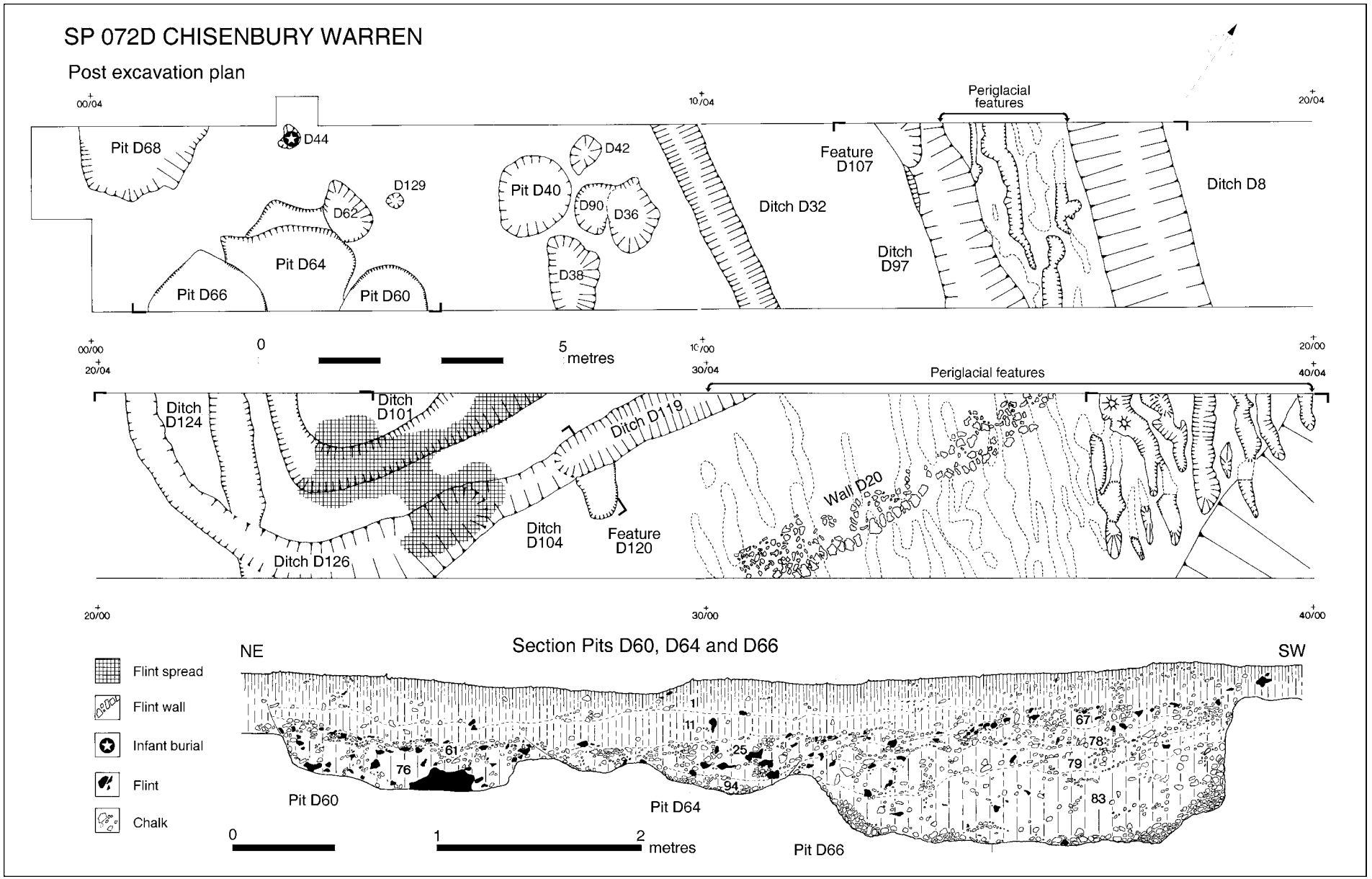

Figure 4.14 Chisenbury Warren SP 072, Trench D, pits D60, D64, and D66

Plate 8 Chisenbury Warren SP 072, ditch D8, bank D59, and ditch 97

erosion, a buried soil (D82) had been preserved between the two ditches, protected by a bank (D59) (Fig. 4.15). To the south-west, the bank had spread over ditch D97, which by then had silted up to around half its depth, layer D71 containing pottery no later than the early 3rd century. On its north-east side the bank was apparently faced with a drystone wall of large flint nodules (D109) laid directly on the chalk bedrock, and running along the edge of ditch D8 with which it seems to have been contemporary. Only parts of the lowest course of the wall, which also produced Late Iron Age/early Roman pottery, survived *in situ*. The rest had subsequently collapsed into ditch D8, the lowest spread of flints (D110) being associated with the tertiary fill of the ditch (D26) which produced pottery of general Romano-British date. The earthwork survey shows that this bank continued for at least a further 15 m to the north, while to the south it ran for *c.* 70 m, curving round to the south-west (Fig. 4.4).

Approximately 3 m south-west of ditch D97 there was a small v-shaped ditch (D32), 1.1 m wide and 0.5 m deep with a flat base. Although on a slightly different alignment to the two other ditches, it appears to match the south-western side of the spread bank which widens towards the west, and so may post-date a period of cultivation, although it provided no dating evidence.

Further to the south-west there was a series of truncated pits and other features that correspond closely to two subcircular anomalies recorded by the magnetometer survey (similar anomalies being recorded just beyond the trench on both sides). These features represent at least three phases of activity. Towards the south-west end of the trench, at least three wide but relatively shallow pits (D64, D66, and D68) produced Late Iron Age/early Roman pottery and are possibly associated with the occupation debris in ditch D97 (Fig. 4.14). To their north-west there was a tight group of five smaller features (including possible post-holes), three of which (D36, D38, and

Plate 9 Chisenbury Warren SP 072, ditches D101, D119/126, and D124, and hollow-way

D40) produced pottery of general Romano-British date. One of these (D44) is also recorded as containing the remains of an undated, perinatal infant burial that had been badly disturbed, with only bones from the pelvis and below surviving (see human bone). A quantity of articulated sheep bone was found on the surface of the fill (D45) but the relationship between the human and animal bone was not established.

There was an arrangement of three ditches and a bank on the north-eastern side of the hollow-way which in many respects matched that to the south-west (Fig. 4.14; Plate 9). This comprised two parallel ditches and a stone-faced bank running perpendicular to the hollow-way, the ditches then turning to the north-west, the outer ditch crossing over the line of a third ditch, also aligned on the hollow-way. The corners in the ditches lie almost exactly opposite the corner in the geophysical anomaly that corresponds to ditch D97, indicating a coherent arrangement of enclosures separated by a trackway. The trackway subsequently developed into the hollow-way which severely truncated the three ditches running along its north-eastern side. Although the magnetometer

survey did not cover this area, a number of the features recorded within the trench correspond to surviving earthworks.

The inner of the parallel ditches (D101), which was 1 m wide and 0.45 m deep (Fig. 4.15), turned at a relatively sharp angle. The outer ditch (D119/D126), which was of similar dimension and profile, followed a more gradual curve crossing over the line of ditch D124. It originally had a 1.3 m wide gap immediately north-east of the corner, the north-eastern terminal cutting a shallow irregular pit (D120). The gap was subsequently closed by a short length of ditch (D104). Unlike the ditches west of the hollow-way, these were all steep-sided with flat or slightly concave bases. Both D101 and D104 produced Late Iron Age/early Roman pottery. The stratigraphical relationship between ditches D119/D126 and D124 was not recorded, and this, combined with the heavy truncation of these features by the hollow-way, makes it hard to determine their chronological relationships.

The earthwork survey indicated a small subcircular rise in the ground just beyond the edge of the trench, at the point where ditches D101 and D119/D126 turned. To the south-east of this rise, within the trench, there was a spread of large flint nodules (D17) extending over the upper fills of both ditches. It is suggested that this material derived from a clearance cairn, perhaps indicating that these ditches enclosed a field. The cairn had been disturbed by later ploughing, the slight rise in the ground appeared to indicate its original position.

The earthwork survey also shows what appears to be a bank running parallel to ditch D119, some 3 m to its south-east, and like bank D59 on the other side of the hollow-way, this too was shown by the excavation to be associated with a drystone wall (D20) running along its north-western edge. The wall, which produced pottery of general Romano-British date, was represented by a single course of large *in situ* flint nodules (D21) with a spread of collapsed nodules on its north-west, outer side (Fig. 4.14). A stony layer (D23), producing early Roman pottery, to the south-east of the wall and continuing up to the edge of a negative lynchet, may represent the remnants of the bank (Fig. 4.15). The earthwork survey shows that the bank, which abutted a similar feature flanking the hollow-way, ran towards the north for some 3.5 m beyond which it appears to have been completely truncated by later ploughing, although its line is continued by the negative lynchet. There were a number of similar banks lying perpendicular to the hollow-way, particularly in the northern part of the site.

That there had been a bank faced by wall D20 is indicated by the fact that the original surface of the chalk natural, as well as a series of periglacial features

Plate 10 Chisenbury Warren SP 072, bank wall D20, and periglacial features

cut into it, had been preserved on this alignment, protected from later ploughing by the body of the bank (Fig. 4.14; Plate 10). These roughly parallel linear features, filled with yellowish brown clayey soil and weathered chalk, were initially identified as spade or cultivation marks (D99), but are natural in origin, similar features also being recorded with the same alignment under bank D59.

Features more likely to represent cultivation marks are evident, however, at a higher level in the soil profile, visible as variations in the overlying ploughsoil (D18), with regular soil-filled depressions cut into disturbed chalk rubble (D27) (Fig. 4.15). Most of the pottery from these depressions was Romano-British, although two medieval rims may indicate later episodes of ploughing.

South-east of the bank the ground fell away into two adjacent, subrectangular sunken terraces filled with a deep colluvial soil, and containing just two features, a Late Iron Age/early Romano-British pit (D86), and a possible post-hole (D95) of probable late Romano-British date. Both had been severely truncated by the later ploughing that had created the negative lynchet south-east of the bank. This lynchet was further investigated some 5 m north of the trench in an enlarged test pit (SP 071, below).

The excavation of Trench D, therefore, in combination with the results of the earthwork and magnetometer surveys, provided further evidence for the origins and early phases of the site. The earliest phase of activity would appear to be represented by a small Late Iron Age/early Romano-British subrectangular ditched enclosure with an entrance to the north. The occupation debris found in the ditch may derive from activity within the enclosure represented by the series of large pits at the south-west end of the trench. Given the layout of the enclosure, it can be suggested that the matching layout of ditches D119/D126 on the other side of the trackway was broadly contemporary, in which case the gap between them suggests that a trackway on the

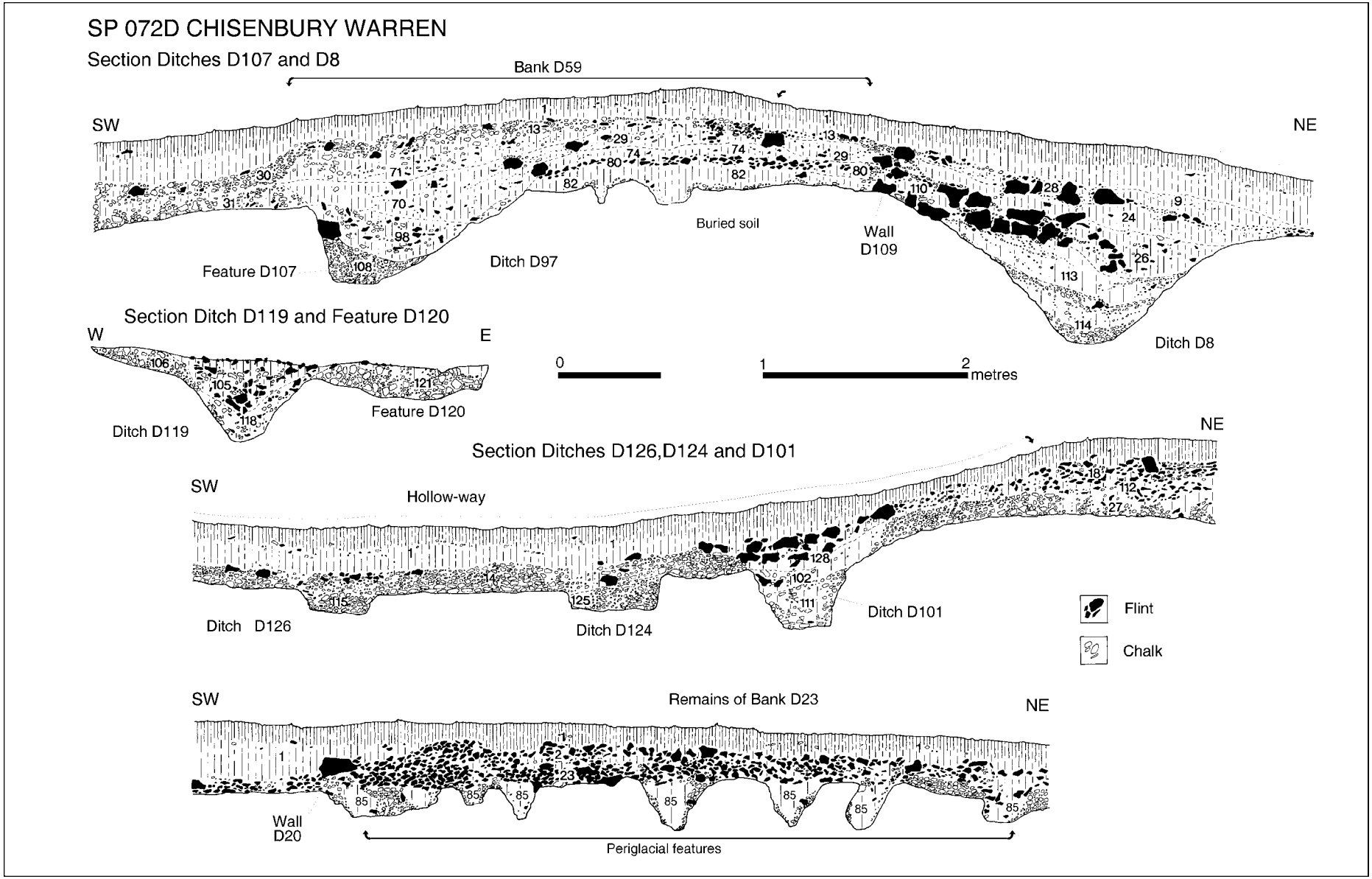

Figure 4.15 Chisenbury Warren SP 072, Trench D, ditches D97 and D8, and bank D59, ditches D126/119, D124, and D101, wall D20 and bank D23, and periglacial features

approximate line of the later hollow-way existed by this time. The enclosure would, therefore, have opened onto the trackway. The original, narrow east-facing entrance in ditch D119/D126 was subsequently blocked.

Although there was no stratigraphical relationship between ditch D119/D126 and ditch D101 inside it, the latter may have been constructed to widen the trackway, perhaps at the time that ditch D8 (and the flint-faced bank on its edge) was constructed, the line of the trackway being shifted some 3 m to the north-west. Ditch D97 had already silted up to at least half its depth by the time the bank was erected. (As the stratigraphical relationship between ditch D126 and D124 was not recorded, the chronological position of this latter ditch cannot be determined.)

Given the similarity of the two flint-faced banks it is possible that they too were broadly contemporary. In both cases the flint facing had subsequently collapsed forward, and in both cases the collapsed flints (D20 and D110) were associated with pottery of general Romano-British date, this occurring when ditch D8 had silted up to around half its depth.

Later activity in this area is indicated primarily by the significant quantities of late Roman pottery (*c.* 3.6 kg) recovered from a layer of plough-disturbed natural (D12) sealing the features in the south-western end of the trench, and from a wide shallow feature (D10) cutting this layer over the Late Iron Age/early Romano-British pits (D64, D66, and D68) (*c.* 5.3 kg). Further quantities were recovered from the topsoil. Apart from the single post-hole (D95) at the other end of the trench, there are no other features to indicate the source of this material.

Test pits SP 071 and 071/1–4

That the northern end of the site was a focus of some form of late activity is confirmed, however, by the further large quantities of late Roman pottery (almost 6 kg) recovered from the base of the modern soil in a series of test pits (SP 071, 071/1, and 071/3) immediately to the north of the trench's north-eastern end (Fig. 4.4). These three test pits, spanning just 10 m, also produced large quantities of ironworking slag from the same contexts, and SP 071 also produced fragments of coal. The closely confined and corresponding distributions of the slag, coal, and pottery suggest associated and very localised activity. No specifically late pottery was identified in 071/4, just 4 m to the east, or in 071/2 16 m to the north-west, the latter producing 68 g of slag. Lynchet trench SP 069, however, *c.* 25 m to the north-west, produced a further 1 kg of slag, possibly representing another localised focus of ironworking activity, although military activity here had disturbed any associated features.

Summary

The excavations at Chisenbury Warren have provided considerable insight into the development of the wide range of features still visible at the site. The recovery of significant quantities of Iron Age pottery from the lynchets to the south-east, east and north-east of the site, points to the likely presence of an Iron Age settlement on the ridge to the east. Residual Iron Age pottery was also recovered from a number of contexts in Trenches A, B, and D.

Four animal bone samples, from stratigraphically early contexts within three of the principal trenches, were submitted for radiocarbon dating in order to provide a date for the origin of the Romano-British settlement in the dry valley below the ridge. However, although that from ditch C108 (OxA-5457) provided a calibrated date range of 60 BC–AD 220, the other three samples all produced dates weighted to the 1st or 2nd centuries BC (Table 4.1). This is significantly earlier than the date suggested by the ceramic evidence, which places the origins of the site some time in the 1st century AD (either pre- or post-Conquest).

The first phase of the site involved the construction of a regular arrangement of features flanking a trackway at the north end of the site. These included a small rectangular enclosure opening onto the track, containing a series of large pits, and with occupation debris being dumped in the enclosure ditch. Opposite the enclosure, on the other side of track, there was a ditch, probably representing the corner of a contemporary field. This ditch (104) produced the only potentially *in situ* Iron Age pottery from the site. A clearance cairn was created in the corner of the field.

There appear to have been relatively rapid modifications to this arrangement during the early Romano-British period, with the abandonment of the enclosure, and its replacement along the south-west side of the trackway by a flint-faced bank and ditch. The bank can be traced running south along the trackway for some 70 m, before curving round to the west and so possibly enclosing a substantially larger area. A slight shift in the alignment of the trackway required by the construction of the bank and ditch led to a corresponding modification to the field ditch on the other side, accompanied by the construction of another flint-faced bank running perpendicular to the trackway, probably utilising the material collected in the clearance cairn.

These modifications appear to represent a significant expansion of settlement, and the formalisation of a number of plot and field boundaries involving the construction of banks. Quantities of large, unabraded sherds of early Roman pottery and freshly deposited animal bone from trench SP 068, east of Trench D, suggests settlement

activity at some distance from the trackway. To the south, there was at least one early Romano-British pit in Trench B, and a ditch and a further pits in Trench C. The ditch in Trench C, running perpendicular to, and then along the edge of, the trackway, was similar in proportions and profile to the track-side ditch in Trench D, and although there were no traces of any associated bank in this area of dense later earthworks, it appeared to form part of the same regular pattern of boundary earthworks running off, or along the trackway. These are clearly recognisable from the earthwork survey to the east and south-east of the trackway, and the excavation of a number of them suggests that their construction was part of this same process. The chalk ridge recorded in Trench A, at the southern end of the site, may indicate the line of a similar bank, later ploughed out, bounding another subrectangular field or enclosure. The excavation of large quarry pits in Trench A probably reflects the rapid pace of construction across the site during this period.

Banked field boundaries are less evident within the dense complex of terraces, hollows, and platforms in the south-western part of the site, in the area of settlement investigated in Trenches B and C, although short lengths of bank running perpendicular to the trackway were recorded to their rear. The hollows and platforms date mainly to the late Romano-British period and mark another fundamental reordering of the layout of the site, with a dense, organised, unbounded settlement established within a more confined area. The arrangement of earthworks suggests a number of clearly defined properties spaced at regular intervals along the trackway, by now probably developing into a substantial hollow-way. Their construction involved the destruction and or slighting of the previous bank and ditch boundaries. In both Trenches B and C there may have been a gradual shift of settlement activity back from the hollow-way, the late hollow in Trench C being located at the rear of the settlement, and the midden material in Trench B appearing to have derived from upslope, behind the terrace.

The finds and features excavated on these terraces point to a range of domestic, subsistence, agricultural, and industrial activities. Some of the terraces were used for the construction of buildings with stone wall footings. The relatively insubstantial construction of the building in Trench C, when compared to the stone building at Beach's Barn, explains why so little evidence for houses survives at sites like Coombe Down South that have been ploughed in modern times. There were also timber structures, pits of various size, shape, and function, a drying oven, and activity areas, including possible horticultural plots, defined by low stone walls. The presence among these archaeological features of four (possibly) five infant burials provides a reminder of the human communities that lived and worked within this settlement.

To the north-east of Trench C there is a noticeable reduction in the density of the settlement earthworks, although their shallower profiles indicate that this part of the site was subject to more sustained levels of later cultivation. However, the large quantities of late Roman pottery from a large amorphous feature and from the ploughsoil in Trench D, and from the test pits beyond it – associated in the test pits with localised distributions of slag – point to another focus of activity, probably industrial, at the north end of the site.

The location of the settlement in a dry valley some considerable distance from the closest river raised the question of how the population and their animals were supplied with water. There are a number of circular depressions in the bottom of the coombe below the site, and although some of these are probably old military disturbances, others may mark the position of wells belonging to the settlement. Unfortunately time did not allow their investigation. However, test pits were excavated in two linear hollows running along the floor of the coombe, but these revealed only shallow soil over weathered chalk, with no traces of water-laid sediment.

SP 009 Coombe Down South

The Romano-British settlement at Coombe Down South lies just 2 km south-east of Chisenbury Warren (Fig. 3.5). The settlement, as revealed by the surviving earthworks, is considerably smaller in scale and displays a less coherent structure, although, as at Chisenbury Warren, the majority of settlement earthworks, in the form of hollows, platforms and small terraces, are on the uphill, northern side of a prominent hollow-way (Fig. 4.16). All four trenches excavated were positioned within the settlement although the locations of three (Trenches B, C, and D) were designed primarily to investigate the ditches of the Iron Age enclosure and other possibly associated ditches. (Some doubt as to the precise correlation of the excavated features in relation to the earthworks stems from inconsistencies in the grid co-ordinates of the earthwork and magnetometer surveys and the trenches.)

Trench A

Only Trench A was designed primarily to investigate the earthworks of the open settlement, crossing two features – a subcircular depression *c.* 15 m across at the south-west linked by a shallow corridor to a slighter subsquare depression, *c.* 10 m across, at the north-east (Fig. 4.16). These features were chosen because they appeared to be an integral part of the Romano-British settlement as defined by the

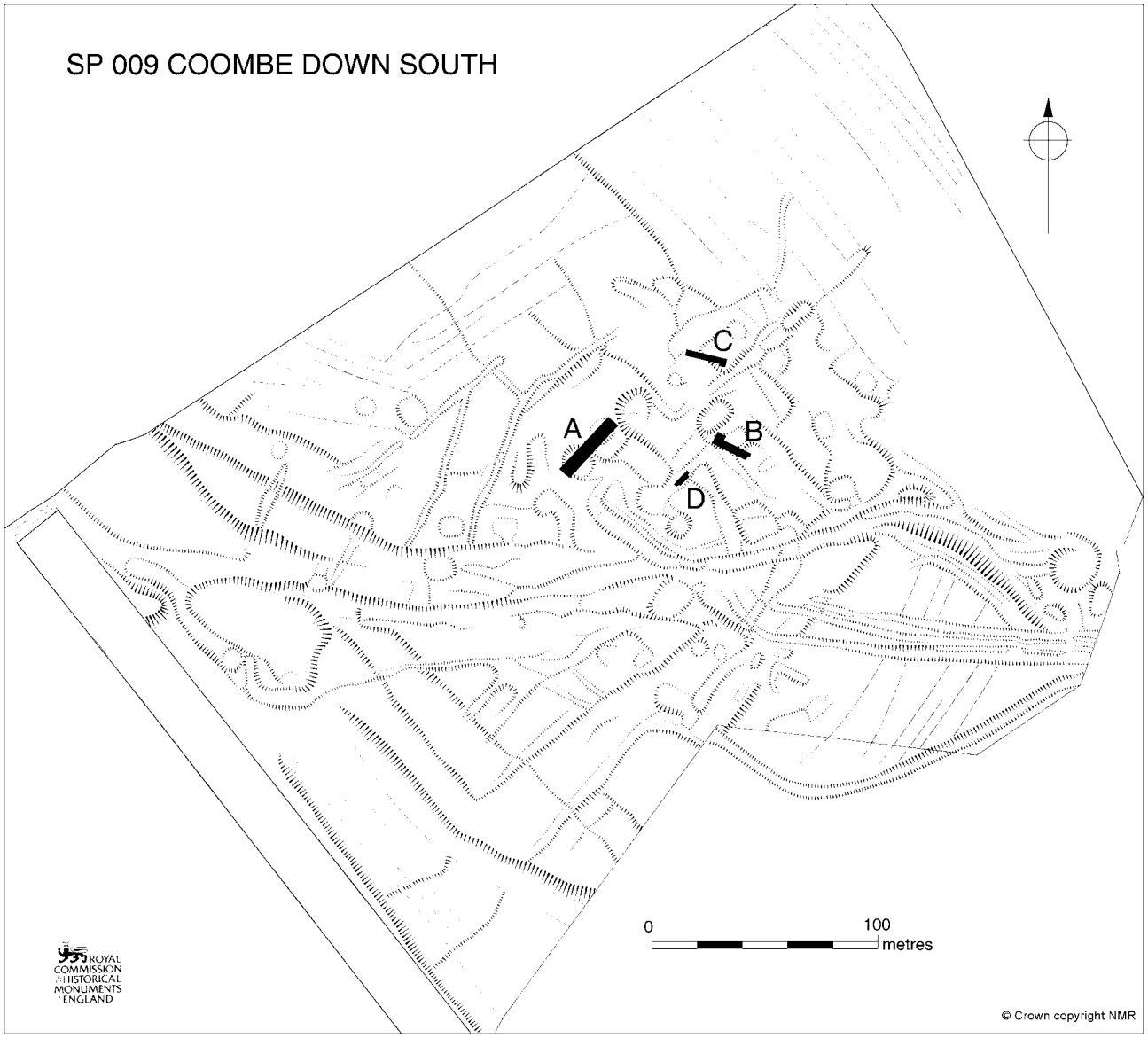

Figure 4.16 Coombe Down South SP 009, earthwork survey with trench locations

earthwork survey, although the latter feature corresponds closely with the area of early Iron Age working hollows (Chapter 3), and may in part, therefore, be a feature of the Iron Age enclosure.

Almost 10 kg of early Roman pottery was recovered from contexts in Trench A, indicating considerable activity in the 1st and 2nd centuries AD. Some two-thirds was recovered, along with Iron Age sherds, from the lower part of a colluvial ploughsoil (A3 – also contexts A32/A40/A45) (Fig. 3.15) covering that part of the trench north-east of Iron Age ditch A109 (see below), but significant quantities were also found below the ploughsoil in the fills of a large shallow hollow (A81) (Fig. 4.17), containing also a large amount of burnt flint and spreads of ash and charcoal, that cut Early Iron Age hollow A102 (Fig. 3.14). This feature, which had a possible post-hole (A108) with a charcoal-rich fill on its southern edge, appears to be associated with an occupation horizon (A61–63 and A72) in the same area, within which traces of a cobbled surface of rammed chalk (A38–39 and A54) were recorded.

Although late Roman pottery was found within the colluvium and topsoil across the trench, features of this date were confined to its south-western end. This area corresponds closely to the prominent subcircular depression recorded by the earthwork survey, suggesting that, as at Chisenbury Warren, such earthwork features may have been of predominantly late Romano-British date. The north-eastern edge of the depression corresponded with the north-eastern edge of Iron Age ditch A109, which, by this time, had completely silted up (Fig. 3.15). The natural bedrock in the uneven base of the depression comprised chalk and periglacial features (a shallow irregular feature (A49), immediately south-west of the ditch, may be

no more than a further irregularity in the base of the depression, as opposed to a discrete archaeological feature).

The lowest fill of the depression (A14/A95), which produced late Roman pottery, animal bone, and burnt flint, appeared to merge in places with the underlying clay. Above it there were traces of a possible cobbled surface (A31). Cutting these layers was a large irregular feature (A48), *c.* 5 m long and 3 m wide, and up to 0.5 m deep, the edges of which were, in places, also hard to define, being much disturbed by animal burrows. It produced *c.* 2 kg of late Roman pottery (as well as residual sherds of earlier date and nine intrusive Saxon sherds). The nature of this feature is unclear, but its use was followed by the further accumulation of a variable brown loamy soil (A14 and A7) over it and filling much of the depression. A small cut (A97) (Fig. 4.17) immediately south of feature A48 produced late Roman pottery (including a complete New Forest indented beaker: Fig. 5.3, P7) and two radiate minim coins (AD 270–80), while further sherds were recovered from a small irregular feature (A12) near the south-west corner of the trench. A further five coins were found within the fills of the depression.

At some point in the late Romano-British period some further activity led to the formation of a shallow linear hollow (A41) which appears to have truncated the upper fills of ditch A109 and scoured out, down to natural, the fills of the depression immediately adjacent to the ditch (Fig. 3.15). Only the south-western edge of the hollow was visible, its north-eastern edge being truncated by later ploughing. The hollow was then covered by a midden deposit (A15) that extended over the ditch and which consisted of a variable deposit of very dark loam, with some areas containing large flints and others being largely stone-free. The deposit produced over 3 kg of Roman and late Roman pottery (as well as a quantity of residual Iron Age to early Roman sherds, and two intrusive Saxon sherds), and a large quantity of animal bone. In addition, a complete late Roman bronze bowl (Fig. 5.6) associated with a coin of Gratian (AD 376–83), and a cow skull was recovered from its surface.

The adjacent ploughsoil (A3) was 0.25 m thick and covered all the features in the north-eastern part of the trench (Fig. 3.15). It produced over 9 kg of small abraded sherds, typical of pottery from fossil ploughsoils, of which over 2.5 kg were of Iron Age date, most of the rest being of 1st–2nd century AD date (there being also some late Roman and two Saxon sherds). Resolving the apparent inconsistency between the dominant early component of the assemblage and the suggested late date for the ploughsoil is hampered by a level of confusion as to the stratigraphic relationship between the midden and the ploughsoil. The original section drawing shows the edge of the ploughsoil overlying and cutting into the midden; however, in the first Interim Report (Entwistle *et al.* 1993, fig. 15), perhaps in an attempt to resolve this inconsistency, the reverse is shown, the ploughsoil, assigned an early Romano-British date, underlying the edge of the midden.

This relationship has considerable implications for the interpretation of the site. However, the view is taken here that, although the assemblage is dominated by Iron Age and early Roman pottery, this almost certainly reflects the date range of the underlying features and occupation horizons that were disturbed by the ploughing in the north-eastern part of the trench, rather than indicating the date of the ploughing itself. The presence of a smaller late Roman component within the ploughsoil assemblage is still adequate to indicate its actual date. Nonetheless, it is worth bearing in mind these two possible options.

Cutting the midden at the point where it was overlain by the edge of the ploughsoil there were three closely spaced post-holes (A20, A22, and A24) (Fig. 4.17). There were a further three post-holes (A16, A33, and A18) some 8 m to the south-west, beyond the midden, cutting the fills of the depression. They were evenly spaced *c.* 1.8 m apart, forming a line running north-east–south-west across the trench, and so parallel to the edge of the ploughsoil. While it is possible that the latter group pre-dated the midden, it is perhaps more likely that the two groups were contemporary. The wide gap between them argues against their having formed part of a timber building, and it is possible that they bounded a trackway along the edge of the field represented by the ploughsoil (such an interpretation would add weight to a late date for the ploughsoil). Arrangements of post-holes and trackways adjacent to lynchets, defining field boundaries and access routes, were recorded at a number of sites during the fieldwork of the Wessex Linear Ditches Project (Bradley *et al.* 1994).

The post-holes were themselves truncated and contained abraded late Roman sherds pointing to the later abandonment of the field boundary and the subsequent extension of ploughing across the south-western depression. This is represented by the overlying layers, with a combined depth of up to 0.3 m, comprising a stony horizon (A2) that extended over ditch A109, but was largely absent from the south-western end of the trench, and the sorted topsoil (A1), that covered the whole trench. The pottery from these layers (over 12 kg) was dominated by sherds of late Romano-British date, and a possible negative lynchet associated with this phase of cultivation is visible in the top of the ditch section (Fig. 3.15).

The recovery from Trench A of 14 sherds of Saxon pottery (although it is possible that some could be of Iron Age date) points to some level of activity on the

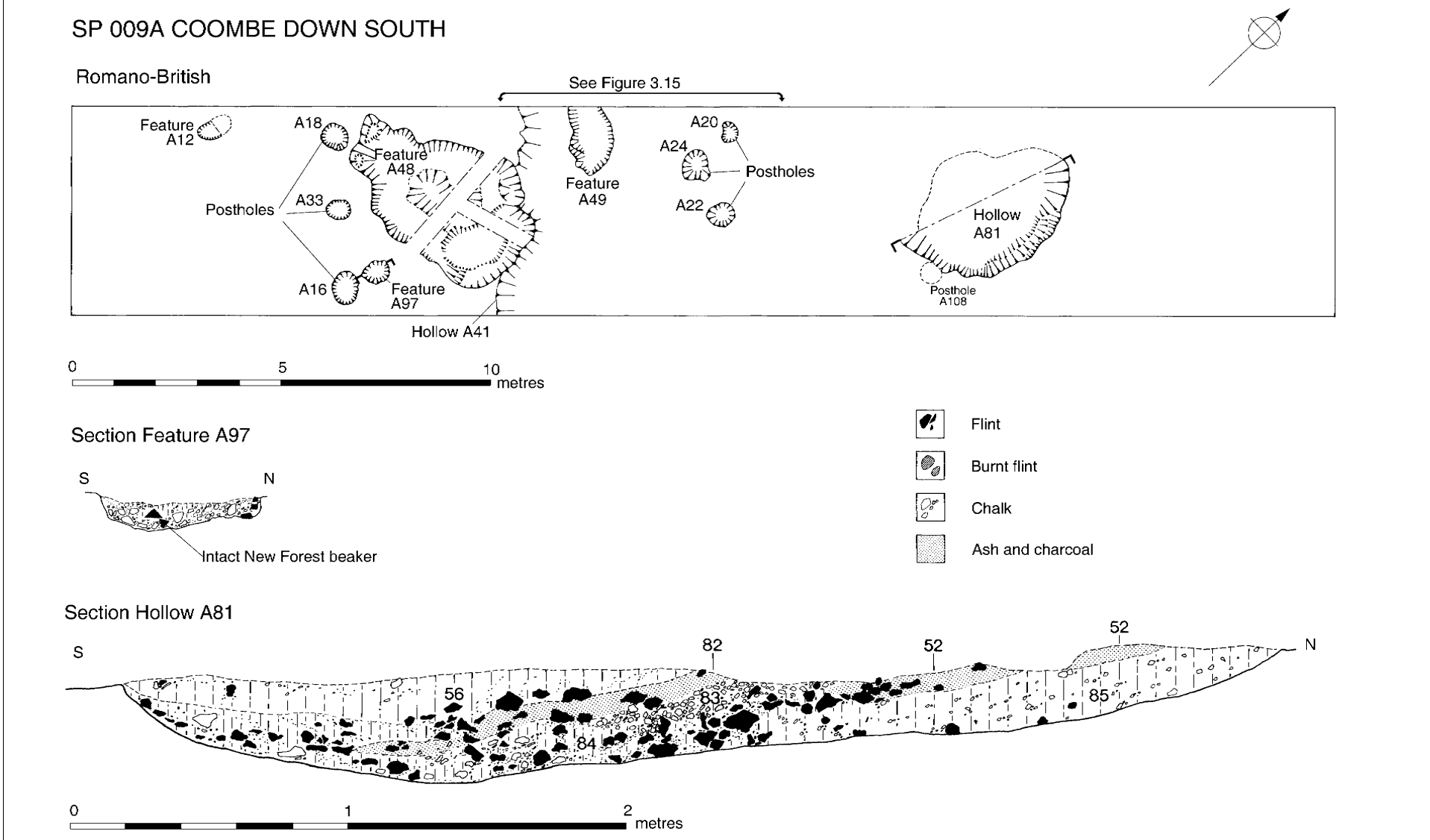

Figure 4.17 Coombe Down South SP 009, Trench A, composite plan and Romano-British features, hollow A81, and pit A97

site following the end of the Romano-British settlement. An initial interpretation of feature A48, which produced nine of these sherds (one with a rosette stamped decoration), as a Saxon sunken-featured building cannot, however, be sustained by the recorded stratigraphy, and these sherds are likely to have become incorporated in the fill through animal burrowing which had seriously affected the feature.

Trench A, therefore, provided valuable information about the varied activities associated with the Romano-British occupation of that part of the settlement lying within the former inner boundary of the Iron Age enclosure. Although the less prominent north-eastern depression appears comparable in form to the general morphology of the depressions found within the open settlement, it also corresponds closely to the main area of Iron Age activity bounded to the south-west by ditch A109, which included substantial working hollows. It is possible, therefore, that there was already a significant depression in the ground at that point by the start of the Romano-British period.

Apart from the early Romano-British activity in the same area, the north-eastern part of the trench does not appear to have been significantly occupied during the late Romano-British period, when a more prominent depression to the south-west was created and became the focus for some form of settlement activity. A combination of animal burrowing and truncation by later ploughing has, however, made it hard to discern the character of that activity, or the nature of the large irregular feature at its centre. That activity, however, may have come to an end within the trench when at least the northern part of the depression was used as a midden for settlement debris, presumably from an adjacent area. In turn, a series of post-holes, possibly bounding a trackway that ran along the edge of a cultivated field, covering the north-east end of the trench, appears to represent the final stage of activity, apart from subsequent phases of cultivation that covered the entire trench.

Trench B

A number of Romano-British features (Fig. 3.11) were recorded in this trench, which crossed a part of a hollow platform. The platform had truncated the upper fills of Iron Age ditch B5, removing its uppermost fills (Fig. 3.12). The highest surviving fill (B6), however, produced early and late Roman pottery. (A single sherd of Roman pottery recorded from a lower secondary silt (B44) of the ditch is almost certainly intrusive, despite being the stratigraphically earliest find.)

Two shallow subcircular pits (B10 and B14), both *c.* 1.8 m in diameter and 0.4 m deep, contained a mixture of topsoil and flint nodules, some bearing flake scars. Pit B14 was undated, but pit B10 produced almost 1 kg of early Roman pottery, the upper fill (B11) also containing the fragmentary remains of an ox skull. If, as suggested in Trench A (and at Chisenbury Warren), the platform is of late Romano-British date, the relative shallowness of these features may be due to their subsequent truncation during the creation of the platform.

Three small late Roman sherds in the upper fill of pit B10 (B11) are likely to derive from later activity on the platform, such as that represented by a larger pit B22 in the western end of the trench. This was over 2.5 m wide and at least 1.5 m deep, with a very mixed fill including chalk rubble weathered from the pit sides and discrete dumps of rubbish and soil, and a small recut on the western side. The pit contained over 2 kg of pottery of predominately late Romano-British date, this probably deriving from some form of occupation associated with the platform. Although there was no conclusive evidence for any structure, there was a dense spread of large flints (B3), including dressed nodules, immediately north of the pit and spilling into its top. This layer, which produced over 2.1 kg of late Roman pottery, may have come from a drystone wall destroyed by later ploughing.

Trench C

Although the inner ditch of the Iron Age bivallate enclosure had silted up to at least half its depth by the end of the Middle Iron Age, after which there was a period of abandonment, it would still have been a visible feature by the start of the Romano-British period (Fig. 4.18). A lens of chalk rubble (C29), spreading from the inside edge of the ditch within the stone-free soil (C30) that reflects this period of relative inactivity, produced two small early Roman sherds and may represent some levelling of the enclosure bank at the start of the period (Fig. 3.13). The overlying tertiary fills (C28 and C6, and C4), which have the appearance of having been produced by ploughing, produced late Roman sherds, the ditch by this time being only a shallow depression.

Towards the eastern end of the trench, there were two small V-shaped ditches (C12 and C21) converging at a right-angle, possibly bounding the corner of a field. The larger, eastern ditch (C21) appears to correlate with a short linear anomaly recorded by the geophysical survey, and it flanks an earthwork bank that runs south-west before turning to the north-west (Fig. 3.10). The ditch was up to 1.5 m wide and 0.8 m deep, and it produced early Roman pottery from its primary fill (C39). Two articulated parts of cattle skeletons, lying parallel to each other, were present within the upper fill (C22). Both were sections of spines, the first of which included all vertebrae from the atlas to the lower thoracic region, with associated ribs, lying on its left side. The second section comprised a few thoracic vertebrae, again with

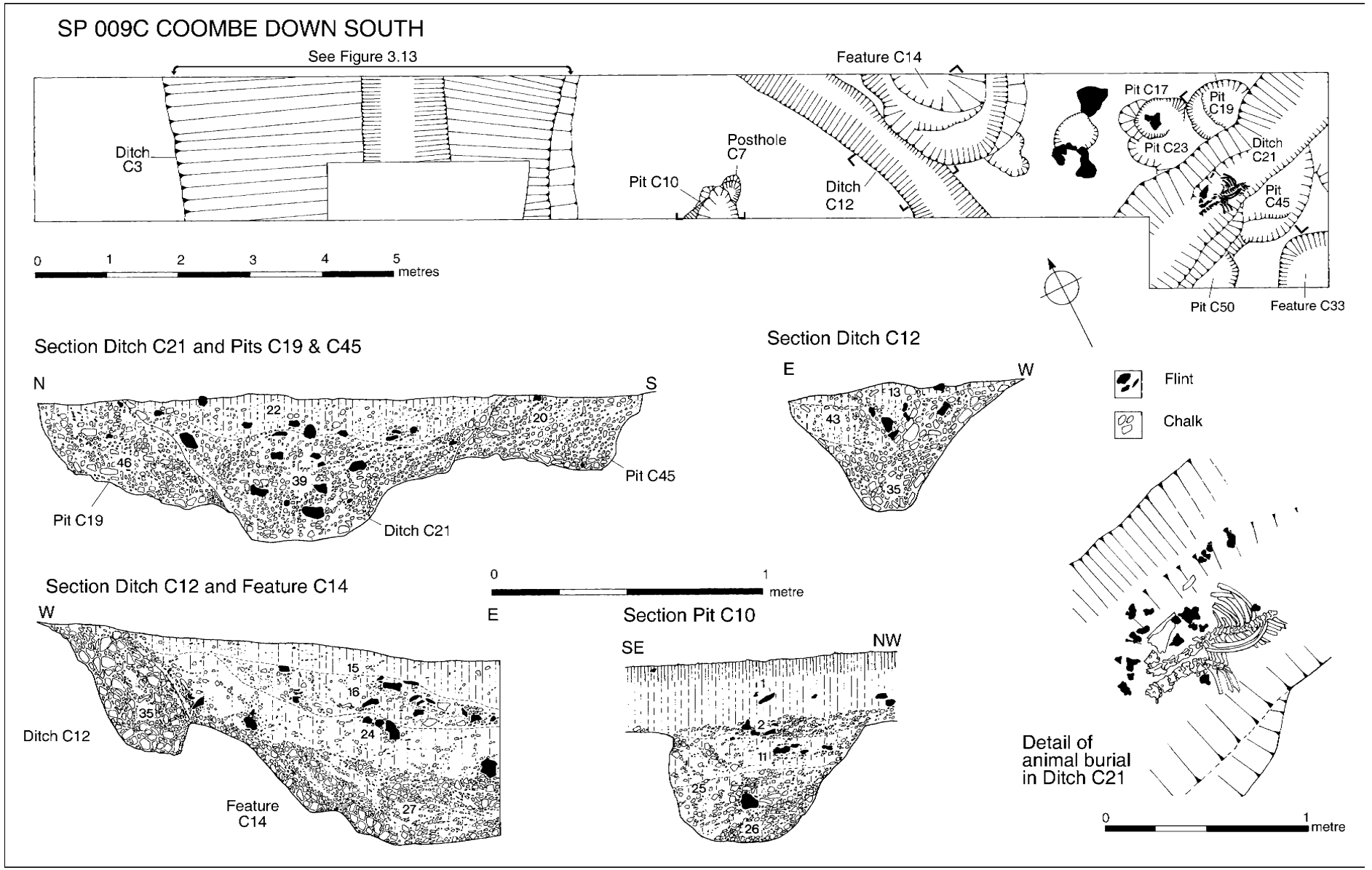

Figure 4.18 Coombe Down South SP 009, Trench C, plan and Romano-British sections

ribs in articulation, but mainly cervical vertebrae excepting the atlas and axis. Both were oriented east–west, with the head areas to the west.

Ditch C21 cut a number of small intercutting pits (C19, C23, C45, and C50), one of which (C19) produced pottery of a similar date. A large flint nodule embedded in the chalk in the base of pit C17 in the same group had been excavated around, presumably to extract it, and these features (and a number of other shallow features in the same area) may all have been dug for the extraction of flint.

The western ditch (C12), which was 0.9 m wide and 0.5 m deep, produced no dating evidence, but appears on the basis of its arrangement with ditch C21 to be also of early Romano-British date. When the ditch had completely filled, mostly with a loose chalk rubble (C35), possibly a deliberate backfill, its eastern side was cut by a rounded feature (C14), either a pit or a ditch terminal, the upper fills of which (C15 and C16) also contained early Roman pottery (and residual Iron Age sherds). Neither feature correlates with any of the linear magnetometer anomalies. West of the ditch were a pit (C10) and a post-hole (C7).

Beneath the modern topsoil, there was a layer of silty loam with granular chalk and small angular flints (C9), containing late Roman pottery, extending over the features in the eastern part of the trench, probably comprising a buried ploughsoil, and possibly representing the same episode of cultivation as seen in the upper fills of ditch C3.

Trench D

This trench was positioned so as to investigate a geophysical anomaly running approximately north-west–south-east between the inner and outer ditches of the Iron Age enclosure, but which appears also to extend over them to join two other diverging linear features that run eastwards from the enclosure (Figs 3.9 and 3.10).

Unlike the other ditches, this substantial feature had clear evidence of having been recut (Fig. 4.19). The surviving south-western side of the original ditch (D22), which was 1.7 m deep, was moderately steep and slightly concave, with a flat base at least 0.2 m wide. For the most part it appears to have filled up naturally, although a layer of ashy soil (D9) towards the top of the ditch containing bone indicates a dump of occupation debris. There was a single sherd of early Roman pottery from the primary silt (D21) cut, with almost 1 kg of similarly dated pottery from layer (D9).

The ditch had almost completely filled when it was recut to its full 1.7 m depth, the recut (D3) being at least 2.2 m wide, with a steeper south-western side and a flat base 0.4 m wide. This, like the original cut, appears to have filled naturally to over half its depth, although at a late stage chalk rubble (D10) was thrown into the ditch. Early Roman pottery was found throughout its fills (along with residual Iron Age sherds). A small oval pit (D5) on the north-east side of the ditch, produced further early Roman pottery (and one Late Iron Age sherd).

Summary

As discussed above, it appears that the bivallate Iron Age enclosure had been abandoned by the Late Iron Age, the subsequent period of relative inactivity being represented by the thick layer of stone free organic soil in the middle part of the inner ditch. The lens of chalk within this soil may indicate some levelling of the enclosure bank at this time. Despite the fact that the ditch would still have been visible as a prominent depression at the start of the Romano-British period (up to 1 m deep in Trench C), the Romano-British features, including the settlement earthworks overlying the south-eastern part of the enclosure, show no significant correlation with any of the Iron Age ditches as revealed by the geophysical survey. The two possible early Romano-British field boundary ditches in Trench C, for example, have radically different orientations to the immediately adjacent inner enclosure ditch, and appear to represent the establishment of completely new plot boundaries. The western of these two ditches appears to be associated with one of the regular pattern of earthwork banks that extend out from the settlement earthworks.

The density of intercutting linear anomalies recorded by the geophysical survey on the south-eastern side of the site makes it hard to interpret the large recut early Romano-British ditch in Trench D. It appears to extend across the inner and outer ditches of the Iron Age enclosure to link to two other large, possibly converging ditches that run to the east; there are a number of other faint linear anomalies parallel to it. The southern of these large ditches matches approximately the northern course of the later hollow-way suggesting that a trackway may have been established along this line by the start of the Romano-British period.

The nature of the early Romano-British settlement is not well defined, being represented largely by a small number of pits, some in Trench C apparently dug for the extraction of flint. The location of the large shallow feature and associated occupation horizon in the north-eastern part of Trench A may reflect a slight existing depression resulting from the concentration of Early Iron Age working hollows in that area. The more prominent, south-western depression in this trench, however, appears to date from the late Romano-British period, as may the majority of earthwork features associated with the settlement across the site (as appears to have been the case also at Chisenbury Warren). The large irregular feature in the south-western part of the trench is of

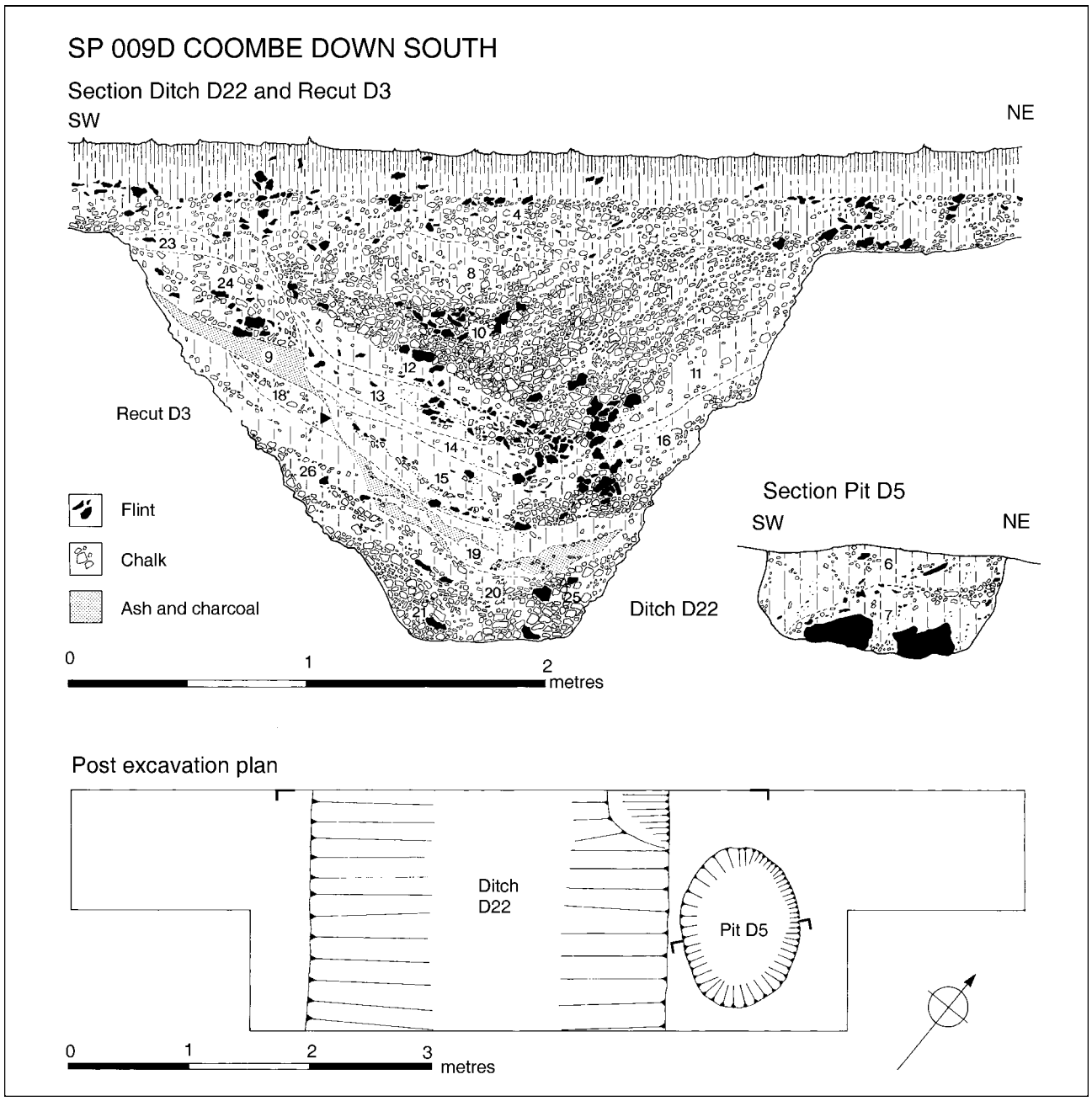

Figure 4.19 Coombe Down South SP 009, Trench D

uncertain function, but appears to be associated with the accumulation of quite deep deposits, containing pottery, bone, and burnt flint, as well as a number of coins. Subsequently the depression appears to have been used for dumping midden material, an activity also seen at Chisenbury Warren, Trench B.

The only evidence for a stone-built structure comparable to that recorded at Chisenbury Warren Trench C, is from the plough-disturbed spread of large flint nodules in Trench B, associated with a large pit containing dumps of domestic refuse. This may represent a plough-levelled wall footing, contemporary with the creation of the platform in which it was built, the platform having truncated not only the upper fills of the adjacent Iron Age ditch, but also possibly the early Romano-British pits in the same trench.

Trenches A, B, and C all provided evidence for what was probably a late Romano-British episode of cultivation. This was most clearly seen in the ploughsoil covering the north-east end of Trench A, where a series of post-holes may define an adjacent field boundary and associated trackway. Cultivation is also indicated by the spreading of the possible drystone wall in Trench B, and by a late Romano-British ploughsoil in the upper part of the now

completely filled inner ditch of the Iron Age enclosure. The whole site was subject to later cultivation, the traces of ridge and furrow on and around the settlement indicating that this may have been in the medieval period.

SP 023 Everleigh
Some level of early Romano-British activity at the site of the Early to Middle Iron Age enclosure was indicated by the presence of pottery in the upper fills of the enclosure ditch. A series of earthworks, comparable in general appearance to those of the Romano-British settlements at Chisenbury Warren and Coombe Down South, was surveyed by the RCHM(E) to the north-east of the enclosure. They comprised a series of small rectangular hollows and platforms arranged along a north-west–south-east aligned hollow-way with a regular arrangement of 'Celtic fields' abutting them. However, an array of test pits excavated over them revealed no artefactual or structural evidence that might indicate a settlement. The few abraded sherds of Roman pottery from the topsoil probably represent the use of the field system, which may be part of a more extensive layout associated with the nearby Romano-British settlement on Snail Down. The Snail Down settlement, recorded by Colt Hoare (1812), but no longer visible on the ground or from the air, could not be investigated due to military training.

The River Bourne and the Eastern Sample Area

The fieldwalking evidence showed that, as in the Iron Age, the main focus of settlement in the 1st and 2nd centuries AD was the Bourne ridge. As described above, four Late Iron Age/early Romano-British sites were identified – Shipton Plantation (SP 007), Snoddington Down (SP 008) (Fig. 4.20), Bedlam Plantation (SP 030A), and Furze Hill (SP 046A) (Fig. 2.2). There was an apparent difference between Snoddington Down and Shipton Plantation, the former having a greater proportion of Savernake Ware, the latter being dominated by local coarse sandy wares. Although no imported stone or ceramic building materials were recovered from these sites, the presence of Old Red Sandstone and Quartz Conglomerate quern fragments clearly demonstrates that imported stone was reaching these settlements, albeit in small quantities.

With the exception of Snoddington Down, these ridge-top sites appear to have declined, or even been deserted during the 3rd–4th centuries AD. Although pottery of this date was recovered in small quantities, this probably represents manuring debris. At Snoddington Down, however, the condition and quantity of the pottery – with early and late Roman sherds being recovered in equal numbers – suggest the continuation of settlement. A clue to the nature of the extended occupation of the site may be provided by the significant quantity of iron slag recovered. Another 1st and 2nd century AD settlement, broadly contemporary with the early Romano-British settlements on the Bourne ridge, was discovered to the north at Collingbourne Ducis (SP 101), on a low ridge overlooking the River Bourne. This site, however, differed in that the pottery was associated with soil marks of two sub-rectangular enclosures, possibly replacing two Middle–Late Iron Age enclosures nearby (Chapter 3).

Elsewhere off the Bourne ridge, and away from the primary focus of early Romano-British settlement, there are a number of sites of a very different character (Fig. 1.2). To the west, a chance report of pottery cast up from a badger set in Tidworth led to the identification of an unrecorded Romano-British site on a low spur just above the floodplain of the River Bourne (SP 051) (as well as Early–Middle Iron Age activity). Fragments of limestone roofing tile clearly indicate the presence of a building, while the large and unabraded sherds of pottery point to a 3rd and 4th century occupation. A considerable amount of animal bone was also recovered.

To the east, there are sites that form part of a settlement pattern that includes a number of villas in the Ludgershall, Kimpton, and Thruxton area. Two of these sites, Kimpton Gorse (SP 053) and Shoddesden Grange (SP 134), also produced clear evidence of buildings in the form of imported stone roofing tiles and variable amounts of ceramic building material, materials absent from the ridge-top sites (Fig. 4.21 and 4.22). While a few sherds indicate Late Iron Age activity at Shoddesden Grange, both sites produced small quantities of early Roman pottery indicating that in part they were contemporary with the ridge-top settlement. As at Tidworth, however, their assemblages were predominantly 3rd and 4th century, and although there is no dating evidence for the building phases at these sites this appears to have corresponded with the period of general decline on the Bourne ridge, and the marginalisation of ridge-top settlement.

The topographical distinction between the ridge top sites and those at lower elevations is emphasised by the evidence for land use. The presence of field systems across much of the Bourne ridge, and their association with manuring scatters of 3rd and 4th century pottery, is strong evidence that by the late Romano-British period extensive tracts of downland were under cultivation. Within the broad distribution of fields there are undoubtedly elements associated with the prehistoric and early Romano-British settlements, the soil marks of lynchets at Shipton

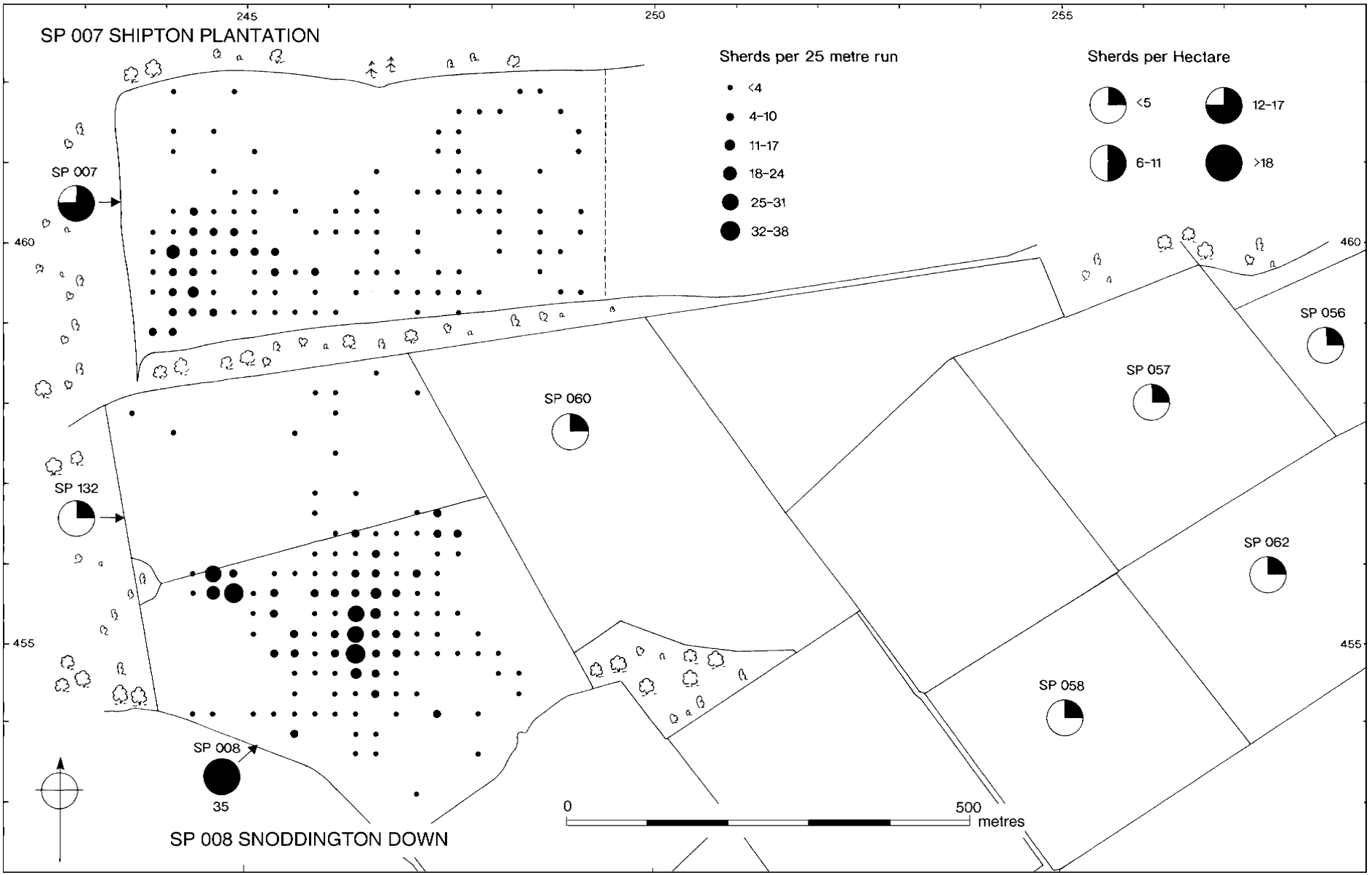

Figure 4.20 Shipton Plantation SP 007 and Snoddington Down SP 008, pottery densities recorded during fieldwalking

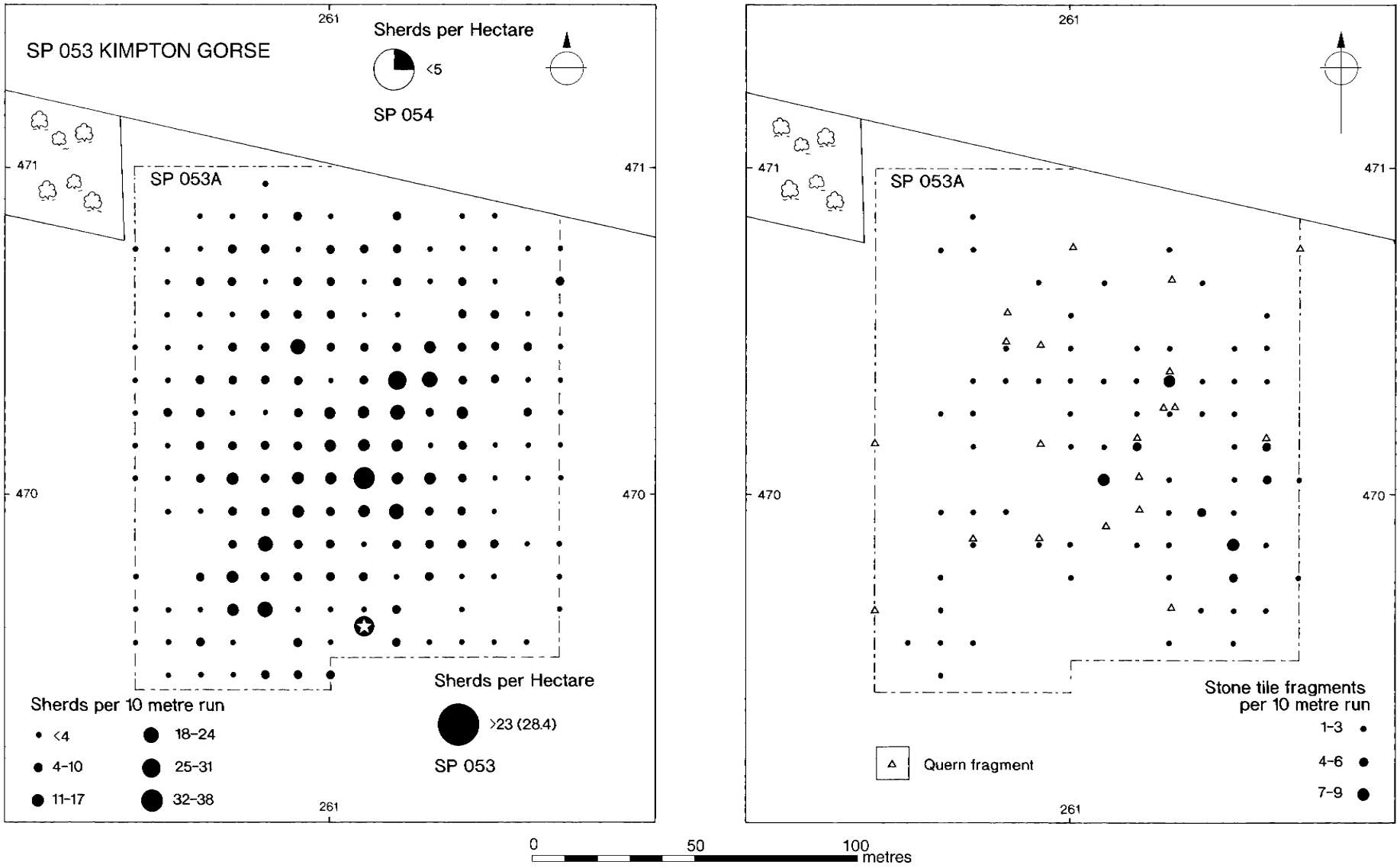

Figure 4.21 Kimpton Gorse SP 053, densities of pottery and non-local stone

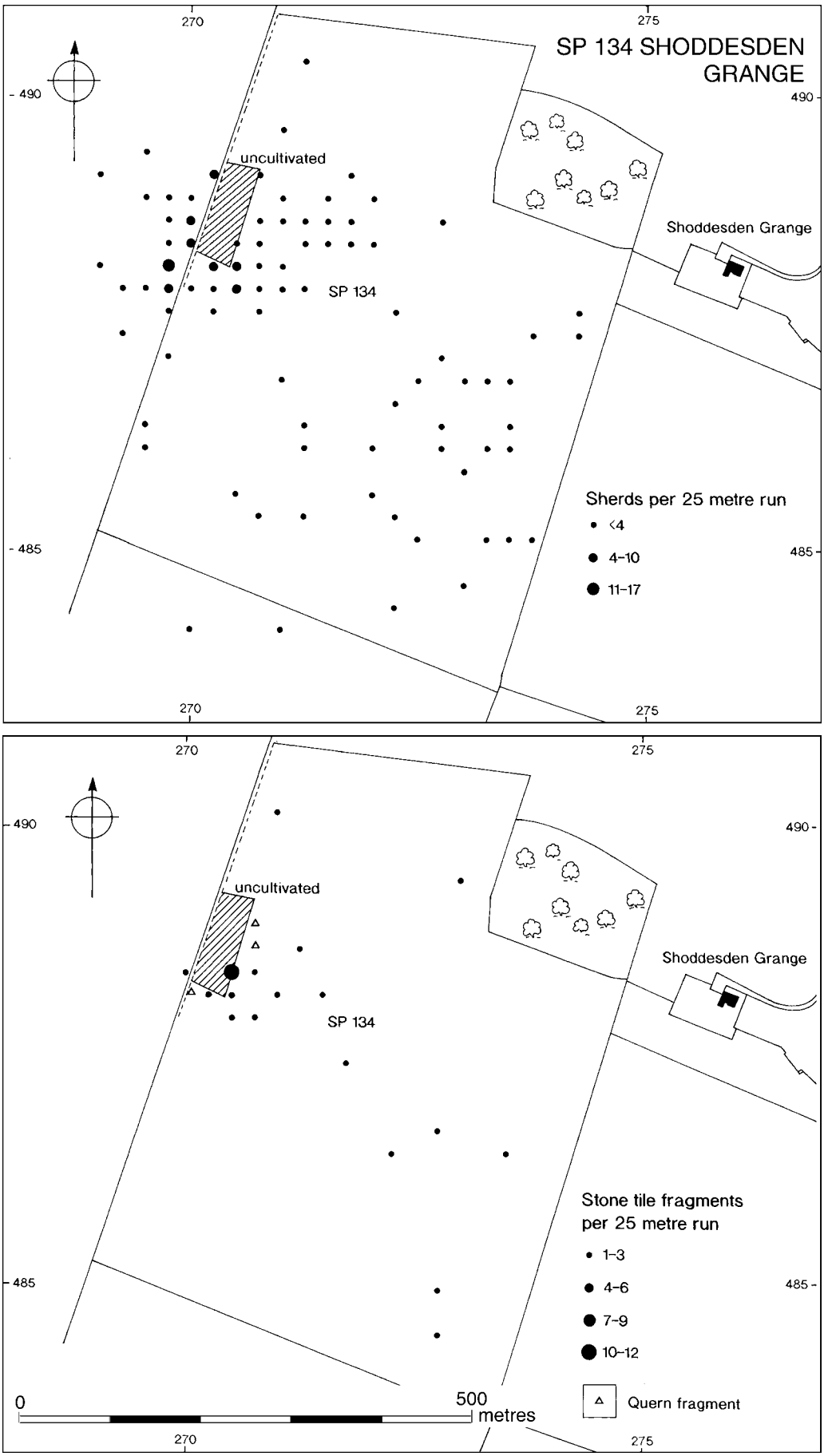

Figure 4.22 Shoddesden Grange SP 134, densities of pottery and non-local stone

Plantation, for example, intermingling with traces of settlement earthworks. The weight of the evidence, however, points to predominantly late Romano-British fields encroaching on the earlier sites, and probably farmed from settlements such as Tidworth, Kimpton Gorse, and Shoddesden Grange.

Despite the potential of the Tidworth site, no fieldwork was possible. The fieldwalking at Kimpton Gorse and Shoddesden Grange, however, showed that apart from the presence of substantial buildings and a broadly parallel chronology, the sites had few points of similarity. Kimpton Gorse is characterised by a 1.5 ha spread of occupation debris containing a rather confined yet dense distribution of building materials. In contrast, Shoddesden Grange appears to have covered little more than 0.5 ha, and produced much less building material and pottery. Similar variations in scale were noted in the Western Sample Area, with the extensive settlement at Beach's Barn (SP 026) and sites apparently consisting of single buildings at Enford Farm (SP 116 and SP 143).

Land Use

Evidence for Romano-British land use takes four main forms. First, the artefact scatters recorded during fieldwalking provide evidence of the spreading of manure incorporating domestic waste onto fields (as discussed in Chapter 2). Secondly, artefactual and environmental remains shed light on the subsistence and economic practices undertaken from the settlements; these are discussed below (Chapters 5 and 6). Thirdly, there were direct investigations of a number of field systems, with test pits and trenches excavated across lynchets, field boundary banks, and ditches, particularly at Chisenbury Warren. Finally, Romano-British ploughsoils were recorded at a number of other sites, particularly within the upper fills of a number of enclosure ditches.

Enclosure Ditches

Such an episode of Romano-British cultivation was recorded in the upper fill of the Widdington Farm enclosure ditch (SP 052), west of the River Avon. The enclosure appears to have been abandoned in the Late Iron Age, with a buried soil (8 and 9), forming over the largely infilled ditch (Fig. 3.2). Although three Roman sherds were recovered from the upper part of the Middle/Late Iron Age midden deposit (11) below the buried soil, these are probably intrusive. Some 2.5 kg of Iron Age pottery were recovered from the stony layer at the base of the buried soil (9), among which were two early Roman sherds, but the stone free soil layer (8) above was dominated by late Roman sherds (over 0.6 kg), suggesting a long period of inactivity following the abandonment of the enclosure.

Running parallel to, and cutting the outer edge of, the enclosure ditch (and the edge of the midden deposit) there was a small ditch (13), 0.7 m wide and 0.25 m deep, with a shallow U-shaped profile, producing Roman pottery from near its base (14). It was truncated, in turn, by the phase of cultivation represented by a buried ploughsoil (5) spreading over and extending beyond the ditch. At the base of the ploughsoil there were small dumps of earth and chalk rubble (6), and within it there were numerous thin lenses of small pieces of chalk and flint, these being possibly derived from the progressive reduction of the bank by ploughing.

A similar period of relative inactivity is suggested by a possible buried soil (53) above the Iron Age layers in the enclosure ditch (12) at Chisenbury Field Barn (SP 050), which also produced sherds of early Roman pottery (Fig. 3.3). Subsequent cultivation, however, is indicated by the creation of a negative lynchet that truncated the outer edge of the ditch and the smaller ditches to the north-west (50, 56, and 62). It was filled with a sequence of colluvial soils indicating two further principal episodes of cultivation (represented by contexts 35 and 12), that produced Roman sherds dated up to AD 200. The modern topsoil contained pottery of general Romano-British date.

A comparable picture emerges from the ditches of the Iron Age enclosures excavated on Coombe Down North. At SP 014A, a fine textured soil horizon devoid of finds (context 9), possibly a turf line, in the half-filled ditch indicates a period of inactivity following the abandonment of the enclosure (Fig. 3.7). The presence of a small number of Roman sherds, including two of early date, in an overlying colluvial deposit (8) and fossil ploughsoil (7) filling the upper part of the ditch may date the earliest stages of Romano-British cultivation on the site. In addition, late Roman sherds were found throughout the modern ploughsoil. All of the assemblages from these upper layers were made up of fairly abraded sherds and contained a strong residual component of Iron Age and Late Bronze Age pottery. Similarly, at the immediately adjacent SP 042A, a deep ploughsoil (5) containing early Roman pottery spread over the largely infilled enclosure ditch (along with a large number of very abraded Middle Iron Age sherds), a similarly mixed assemblage being recovered from the modern plough soil.

No early Roman sherds were found in the ditch of the small enclosure (SP 014B) inside SP 014A, although there was a similar sequence of layers, with a buried soil (11) overlain by a colluvial ploughsoil (6) containing four late Roman sherds (with further sherds, some undiagnostic, in the topsoil) (Fig. 3.8).

A probable late Romano-British episode of cultivation was also recorded in Trenches A, B, and C at the bivallate enclosure (SP 009). This was most clearly seen in the ploughsoil covering the north-east end of Trench A, where a series of post-holes may define an adjacent field boundary and associated trackway (Fig. 4.17). Cultivation is also indicated by the spreading of the possible drystone wall in Trench B, and by a late Romano-British ploughsoil in the upper part of the now completely filled inner ditch of the Iron Age enclosure (Fig. 3.11). The whole site was subject to later cultivation, the traces of ridge and furrow on and around the settlement indicating that this may have been in the medieval period.

A few abraded sherds of early Roman pottery were recovered from the upper fills of the Iron Age enclosure ditch at Everleigh (SP 023) and from the topsoil. These probably represent the use of the adjacent regular arrangement of 'Celtic fields' flanking a hollow-way, that was surveyed by the RCHM(E), and which may be part of a more extensive layout associated with the nearby Romano-British settlement, recorded by Colt Hoare (1812), on Snail Down. At Warren Hill (SP 049), east of the River Bourne, a few sherds of Roman pottery were recovered from the tertiary silt of the enclosure ditch (13), with late Roman sherds in the topsoil (Fig. 3.18).

Field Systems

Chisenbury Warren field system

In addition to the various lynchets (described above) exposed during the excavation of the four settlement trenches at Chisenbury Warren, the excavation of the adjacent field system, which can be traced running right up to the settlement earthworks, was valuable in helping to interpret the settlement excavations as well as providing an economic context for the settlement. The field system, which comprises a series of largely rectangular fields defined by lynchets, banks and ditches, is best preserved to the south-west of the settlement, although traces of fields to the east show how widely the surrounding land had been cultivated (Fig. 4.4).

Ten lynchets were sectioned at three general locations – to the immediate south-east (SP 063–066) of the settlement, at a greater distance on the slope of the ridge to the south-east (SP 073–075) (Fig. 3.5), and to the north-east (SP 068–071). Most produced evidence for various phases of cultivation, although the dating of such lynchets is hampered by the repeated reworking of soils and the pottery assemblages within them, and as outlined in Chapter 3. It is possible that some of the features were Iron Age in origin.

Trenches SP 063–066

The most southerly trenches (SP 065 and 066), both measuring 2 x 1 m, were excavated across two prominent lynchets/banks running from the south-east towards the settlement. As they approached the settlement both turned to the north-east, forming what appears to be a trackway running parallel to the hollow-way. Trenches SP 064A and 064B were sited to investigate a similar lynchet to the north-east, but as described in Chapter 3, the only dating evidence from each of these trenches was exclusively Iron Age.

A wider date range, however, was suggested by the features in Trench SP 063 (Fig. 3.19). This trench, measuring 15 x 1 m, was excavated across a series of parallel earthworks mid-way between SP 066 and SP 064A/B. These appear to represent a trackway linking the dry valley and the ridge to the south-east, flanked on either side by rectangular fields. The trench extended a short distance into the corner of an adjacent field on the south-west side, where the earthworks appear to define a small internal subdivision. From the earthwork survey it appears that the trackway was bounded by banks on either side, although excavation also revealed a pair of parallel ditches *c.* 3.7 m apart.

As already described (Chapter 3), ditch 6 on the south-west side of the trackway was 1.8 m wide and 0.9 m deep with moderately steep sides and a wide slightly concave base. Its primary fill (18) produced a single Iron Age sherd, and a secondary fill produced a single Roman sherd. On its south-west side, below the topsoil but overlying a sterile buried soil, there was a layer of chalk rubble (8), possibly the remains of an external bank surviving to no more than 0.1 m and producing a further single Iron Age and four Roman sherds. The ditch (21) on the other side of the trackway was smaller – *c.* 0.8 m wide and 0.37 m deep – although with a similar profile. Between the ditches, although possibly pre-dating them, there was an arrangement of seven stake-holes, between 0.08 m and 0.16 m in diameter. Three, closely spaced, were in a line parallel to the ditches, the others lying across the trackway, their arrangement suggesting some slight rectangular structure. They were overlain by a stony soil (27) that extended across the trackway but not over the ditches.

The trench extended only 2 m to the north-east of ditch 21, and so did not fully investigate the positive feature, comprising a series of layers of soil, on that side of the trackway. However, after the trackway had gone out of use and its ditches had silted up (the upper fill of ditch 6 producing a number of hobnails), the whole arrangement was ploughed over, reducing the bank, and resulting in the creation of a negative lynchet above the fills of ditch 21, and what appeared to be a positive lynchet immediately behind it.

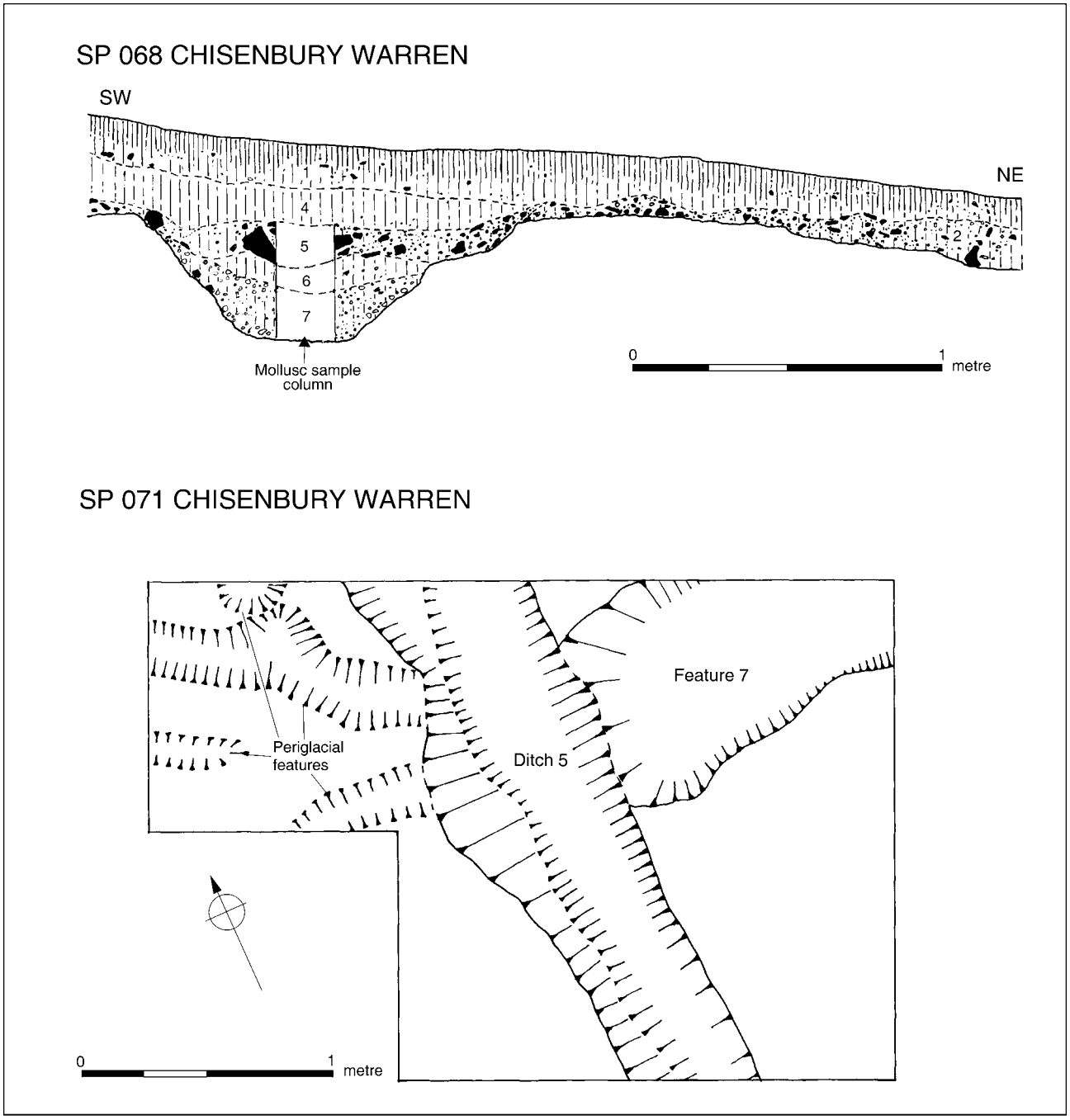

Figure 4.23 Chisenbury Warren SP 068 section and SP 071 plan

(At the base of the positive features north-east of ditch 21 the natural contained a series of parallel lines of soil and large flint nodules. One of these lines was excavated revealing an irregular cut up to 0.8 m wide and *c.* 0.1 m deep. It contained a mid yellow-brown soil containing some chalk and flint. While it is possible that this is an archaeological feature, initially interpreted as a wheel rut or as a shallow ditch, it is also possible that it is one of a series of natural periglacial striations, as found elsewhere on the site preserved beneath other positive features, such as under the banks in Trench D).

Trenches SP 073–075

Three parallel lynchets were excavated 280–540 m south-east of the settlement on the slope of the ridge, in order to detect any fall-off of pottery relative to the distance from the settlement. However, the assemblages of Roman pottery were too small to identify any differences between them.

Trenches SP 068–071 and test pits 1 and 3

A series of trenches and test pits was excavated along the north-eastern boundary of the site, although the most northern (SP 069), lying across the projected line of a shallow bank recorded by the earthwork survey, had been disturbed military activity.

As already described, Trench SP 070 (2 x 1 m) cut a bank on the northern side of an east–west trackway, and produced exclusively Iron Age pottery from two layers of colluvium, but revealed no features. In contrast, trench SP 068 (3 x 1m) on the western side of the field immediately north of the trackway revealed a 1.2 m wide ditch, 0.4 m deep with moderately steep sides and a wide flat base (Fig. 4.23). Its primary fill (7) produced two Roman sherds, with a further *c.* 0.5 kg of pottery, of exclusively early Romano-British date, coming from the secondary and upper fills (6 and 5), including a sherd in a local fabric with an imitation potter's stamp on the base. The bulk of the sherds came from the upper, flinty layer which also produced a quantity of animal bones. Although the bones were broken, they were in relatively fresh condition, suggesting that they were constituents of an *in situ* deposit reworked by later ploughing. This deposition of this quantity of apparently domestic material in the ditch may indicate a change in the nature of the adjacent activity and possibly a break in cultivation. The flinty layer may be associated with a similar layer overlying the chalk on either side of the ditch. A layer of stone free colluvium (4) above it and spreading over the ditch from the west (upslope) probably represented the tail of a positive lynchet. The edge of a possible negative lynchet was recorded at the eastern end of the trench.

A series of test pits, one of them (SP 071) enlarged to a 3 x 2 m trench, was excavated north of the settlement. Trench SP 071 was positioned just 6 m north of SP 072 Trench D, immediately east of the projected line of the flint-faced bank revealed by the trench running north-east from the hollow-way (Fig. 4.13). It revealed a small ditch (5), 0.45–0.7 m wide and up to 0.4 m deep with an irregular profile, running approximately north–south on a slightly different alignment to the bank (Fig. 4.23). The only dating evidence comprised eight sherds of early Roman pottery from its upper fill. Abutting the eastern edge of the ditch at a right-angle was feature 7, possibly the terminal of a second ditch, running approximately east. Both ditches cut a chalky layer (11), confined to the lower, eastern side of the trench, which was interpreted as the fill of a negative lynchet that had in turn truncated an earlier feature (9), possibly a pit. (Irregular linear features in the chalk natural west of ditch 5, on the same alignment as those in Trench D, were probably periglacial striations rather than cultivation marks.)

Despite the proximity of these features to Trench D, their interpretation is hampered by the small size of the trench and the limited dating evidence they produced. Ditch 5 was not recorded in Test Pit 3, on the same alignment just 4 m to the north, indicating that it either turned or terminated between them. Another, very shallow ditch, however, was recorded 8 m to the north in Test Pit 1, running west-north-west–east-south-east. Given the fact that the alignments of these features do not correspond to those recorded in Trench D, nor to the surveyed earthworks, it seems likely that they pre-date the early Romano-British date suggested for the majority of Trench D features, although there was no material from any context to suggest an Iron Age date.

Summary

Interpretation of the evidence for land use at Chisenbury Warren, as represented by the lynchet excavations alone, is hampered by the small pottery assemblage recovered. However, it is aided to some extent by the lynchets revealed in Trenches A, B, and C of the settlement excavation (SP 072), and particularly by the range of field boundary banks and ditches in Trench D (as described above).

The occurrence of Early–Late Iron Age pottery in many of the lynchet excavations suggests an Iron Age origin for elements of the field system, and some level of Iron Age cultivation was probably undertaken from a ridge top settlement to the south-east, or from the enclosures at Lidbury Camp and on Longstreet and Coombe Downs. Nonetheless, there are no features, whether ditches, banks, lynchets, or trackways, that can be assigned with certainty to this period, and the overall evidence shows that that the field system in its fullest form is Romano-British in date.

However, the earliest datable features – the field boundary ditches across the trackway from the small rectangular enclosure in Trench D – are of Late Iron Age/early Romano-British date. Although limited in extent, these features appear to have been expanded upon in the early Romano-British period, and formalised by the creation of more substantial ditches and/or banks, some of the banks faced with flint walling. Examples of these were identified both flanking the trackway and running perpendicular to it, and it is not unreasonable to suggest that many of the other similar features identified in the earthwork survey, which together form a relatively coherent pattern, belong to the same general phase of activity and were associated with the establishment of the expanding settlement. Probable early ditches were also identified in SP 068 and SP 071, and the evidence from Trench C indicates that early Romano-British features both pre-dated and post-dated a boundary ditch.

Possible plough ridges were noted at a number of locations – these take the form of marked, soil-filled undulations in the upper surface of the disturbed chalk forming basal layers of a number of the positive lynchets. These are distinct from the preglacial striations within the chalk natural, protected from the plough under a number of positive features, that were provisionally interpreted in the field as spade or hoe cultivation marks.

In addition to the grid of field boundaries, there is a series of bounded trackways leading both into the fields flanking the settlement and through them onto the surrounding downs. These would have been used for the movement of animals, the series of stake-holes within the trackway excavated in SP 063 perhaps forming a barrier for controlling their movement into adjacent fields.

There was varied evidence for episodes of later cultivation at most of the excavated locations across the site. The three cultivation terraces in Trench C, and other similar features recorded by the earthwork survey within bounded fields across the site, appear, at least in the main area of settlement, to be truncated by the settlement hollows and platforms. If so, they might indicate smaller cultivation units within the larger fields on the edges of the settlement and flanking the trackway. Unfortunately, the features in Trench C consisted only of negative lynchets, themselves reduced by later cultivation, and apart from truncating the early Romano-British features at the lower end of the trench, they provided no dating evidence.

These negative lynchets and other earthwork features are considerably reduced to the north-east of a bank bounding the main settlement earthworks and a possible adjacent trackway running off the hollow-way, suggesting a later phase of ploughing possibly contemporary with the more closely confined late Romano-British settlement earthworks. However, these too were also ploughed over, causing for instance the partial destruction of the stone wall footing in the hollow at the top of Trench C. This probably dates to the medieval and/or post-medieval periods.

SP 135–142 Weather Hill field system

A series of eight 2 x 1 m test pits was excavated over lynchets within the well preserved field system south-east of the bivallate enclosure on Coombe Down South (SP 009) (Fig. 4.24). This comprises a pattern of rectangular fields bounded to the south by a Linear Ditch and to the north by a hollow-way, its main axis aligned north-west–south-east. In order to detect any decline in the amount of pottery with distance from the Coombe Down South settlement, the test pits were spaced at intervals on the most prominent lynchets, thereby increasing the chances of finding boundary features such as field ditches or post-holes.

More than one phase of cultivation was recognised in six of the test pits, the two exceptions being at the eastern edge of the field system (SP 137 and SP 138). The pottery assemblages were small, and the majority of sherds were of early Romano-British date. These were most common in the uppermost layer beneath the modern turf, and although this horizon also produced small assemblages of 3rd–4th century pottery, late sherds were never found in the lowest colluvial layers.

This contrasts with a stratified pottery sequence recovered from the excavation of a larger trench across a lynchet adjacent to the hollow-way during the Linear Ditches Project (LDP 082). This lynchet had also formed during two distinct periods of cultivation, but while the pottery assemblage in its lower part was dominated by 1st and 2nd century AD wares, the overwhelming majority of sherds in the upper layers were of 3rd and 4th century date. A similar division between early and late Romano-British cultivation also characterised the lynchet in Trench A at Coombe Down South (SP 009).

The excavation at LDP 082 also revealed a number of post-holes along the lower edge of the positive lynchet, presumably marking the position of a fence line, although there was no trace of a field ditch. Similarly, no field ditches were recorded in any of the test pits, possibly due to their small size, and the only possible boundary features were a possible stake-hole 0.15 m diameter in SP 136, and a further three of 0.08–0.1 m diameter in SP 138. SP 138 revealed only a negative lynchet, producing no pottery, at this location.

SP 004–006 Tidworth lynchets

Limited work was undertaken on a series of lynchets overlooking the Bourne valley at Tidworth. These form part of an extensive field system that is partly obscured by woodland and in places levelled by cultivation, but which may have originally reached as far south as the sites at Shipton Plantation (SP 007) and Snoddington Down (SP 008). Three lynchets were selected for excavation at places where they had been cut through by a military trackway ascending a steep hillside. At SP 004 and SP 005 the work involved cutting back the track exposures in order to sample the undisturbed stratigraphy (Plate 11).

Several phases of cultivation were visible in section at SP 004, giving rise to a considerable depth of ploughsoil (*c.* 1.2 m measured from just below the crest of the positive lynchet). Most of the sherds were of early Romano-British date (although with a residual Late Bronze Age and Iron Age component in the lower levels).

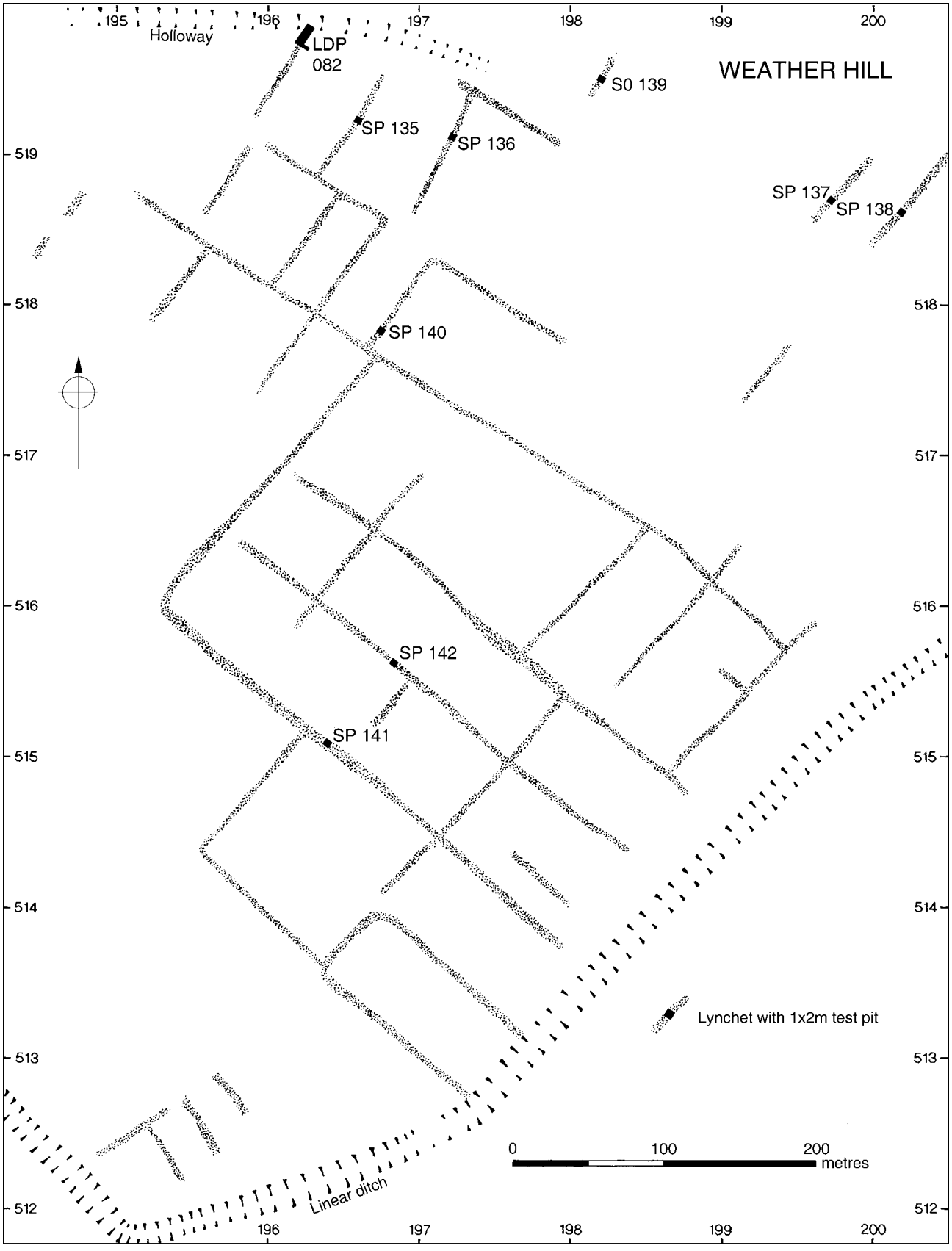

Figure 4.24 Weather Hill field system SP 135–142

Plate 11 Tidworth lynchet SP 004 or 005

The time scale represented by the formation of lynchet SP 005 is difficult to estimate, although it was broadly Romano-British in date, with more than one phase of cultivation between the 1st and 4th centuries, a Saxon grave cut through the lynchet showing that cultivation had ceased by the late 5th century (Härke and Entwistle 2002). The original field boundary may have been marked by a fence of which only one post-hole (13) was identified. This was replaced by a shallow ditch (8) which subsequently ceased to function as a boundary and was cultivated over.

The third and smallest lynchet (SP 006), sectioned by a 2 x 1 m test pit alongside the trackway, lies just below the crest of the hillside and coincides with the western limit of an extensive stretch of Clay with Flints that caps this part of the Bourne Ridge. It was barely 0.5 m in depth and made up of a single accumulation of ploughsoil. It produced no pottery, the only evidence of Romano-British activity being 15 small abraded sherds found in the sorted horizon at the base of the topsoil.

5. Finds

Prehistoric Pottery

by Frances Raymond

A total of 7605 sherds (weighing 52.993 kg) of prehistoric pottery was recovered from various sites during the course of the project. This includes a small group of residual or unstratified Late Neolithic–Middle Bronze Age ceramics (17 sherds, 134 g) from excavations on the northern side of Coombe Down North (SP 014A) and at Everleigh (SP 023), and from lynchet sections and surface collections.

Late Bronze Age plain ware, dating to between 1000 and 800 BC, comprises a much larger proportion of the prehistoric assemblage (1324 sherds (17%), 6209 g (12%)). Most of this pottery was found during surface collection and the relatively high numbers reflect the occurrence of three concentrations likely to denote occupation. The widespread scatter of contemporary sherds across the landscape includes a residual component at the excavated settlements on Coombe Down (SP 042A, 014A, 014B, and 009) and at Everleigh (SP 023). In all cases, however, the numbers of sherds are sufficiently low to suggest that the main focus of occupation lay beyond the later enclosures.

The rest of the pottery dates between 800 BC and the end of the Iron Age, and includes a small group of wares which continued in production after the Roman Conquest. Many of the fabrics which emerged during the 8th century BC continued in production into the Early Iron Age. This has hindered the precise phasing of some of the smaller assemblages. Nevertheless, the evidence does allow for the construction of a developmental sequence suggesting that the two smallest enclosures on the northern side of Coombe Down North (SP 014B) and at Everleigh (SP 023) may have an origin in the 7th–6th centuries BC. The ceramics from the site on the southern side of Coombe Down South (SP 009) point to a later foundation date in the early 5th century BC, when the settlement appears to have been unenclosed. The sites at Widdington Farm (SP 052) and Warren Hill (SP 049) produced pottery dated broadly to the 7th–5th centuries BC, while the larger assemblages from the secondary ditch silts at both sites can be placed in the 5th–4th centuries BC.

By the Middle Iron Age, the two smallest enclosures had been abandoned (SP 014B and SP 023) and others had been constructed at Chisenbury Field Barn (SP 050) and on Coombe Down (SP 042A, SP 014A, SP 009B, and SP 009C). None produced large groups of pottery and the relative phasing is uncertain, although a date after 310 BC is indicated by vessel types from two of the Coombe Down enclosures (SP 014A and SP 009C), while Chisenbury Field Barn (SP 050) may have originated after 250 BC. Elsewhere, at Widdington Farm (SP 052) settlement continued into the Middle Iron Age, while at Warren Hill the evidence points to a possible reoccupation during the later part of this period. By the Late Iron Age most of these enclosures had been abandoned, while the only assemblage likely to denote settlement at this time indicates a new foundation at Chisenbury Warren (SP 072).

The character of the ceramics from each of the excavated settlements and enclosures is described in detail in the following section. Wherever possible the identifiable forms have been keyed into the up-dated type series revised during the Danebury Environs Project (Brown 2000a). A more general approach has been adopted in the subsequent presentation of the ceramic evidence from the lynchet sections, test pits, and surface collections. The narrative follows the sites from west to east across the landscape and concludes with an overview describing shared characteristics and exploring their local and regional significance.

Prehistoric Pottery from the Enclosure and Settlement Excavations

Widdington Farm SP 052

The Widdington Farm assemblage is composed of 1008 sherds (8046 g; Table 5.1). These are mostly of Early–Middle Iron Age origin, although a Late Bronze Age presence is indicated by fragments from two All Cannings Cross vessels. The pottery from the primary and secondary silts of the enclosure ditch (ditch 4) below the crouched inhumation (grave 19) is of Early Iron Age date. The few sherds from the grave also belong to this period and had clearly been re-deposited in the backfill.

The overlying horizon (context 11) produced a relatively large assemblage apparently derived from earlier contexts. There is no ceramic evidence for any Late Iron Age activity, perhaps suggesting that the earlier end of the radiocarbon date range of 100 cal BC–cal AD 20 is a more appropriate date for the burial. The rest of the Iron Age pottery, from the tertiary silts of the ditch, the fill of the shallow ditch (13) cutting its outside edge and the overlying contexts, was found alongside Roman ceramics and is clearly residual. Nevertheless, it does appear to be mainly of Early and Middle Iron Age date, reinforcing the impression that the enclosure had been abandoned by the Late Iron Age.

Table 5.1 Prehistoric pottery from enclosure and settlement excavations, by phase and fabric group

Site		*052*		*050*		*072*		*042A*		*014A*		*014B*		*009*		*023*		*049*	
Phase	*Fabric group*	*no*	*g*	*no*	*g*	*no*	*g*	*no*	*g*	*no*	*g*	*no*	*g*	*no*	*g*	*no*	*g*	*no*	*g*
LBA	LBA plain ware	–	–	–	–	–	–	–	–	–	–	6	*6*	–	–	–	–	–	–
	1	–	–	–	–	–	–	–	–	–	–	135	*539*	–	–	–	–	–	–
	2	–	–	–	–	–	–	–	–	–	–	25	*265*	–	–	–	–	–	–
	6	–	–	–	–	–	–	–	–	–	–	6	*10*	–	–	–	–	–	–
	7	–	–	–	–	–	–	–	–	–	–	1	*2*	–	–	–	–	–	–
	9	–	–	–	–	–	–	–	–	–	–	1	*1*	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	7	*90*	–	–	–	–	–	–
EIA	LBA plain ware	–	–	–	–	–	–	–	–	–	–	2	*22*	1	*3*	3	*27*	–	–
	1	245	*1784*	–	–	–	–	–	–	–	–	124	*470*	549	*4436*	37	*223*	–	–
	2	–	–	–	–	–	–	–	–	–	–	4	*37*	229	*2110*	10	*88*	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	*9*	–	–
	4	–	–	–	–	–	–	–	–	–	–	–	–	2	*5*	–	–	–	–
	5	1	*2*	–	–	–	–	–	–	–	–	–	–	3	*44*	–	–	–	–
	6	4	*47*	–	–	–	–	–	–	–	–	5	*13*	47	*484*	2	*10*	–	–
	7	–	–	–	–	–	–	–	–	–	–	1	*1*	–	–	–	–	–	–
	8	27	*158*	–	–	–	–	–	–	–	–	–	–	2	*7*	–	–	–	–
	9	2	*22*	–	–	–	–	–	–	–	–	1	*2*	–	–	–	–	–	–
	10	1	*9*	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–	1	*4*	2	*24*	–	–
	13	–	–	–	–	–	–	–	–	–	–	–	–	1	*11*	–	–	–	–
	14	3	*47*	–	–	–	–	–	–	–	–	1	*1*	–	–	1	*4*	–	–
	indet.	–	–	–	–	–	–	–	–	–	–	3	*3*	12	*7*	–	–	–	–
MIA	LBA plain ware	–	–	–	–	–	–	7	25	–	–	–	–	—	–	–	–	–	–
	1	–	–	62	*561*	–	–	73	*359*	29	*233*	–	–	336	*5534*	–	–	349	*2325*
	2	–	–	–	–	–	–	–	–	1	*7*	–	–	9	*104*	–	–	19	*220*
	3	–	–	–	–	–	–	–	–	–	–	–	–	1	*13*	–	–	–	–
	4	–	–	–	–	–	–	–	–	–	–	–	–	1	*8*	–	–	–	–
	5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7	*96*
	6	–	–	1	*2*	–	–	–	–	–	–	–	–	13	*66*	–	–	–	–
	7	–	–	–	–	–	–	3	*10*	–	–	–	–	–	–	–	–	–	–
	8	–	–	–	–	–	–	–	–	2	*8*	–	–	2	*28*	–	–	4	*32*
	9	–	–	–	–	–	–	–	–	–	–	–	–	8	*149*	–	–	22	*324*
	10	–	–	–	–	–	–	–	–	–	–	–	–	1	*5*	–	–	–	–
	11	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5	*11*
	12	–	–	–	–	–	–	–	–	–	–	–	–	16	*369*	–	–	–	–
	13	–	–	1	*15*	–	–			–	–	–	–	1	*12*	–	–	96	*429*
	14	–	–	–	–	–	–	1	*1*	–	–	–	–	11	*262*	–	–	24	*269*
	15	–	–	–	–	–	–			–	–	–	–	1	*23*	–	–	1	*5*
	indet.	–	–	–	–	–	–	3	*3*	–	–	–	–	16	*7*	–	–	2	*4*
LIA	1	250	*2131*	24	*256*	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	6	23	*92*	1	*15*	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	8	2	*15*	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	11	3	*12*	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	13	1	*5*	3	*31*	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	14	–	–	5	*70*	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	15	–	–	2	*21*	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Resid	LN/EBA	–	–	–	–	–	–	–	–	2	*42*	–	–	–	–	2	*5*	–	–
	(M/) LBA plain ware	–	–	–	–	–	–	8	*79*	8	*21*	1	*1*	1	*3*	24	*89*	–	–
	1	416	3440	71	*292*	2	*0.3*	133	*391*	52	*205*	106	*405*	974	*7041*	40	*125*	47	174
	2	3	19	3	*28*	–	–	–	–	7	*34*	–	–	90	*658*	8	*44*	1	*3*

Table 5.1 continued

Site		052		050		072		042A		014A		014B		009		023		049	
Phase	Fabric group	no	g	no	g	no	g	no	g	no	g	no	g	no	g	no	g	no	g
	3	–	–	–	–	–	–	–	–	–	–	–	–	2	5	–	–	–	–
	4	–	–	–	–	–	–	–	–	–	–	–	–	3	9	–	–	–	–
	5	–	–	1	2	–	–	–	–	–	–	–	–	26	273	2	10	2	5
	6	2	10	–	–	–	–	–	–	1	2	8	15	25	291	4	24	1	4
	7	–	–	–	–	–	–	3	5	–	–	8	32	–	–	1	8	–	–
	8	–	–	–	–	2	1.7	–	–	–	–	–	–	24	162	–	–	–	–
	9	1	16	–	–	–	–	–	–	–	–	–	–	8	159	–	–	3	15
	10	–	–	–	–	–	–	–	–	–	–	2	7	–	–	–	–	–	–
	11	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	2
	12	–	–	–	–	–	–	–	–	–	–	–	–	10	80	–	–	–	–
	13	10	60	1	2	92	98	–	–	–	–	–	–	83	570	1	6	2	6
	14	8	112	2	13	–	–	–	–	2	14	2	4	25	181	–	–	5	21
	15	6	65	–	–	–	–	–	–	2	18	1	6	17	217	4	24	1	4
	16	–	–	–	–	–	–	–	–	–	–	–	–	3	51	–	–	–	–
	17	–	–	–	–	–	–	–	–	–	–	–	–	6	46	–	–	–	–
	indet.	–	–					2	2	4	3	2	2	9	17	–	–	–	–

Note that the phase given does not necessarily reflect the date of the pottery

The Early Iron Age assemblage

The lower horizons within the enclosure ditch produced 283 sherds of Early Iron Age pottery (2069 g). Although the ceramics are in variable condition, all of the contexts included fresh or lightly abraded sherds. A relatively small proportion of the Early Iron Age assemblage (45 sherds, 334 g) came from the primary and lower secondary silts (contexts 21–6). The few featured sherds are made from the same coarse sandy ware (fabric group 1d) and include small rim fragments from six different vessels. Although the stylistic evidence is too limited for the identification of specific types, three of the rims from contexts 21, 23, and 24 are sufficiently complete to demonstrate their derivation from vessels with well defined necks (Fig. 5.1, P1, P2, and similar to P32). An additional fragment of a carinated shoulder and one sherd with a red surface coating came from these same deposits (contexts 21 and 26).

By contrast, the overlying contexts contained notably larger numbers of sherds (contexts 17 and 18). This either indicates increased activity in the vicinity of the ditch or is a reflection of events involving the selective deposition of pottery. The stratigraphy suggests two main episodes separated by a time interval. The intervening horizon (context 15), only yielded seven featureless sherds made from the same coarse sandy ware (fabric group 1d), and may be the product of natural weathering.

Context 18 produced 96 sherds (875 g), and again most of the featured fragments are made from coarse sandy wares (fabric group 1d). The material includes one residual Late Bronze Age sherd from an All Cannings Cross carinated bowl. This is decorated with a row of deep circular impressions immediately above the shoulder angle (not illustrated). A fragment from a bipartite bowl with a carinated shoulder and a slightly beaded rim may be contemporary (Fig. 5.1, P3). Two additional sherds from a carinated and a fine sandy cordoned bowl of Early Iron Age date, together with three red-coated wall fragments in the same fabric (fabric group 1a) were also recovered from this deposit.

The assemblage from context 17 is of comparable size (135 sherds, 825 g), but incorporates a higher proportion of glauconitic sandy wares (fabric group 1e: 49 sherds, 421 g). All of the featured sherds are made from these fabrics and include a rim from a cordoned bowl with a red surface-coating (not illustrated) and a second rim from a barrel-shaped jar (Fig. 5.1, P4; Brown 2000a, form JB4.1). This association suggests that the horizon may have been deposited towards the end of the Early Iron Age (post-dating 470 BC) .

In addition to the fabric differences, contrasts in the proportions of burnished sherds point to the deposition of a different range of vessel types in context 17. Some 78% of the pottery from this layer is burnished, whereas only 26% of the fragments from context 18 and 17% from the underlying horizons have been treated in this manner. The rest of the ceramics have smoothed or wiped surfaces possibly pointing to a higher proportion of coarse jars in the lower deposits. These contrasts are further emphasised by apparent colour preferences, with 87% of the sherds from context 17 having black to grey surfaces as opposed to 50% from the underlying layers. The rest of the pottery is characterised by a variety of oxidised hues.

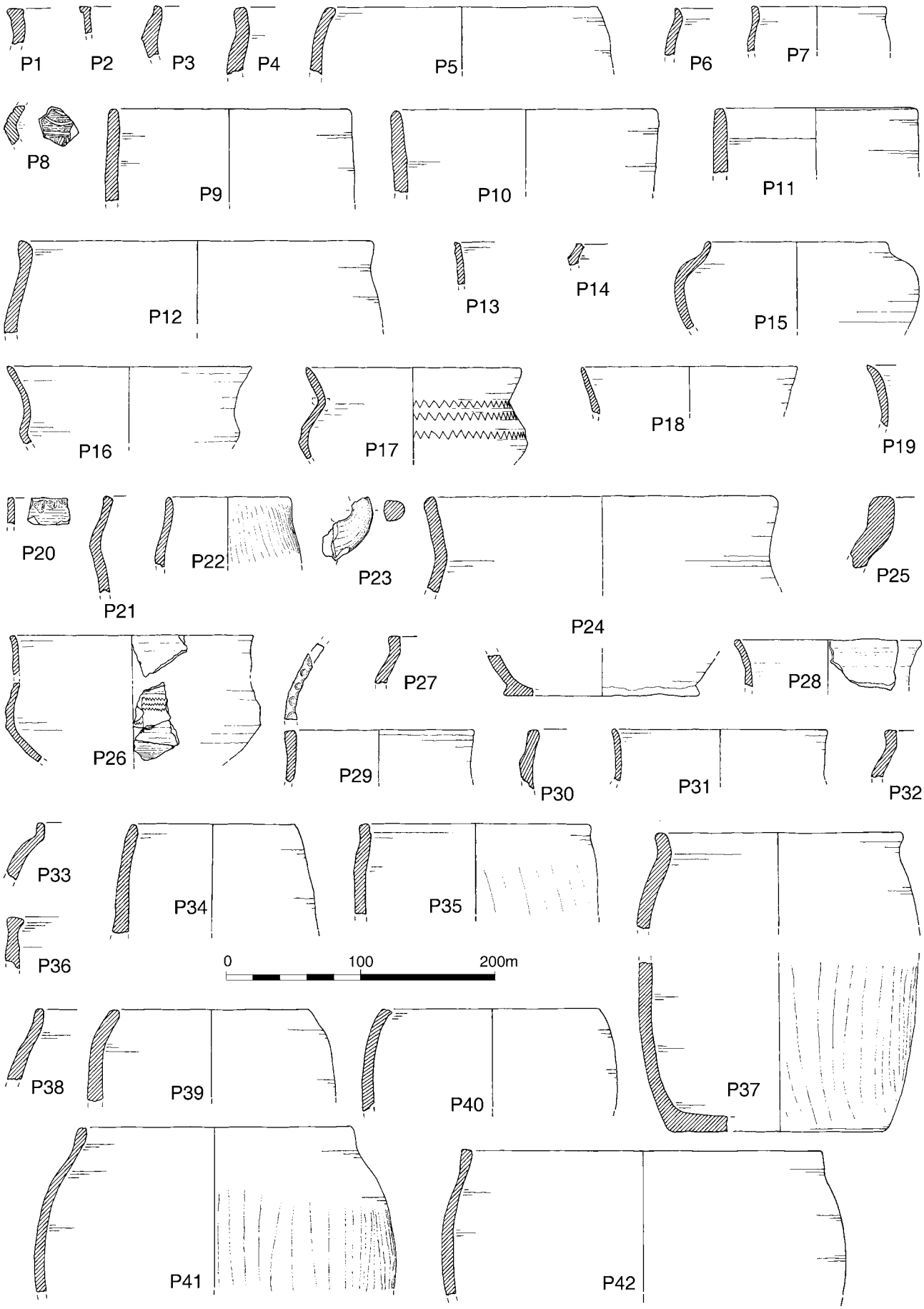

Figure 5.1 Prehistoric pottery

The later horizons

The fill of the grave produced seven Early Iron Age sherds (89 g), including one with a red surface-coating (context 20). The radiocarbon date of 100 cal BC–cal AD 20 indicates that these must have been derived from the earlier ditch silts.

The layer sealing the grave (11) contained 272 sherds (2166 g). The range and relative proportions of fabrics is very similar to the Early Iron Age assemblage, while the percentage of glauconitic sandy wares is virtually the same as in context 17. This is likely to be a reflection of a large residual component within context 11. Although it is not possible to distinguish all of the earlier pottery because many of the fabrics were used throughout the Iron Age, the few featured sherds include rims from three Early Iron Age jars with well defined, upright necks. The assemblage additionally incorporates part of a barrel-shaped jar with a charred residue on the exterior (not illustrated; Brown 2000a, form JB4) in a coarse sandy fabric (fabric group 1d), which could have been produced at any time between 470 and 50 BC; and fresh fragments from a proto-saucepan pot (Fig. 5.1, P5), of a type thought to have been current between 470 and 310 BC (Brown 2000a, form PA1). This is made from a glauconitic sandy ware (fabric group 1e) and has burnished surfaces.

The residual material from the site, which is similar to that from context 11, includes fragments from two high-shouldered jars (Fig. 5.1, P6 and P7; Brown 2000a, form JC2.3), as well as a single fragment from the shoulder of an All Cannings Cross carinated bowl (Fig. 5.1, P8), decorated with a deeply impressed geometric motif and made from a glauconitic sandy fabric (fabric group 1e).

Chisenbury Field Barn SP 050

The assemblage from Chisenbury Field Barn is composed of 168 sherds, weighing 1310 g. The pottery from the primary and secondary silts of the enclosure ditch (49) is of later Middle Iron Age date. The tertiary silts produced additional ceramics of this period alongside a small group of Late Iron Age sherds. The residual assemblage which was associated with Roman pottery in the overlying horizons broadly reflects the character of the stratified material. A low level of earlier activity is signalled by occasional Early Iron Age sherds from the secondary silts and colluvial deposits.

The primary and secondary silts of the enclosure ditch

The primary and secondary silts of the enclosure ditch incorporated 64 sherds (578 g). Only one of these, a heavily abraded fragment made from a ware tempered with oolitic limestone (Group 6c), is demonstrably of Late Bronze Age–Early Iron Age origin (800–400/350 BC). The ceramics are very fragmentary and although there are relatively few featured sherds, all are Middle Iron Age types post-dating 310 BC.

The more diagnostic sherds are from the secondary silts (contexts 69 and 70) and include the rims from two undecorated, developed saucepan pots (Fig. 5.1, P9 and P10; Brown 2000a, form PB1.1). Both vessels are made from glauconitic sandy wares (fabric group 1e) and have smoothed surfaces. These were associated with two decorated wall fragments (not illustrated), one with a motif composed of three shallow-tooled lines, in a similar fabric to the saucepan pots (fabric group 1e) and the other made from a fine flint-tempered ware (fabric group 13a) decorated with an arc of shallow-tooled dots, possibly pointing to date in the later part of the Middle Iron Age between 250 and 50 BC.

Virtually all of the sherds from the lower fills of the enclosure ditch are characterised by sandy fabrics, most of which are glauconitic. Forty-five percent are burnished and 81% are black, dark to mid grey or dark brown. The ceramics are in variable condition and there were no notable concentrations of sherds in any of the contexts.

The tertiary silts of the enclosure ditch, and ditch terminal (50)

The tertiary silts of the enclosure ditch produced 35 sherds (393 g). These include two fragments made from sandy grog tempered wares which have an origin in the Late Iron Age and continued to be produced after the Roman Conquest (fabric group 15c – from contexts 55 and 66). The Middle Iron Age is represented by a rim fragment in a coarse sandy ware (fabric group 1d) from a developed saucepan pot (Fig. 5.1, P11; Brown 2000a, form PB1.1).

There is no clear indication of a transitional group of ceramics within any of the tertiary horizons, and given the character of the contexts, the Middle Iron Age pottery may well be residual. The assemblage is simply too small and fragmentary to provide a detailed chronology for the stratigraphic sequence.

The date of the possible ditch terminal (50) outside the enclosure ditch is similarly equivocal since it only produced a single sherd of heavily abraded pottery (2 g). This is made from a coarse sandy ware with a long history of production beginning in the Late Bronze Age and continuing throughout the Iron Age (fabric group 1d).

Among the residual pottery from the site are two Middle Iron Age, high-shouldered jars (Fig. 5.1, P12; Brown 2000a, form JC2) in coarse sandy wares (fabric group 1d).

Chisenbury Warren SP 072

The Iron Age assemblage incorporates 96 sherds, weighing 706 g, and is largely residual. The pottery

comprises a significant group in spite of its derived nature, since it points to a Late Iron Age origin for the settlement at Chisenbury Warren. The focus of this was not identified in any of the excavated trenches, although Trench B produced the largest group (71 sherds, 542 g). Associated activity is indicated by a few scattered fragments from Trench A (four sherds, 60 g) and a slightly larger assemblage from Trench D (21 sherds, 104 g) that includes the only potentially *in situ* material from field boundary ditch D104 (eight sherds, 28 g).

The predominance of flint tempered wares from Chisenbury Warren (fabric group 13) contrasts with the assemblages from the other sites to the west of the Bourne, which are all dominated by sandy fabrics (fabric group 1). It seems probable that this is a reflection of the mainly Late Iron Age date of the pottery. This is slightly uncertain because most of the sherds lack diagnostic features. The only identifiable forms are two high-shouldered jars with upright rims (not illustrated) of a type produced during the Late Iron Age (Brown 2000a, form JC3.1), which were associated with Roman pottery in Trench B.

The Chisenbury Warren assemblage contrasts with the character of the pottery from the settlement on the southern side of Coombe Down South (SP 009). The reasons for these differences are uncertain, but it is possible that it relates to a later foundation at Chisenbury Warren towards the end of the Iron Age. The closing years of this period may be marked by a preference for flint tempered wares, masked at Coombe Down South by pottery from earlier phases of the Late Iron Age. This apparent contrast is also likely to be the product of shifts in the location of occupation through time, pointing to a focus of Late Iron Age settlement on Coombe Down South well outside the excavated trenches.

Coombe Down North SP 042A

The assemblage from the westernmost of the three excavated enclosures incorporates 233 sherds, weighing 875 g. This includes 15 sherds of residual Middle and Late Bronze Age pottery (104 g). The enclosure ditch (4) produced a small group of fragmentary Iron Age sherds. Although the date of this assemblage is uncertain, it exhibits traits which point to a likely Middle Iron Age origin for the enclosure boundary. The residual pottery is of similar character and, as with the ceramics from the other adjacent enclosures, suggests that the settlement on the northern side of Coombe Down had been abandoned by the Late Iron Age.

The enclosure ditch

A small group of 87 sherds (398 g), came from the enclosure ditch. The pottery is in variable condition and is fairly fragmented, with most sherds measuring only 10–40 mm across. The assemblage includes seven fragments of residual Late Bronze Age plain ware dating between 1000 and 800 BC. The remainder is dominated by sandy fabrics which have a long history of use extending between 800 BC and the 1st century AD. However, it does display characteristics more typical of the Middle Iron Age. It is notable that the range of fabrics is far more restricted than in the Early Iron Age assemblages from Widdington Farm (SP 052), other sites on Coombe Down (SP 014B and 009A), and the Everleigh enclosure (SP 023). The limestone and shell tempered wares are missing from this particular group, and the overall fabric profile is more reminiscent of the Middle Iron Age ceramics from Chisenbury Field Barn (SP 050).

This chronology is lent tentative support by three small sherds in sandy fabrics (fabric groups 1a and 1d) from the secondary silts (contexts 7 and 9) with profiles which suggest they are derived from two high shouldered jars (not illustrated; Brown 2000a, form JC2). These same deposits produced two earlier sherds (not illustrated): one of Late Bronze Age–Early Iron Age date decorated with a fingertip impression, made from a sandy ware containing calcareous inclusions (fabric group 7a); and the other from an Early Iron Age cordoned bowl with a red surface-coating in a fine sandy fabric (fabric group 1a).

Coombe Down North SP 014A

The largest of the two concentric enclosures on the northern side of Coombe Down produced relatively little pottery. The assemblage is composed of 117 sherds (614 g) which include residual fragments of Late Neolithic and Late Bronze Age vessels (12 sherds, 78 g). Although there are very few sherds from the primary and secondary silts of the main enclosure ditch (2), a Middle Iron Age date is indicated by diagnostic pottery from key positions in the sequence. The few fragments of Iron Age pottery from the immediately adjacent inner ditch (12) are in fabrics used throughout the period which cannot be phased.

The enclosure ditch

Thirty-two sherds of Early–Middle Iron Age pottery (248 g) were recovered from the primary and secondary silts of the enclosure ditch. The primary fill (context 21) only contained four sherds (52 g) made from the same coarse sandy ware (fabric group 1d), including a slightly beaded rim from a developed saucepan pot of a type post-dating 310 BC (Fig. 5.1, P13; Brown 2000a, form PB1.1). A single sherd (5 g) came from the lower secondary silts (context 20) which is made from a similar fabric.

The upper secondary silts (context 11) only produced two wall sherds (9 g). One of these is clearly residual, since it is made from a sandy ware tempered

with coarse limestone (fabric group 2e), current between 800 and 400/350 BC. A larger group of 25 sherds (182 g) came from the overlying sorted horizon of the buried soil. Again these include a residual Early Iron Age fragment from the shoulder of a carinated bowl with a red surface-coating. The only other featured sherd in a coarse sandy fabric (fabric group 1d) has a profile reminiscent of a barrel-shaped jar, a type produced between 470 and 50 BC (not illustrated; Brown 2000a, form JB4).

Ditch 12

Seven sherds (27 g) came from the upper fill of ditch 12. Two (15 g) are residual fragments of Late Bronze Age plain ware, dating to 1000–800 BC. The rest are made from a coarse sandy fabric introduced during the Late Bronze Age and used throughout the Iron Age (fabric group 1d).

Among the residual pottery from the site was a small rim fragment from a bipartite carinated bowl (Fig. 5.1, P14).

Coombe Down North SP 014B

The assemblage from the inner of the two concentric enclosures on the northern side of Coombe Down is composed of 454 sherds, weighing 1949 g. The pottery from a pit (3) within the enclosure includes types which suggest that it is likely to have been backfilled towards the end of the Bronze Age. A single tiny fragment of coarse sandy pottery from a second pit (18) cannot be dated closely. This feature was cut by the enclosure ditch (5) which produced a range of wares introduced around 800 BC and used throughout the Early Iron Age. The lack of diagnostic material from ditch silts precludes close phasing within this broad chronological range. The residual assemblage reflects the character of the pottery from these features, but also includes a small group of Middle–Late Iron Age sherds.

Pits 3 and 18

Pit 3 contained 181 sherds (915 g) that represent at least 16 different vessels. The pottery is in variable condition and the sherd size is generally small (20–50 mm across). Apart from six fragments of Late Bronze Age plain ware, there are no other identifiable residual elements.

The greatest concentration of sherds came from uppermost horizon (context 10, 95 sherds, 389 g). Four of the underlying layers incorporated assemblages of 14–20 fragments of pottery (contexts 16, 24, 25, and 27), with smaller groups of 4–9 sherds from the intervening deposits (contexts 22, 26, and 28). In all cases these represent the remains of several vessels. Twenty-one percent of the sherds are burnished, 4% have a red surface-coating, while the remainder are smoothed or wiped. The majority are black or dark grey (62%), the rest are in various oxidised hues.

The diagnostic pottery includes two sherds in good condition from the lower pit fills (contexts 27 and 28). The most deeply stratified is a shoulder fragment from a carinated jar decorated with a row of deep diagonal impressions (not illustrated), made from a coarse sandy fabric containing limestone (fabric group 2e). The overlying horizon produced a rim from a high-shouldered bowl with a short upright neck (Fig. 5.1, P15) in a sandy ware with organic inclusions (fabric group 12b). A coarse sandy sherd (fabric group 1d) from a carinated bowl with an impressed chevron above the shoulder was also found in this context (context 27). The upper pit fill (context 10) included a small fragment in a comparable fabric (fabric group 1d) from the shoulder of a second jar decorated with a fingertip impressed row (not illustrated). Although the group is small, the types represented are most typical of the end of the Bronze Age. The high-shouldered bowl (Fig. 5.1, P15) is certainly reminiscent of similar vessels in the Late Bronze Age assemblages from East Chisenbury (pers. obs.), Lidbury (*ibid.*), and Potterne (Gingell and Morris 2000, bowl type 3.2).

The character of the rest of the assemblage is consistent with this date, although it cannot be recruited as independent confirmation of the proposed chronology. All of the wares represented within the pit were first introduced during the Late Bronze Age, around 800 BC, but they continued to be used during the Early Iron Age.

The single sherd from pit 18 is in poor condition and only weighs 1 g. It is made from a fine sandy fabric (fabric group 1a) current between *c.* 800 and 400 BC.

The enclosure ditch

The enclosure ditch produced 141 sherds (549 g), which include two fragments of Late Bronze Age plain ware. The rest of the assemblage is made from wares with an origin around 800 BC which continued to be used throughout the Early Iron Age. The pottery is in variable condition and is fairly fragmented (20–50 mm across). Only 8% of the sherds are burnished, 5% have red surface-coatings, and the rest are smoothed or wiped. Approximately half of the assemblage is black or dark grey (53%), while the remainder is characterised by various oxidised hues.

The primary and lower secondary silts (contexts 17, 20, and 21) contained very little pottery (18 sherds, 32 g) and none of this can be phased. By contrast the upper secondary silts (context 14) incorporated a larger group of 116 sherds (483 g), including a rim made from a coarse sandy fabric (fabric group 1d) from a tripartite-shouldered bowl with a long neck (Fig. 5.1, P16). This type of vessel

has been attributed to the 5th and 4th centuries BC (Brown 2000a, BA2.2), but appears to have had a longer history of production extending back to the 6th or 7th century BC at Longbridge Deverill Cow Down (Chadwick Hawkes 1994, fig. 5, 6–10) and to the 7th or 8th century BC at East Chisenbury (pers. obs.).

The buried soil (context 11) produced one sherd of Late Bronze Age plain ware (17 g) and six wall fragments (17 g) made from coarse sandy wares used between 800 BC and the end of the Iron Age (fabric group 1d). One of these with a red surface-coating is of Late Bronze Age or Early Iron Age origin.

Coombe Down South SP 009

In combination the four trenches excavated in the settlement on the southern side of Coombe Down produced 2658 sherds, weighing 24.340 kg. The earliest of the *in situ* ceramics date to the Early Iron Age and are exclusively from features and deposits in Trench A. The forms within the largest groups suggests that they were deposited between 470 and 360 BC. An assemblage of later character, attributed to the earlier part of the Middle Iron Age around 310 BC, was recovered from a V-shaped ditch crossing Trench A (A109).

The possible, small subcircular enclosure-ditch (B5), investigated in Trench B, and the inner ditch of the bivallate enclosure (C3) produced Middle Iron Age ceramics that are broadly contemporary with a special deposit from a pit in Trench A (A11). None of the assemblages from these features was of sufficient size to provide evidence for phasing within the period. The outer ditch of the bivallate enclosure (B16) contained two tiny sherds and cannot be dated from the pottery, while the only *in situ* Late Iron Age assemblage came from the base of the colluvial ploughsoil (A40) in Trench A.

Approximately half of the pottery is derived from later contexts and is residual (1305 sherds, 9763 g). This group includes a high proportion of featureless wall sherds made from fabrics used throughout the Iron Age, and has been treated separately because so much cannot be phased.

The Early Iron Age assemblages

A total of 847 sherds (7111 g), came from securely stratified deposits in Trench A. The largest groups have similar compositions, being dominated by coarse sandy fabrics (group 1d) alongside a significant proportion of wares containing limestone and oolitic limestone. This is reminiscent of contemporary and slightly earlier assemblages from Widdington Farm (SP 052), the smallest of the Coombe Down North enclosures (SP 014B) and Everleigh (SP 023).

The largest group came from the working hollow at the northern end of Trench A (A47, 486 sherds, 4210 g). The assemblage is derived from at least 18 vessels and the majority of sherds have smoothed or roughly wiped surfaces typical of coarse jars (78% – 387 sherds). Burnished fragments, some with a red coating (10 sherds, representing 10% of the burnished ceramics) are in the minority (22%). The vessel types include a scratch-cordoned bowl (Fig. 5.1, P17; Brown 2000a, form BB1) dating to 470–360 BC, with black burnished surfaces in a fine ware tempered with limestone (fabric group 2a). A series of other rims, all from thin-walled bowls (Fig. 5.1, P18 and P19), are made from a coarse fabric also incorporating limestone (fabric group 2e). Those in good condition have burnished surfaces and range in colour from mid grey to various oxidised hues including reddish grey, tan, and yellowish brown. A couple of examples have traces of an exterior red surface-coating.

Several jars with smoothed or roughly wiped surfaces are additionally represented. Two of these are made from the same fabric as the bowls (fabric group 2e) and include one decorated with a row of fingertip impressions (Fig. 5.1, P20) and a small shouldered vessel (Fig. 5.1, P21). A third jar made from a coarse sandy fabric (fabric group 1d) is of a type current during the 7th and 6th centuries BC (Fig. 5.1, P22; Brown 2000a, form JG2). This has an exterior marked by prominent traces of downward wiping, a characteristic also originating in the Late Bronze Age. Some of the other sherds exhibit attributes first introduced during this period. These include part of a vertically mounted handle (Fig. 5.1, P23) in the same fabric as the bowls (fabric group 2e), and occasional base sherds from jars with abundant impressions of organic material on the exterior surfaces.

The rims from other jars (Fig. 5.1, P24 and P25) in coarse sandy fabrics (fabric group 1d) belong to types that are thought to have emerged around 470 BC (Brown 2000a, forms JB2.1 and JC1). One of these forms was no longer produced after 360 BC (Fig. 5.1, P24; Brown 2000a, form JB2.1), while the other had a longer history of use to the end of the Middle Iron Age (Fig. 5.1, P25; Brown 2000a, form JC1). Given the character of the assemblage as a whole, a deposition date in the early 5th century BC seems most probable.

The smaller assemblage from hollow A102 (215 sherds, 1627 g) incorporates the remains of 17 vessels and is of similar character. A slightly lower proportion of sherds with smoothed or wiped surfaces are represented (70% – 151 sherds), while 35% of the burnished pottery is red coated. The diagnostic sherds include fragments from two scratch-cordoned bowls. The more complete is made from a fine ware tempered with limestone (fabric group 2a) and has burnished surfaces with a red exterior surface-coating (Fig. 5.1, P26). The profile is typical of vessels produced between 470 and 360 BC (Brown 2000a,

form BB1). The second bowl, in a fine sandy ware (fabric group 1a), has a black-burnished exterior (Fig. 5.1, P27). The assemblage incorporates fragments from least four other burnished thin-walled bowls made from fabrics containing oolitic limestone (fabric groups 6c and 6d), limestone (fabric group 2b), or coarse sand (fabric group 1d). All have everted rims similar to the most complete example which is illustrated (Fig. 5.1, P28).

Jars made from coarse sandy wares (fabric group 1d) include a vessel with a row of fingertip impressions on the rim top (Fig. 5.1, P29; Brown 2000a, form JB1.2), dating between the 7th and 5th centuries BC; a fragment from a barrel-shaped jar (not illustrated, similar to P25; Brown 2000a, form JC1), with an extended currency between 470 and 50 BC; and a rim from a small vessel with an upright neck and angular shoulder (Fig. 5.1, P30). The range of types suggests that the assemblage was deposited between 470 and 360 BC.

The pit or ditch terminal (A46) at the northern end of Trench A produced a small group of Early Iron Age sherds from at least seven vessels (57 sherds, 398 g). The majority have smoothed or wiped surfaces typical of coarse jars (72% – 41 sherds), while the rest are burnished and are probably derived from bowls (28% – 16 sherds). The assemblage is in variable condition and most of the sherds are small (10–15 mm across). There is insufficient evidence to phase these ceramics since the only diagnostic pieces, made from the same fine sandy ware (fabric group 1a), are part of a cordon and an everted rim fragment from a thin-walled bowl (Fig. 5.1, P31).

An assemblage of similar size (69 sherds, 526 g) from at least 14 vessels came from context A64. A high proportion of the sherds are smoothed or wiped (91% – 63 sherds) and their likely derivation from coarse jars is confirmed by the featured sherds. These include a rim from a form with a long and slightly everted neck (not illustrated) made from a fine ware tempered with limestone (fabric group 2b). The other vessels are all in coarse sandy wares (fabric group 1d) and include a jar with a short upright neck (Fig. 5.1, P32) dating between 470 and 360 BC (Brown 2000a, form JB2.3); and a high shouldered bowl (Fig. 5.1, P33) of a type with an origin in the Late Bronze Age (Gingell and Morris 2000, bowl type 3.2).

The rest of the deposits in Trench A (hollow A90 and contexts A38, A66, and A95) only produced small numbers of Early Iron Age sherds. The largest group is from hollow A90 (15 sherds, 126 g), while the other contexts only contained 1–3 fragments and cannot be dated to the period with any degree of confidence.

The Middle Iron Age assemblages

A small assemblage of 416 Middle Iron Age sherds (6580 g), came from securely stratified deposits likely to have formed during the period. By this stage there appears to have been an increasing preference for sandy wares (fabric group 1). The earlier fabrics containing limestone (fabric groups 2, 3, 4, and 6) are still present, but in lesser proportions. Most of these occur in the V-shaped ditch (A109) crossing the centre of Trench A, which contained an assemblage dating to the earlier part of the Middle Iron Age. This period may well have been one in which traditional wares were still being used, although it is possible that the pattern partly reflects the presence of a residual component.

The ditch produced most of the *in situ* Middle Iron Age pottery (323 sherds, 4584 g). The most deeply stratified group came from the lower secondary silts (A106) which contained 55 sherds (957 g). The majority are made from a coarse sandy ware (84% – 46 sherds, 802 g; fabric group 1d), while most of the rest are in a shelly fabric (eight sherds, 149 g; fabric group 9a). A single sherd containing oolitic limestone (fabric group 6c) has a red surface-coating and may be residual. Much of the sandy pottery is derived from a single jar with a profile typical of vessels introduced around 470 BC and used until the end of the Middle Iron Age (of the same type as Fig. 5.1, P37; Brown 2000a, form JB4.1).

The overlying secondary silts (A79) incorporated a larger assemblage (245 sherds, 3096 g), derived from at least 17 different vessels. An identical proportion are made from sandy fabrics (84% – 205 sherds, 2709 g; fabric group 1), while wares containing limestone are represented by a few fragments (13 sherds, 115 g; fabric groups 2, 3, and 6). The rest of the pottery is made from fabrics either containing shell (fabric group 8b) or flint (fabric group 14f). Potentially residual sherds include one with red surface-coating and a rim from a jar with an upright and well defined neck (of the same type as Fig. 5.1, P1), in a ware containing limestone and shell.

Otherwise the diagnostic pottery includes a range of types, made exclusively from coarse sandy fabrics (fabric group 1d), pointing to a date in the earlier part of the Middle Iron Age notionally around 310 BC. These include the rims from three proto-saucepan pots dating between 470 and 310 BC (Fig. 5.1, P34; Brown 2000a, form PA1). A fourth saucepan pot has an upright rim and a profile reminiscent of the developed forms with a potential origin around 310 BC (Fig. 5.1, P35; Brown 2000a, form PB1.1). A small and slightly expanded rim is likely to be derived from a vessel of similar type (Fig. 5.1, P36; Brown 2000a, form PB1.1). A broader date range is indicated by fragments from two jars, one of a type produced between 470 and 50 BC (Fig. 5.1, P37; Brown 2000a, form JB4.1), and the other of a form introduced around 350 BC and used throughout the Middle Iron Age (Fig. 5.1, P38; Brown 2000a, form

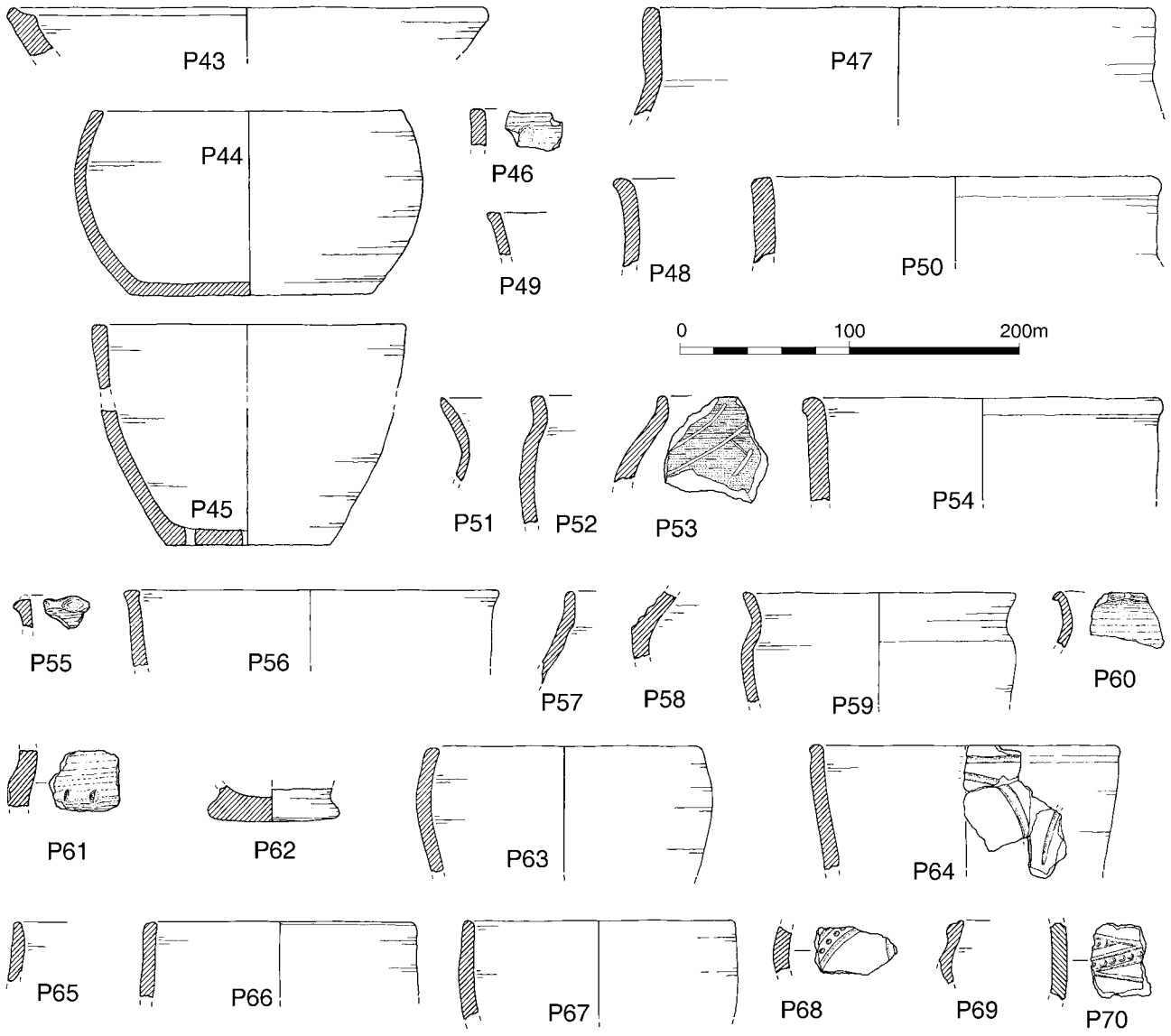

Figure 5.2 Prehistoric pottery

JC2). All seven of these vessels have relatively crude smoothed or wiped surfaces.

The smaller assemblage from context A78 (23 sherds, 561 g) is of similar character. It includes the rims from two proto-saucepan pots which are likely to have been produced between 470 and 310 BC (Fig. 5.1, P39 and 40; Brown 2000a, form PA1). These are made from the same coarse sandy ware (fabric group 1d) and have smoothed surfaces.

Ditch B5 in Trench B only produced 18 coarse sandy sherds, weighing 311 g (fabric group 1d). Two rims from high-shouldered jars with burnished surfaces (Fig. 5.1, P41 and P42) came from the secondary and upper ditch silts (contexts 31 and 43). Vessels of this type are relatively common and have an extended currency between 350 and 50 BC (Brown 2000a, form JC2).

A larger group of 57 sherds (768 g) came from the inner ditch of the bivallate enclosure (C3). Once again sandy wares (fabric group 1d), some with organic inclusions (fabric groups 12c and 12d) are in the majority (82% – 47 sherds, 672 g). A few sherds in fabrics containing oolitic limestone (fabric groups 4a, 6d, and 6e), shell (fabric group 10a), flint (fabric groups 13 and 14e) and grog (fabric group 15e) are also represented. The diagnostic pottery is exclusively from the lower secondary silts (context 41) and includes a rim from a dish (Fig. 5.2, P43; Brown 2000a, form DA1.2) in a grog-tempered ware (fabric group 15e), and approximately one third of a developed saucepan pot (Fig. 5.2, P44; Brown 2000a, form PB1.1). This has a burnished exterior, is made from a sandy ware with sparse organic inclusions (fabric group 12c), and is in fresh condition retaining traces of sooting. The dish belongs to a type in use throughout the Middle Iron Age, but the saucepan pot has a slightly more confined currency between 310 and 50 BC.

This also applies to the pottery forming part of the special deposit from pit A11 in Trench A. The assemblage is composed of 16 sherds (883 g) most of which represent approximately half of a single vessel in a coarse sandy fabric (fabric group 1d). This is a developed saucepan pot with a burnished exterior (Fig. 5.2, P45; Brown 2000a, form PB1.1), which has post-firing drilled holes in the base suggesting that it was adapted as a strainer. The only other sherds from this feature (two sherds, 9 g) are made from fabrics containing limestone (fabric groups 2b and 6c) and could be residual elements dating from the Early Iron Age.

The outer ditch of the bivallate enclosure (B16) produced two featureless sherds of pottery (4 g). These came from the upper and lower secondary silts and are made from a coarse sandy fabric which cannot be dated closely (fabric group 1d).

The small groups of pottery

Several of the deposits in all four trenches incorporated small numbers of Iron Age sherds. None of these contained Roman pottery and it is possible that they are of prehistoric origin, although this is uncertain given the potential for the incorporation of residual material in later contexts within such a long-lived settlement.

Most of the sherds from layers of this type cannot be phased, with the single exception of the assemblage from the base of the lynchet in Trench A (A40). This is composed of 41 sherds, weighing 421 g, which are mainly made from coarse sandy wares (30 sherds, 311 g; fabric group 1d). Apart from a single flint-tempered fragment (fabric group 14a), the rest of the pottery is in various limestone-tempered fabrics (fabric group 2a, 2b, 2c, 5a, and 6d). These include the only featured sherd from a Late Iron Age bead rim jar. The assemblage additionally incorporates two red coated sherds of Early Iron Age date, indicating that it is at least partly derived from earlier deposits. This is confirmed by the character of the pottery from the uppermost horizon of the lynchet which certainly includes a residual component (see below).

The residual assemblage

For the most part the residual pottery replicates the range of forms from the securely stratified groups, although in general it is more fragmented. The majority of identifiable featured sherds from Trench A are from the lynchet and include two fragments from vessels dating to between 800 BC and the beginning of the Iron Age. The first is from a furrowed bowl (not illustrated), while the second is part of a jar with a fingertip impression below the rim (Fig. 5.2, P46). Early Iron Age sherds are from four long-necked jars (Fig. 5.2, P47 to P50; Brown 2000a, form JB2); a thin-walled bowl with an everted rim (Fig. 5.2, P51); and part of a low pedestal base (not illustrated; Brown 2000a, form JD2.2). Featured sherds with a currency extending into the Middle Iron Age include rims from a barrel-shaped jar (Fig. 5.2, P52; Brown 2000a, form JB4.1); and a high-shouldered jar decorated with shallow-tooled diagonal lines (Fig. 5.2, P53; Brown 2000a, form JC2). There are no diagnostic featured sherds from Trenches B and D, while Trench C produced a single rim from a developed saucepan pot (Fig. 5.2, P54; Brown 2000a, form PB1.1).

The Everleigh enclosure SP 023

A small assemblage of 142 sherds, weighing 720 g, was recovered from the ditch sections and test pits at the Everleigh enclosure. This includes two abraded Beaker sherds (5 g) and 27 fragments of Late Bronze Age plain ware, dating to 1000–800 BC (116 g). The pottery from the primary and secondary silts of the enclosure ditch can be assigned broadly to the period between the 8th and 5th centuries BC. There is no indication of Middle Iron Age activity, while the few Late Iron Age sherds from the site are most likely to have been deposited during phases of cultivation across the area.

The enclosure ditch (SP 023A, ditch 3)

The primary and secondary silts of the enclosure ditch produced 56 sherds (385 g), which are fragmented (20–50 mm across) and in variable condition. The pottery includes three residual fragments of Late Bronze Age plain ware from the primary silts (context 15). Otherwise the range of fabrics represented provides a signature typical of the period *c.* 800–400/350 BC. This is very similar in character to the ceramics from Widdington Farm (SP 052), the smallest of the Coombe Down North enclosures (SP 014B), and from the earliest features at the settlement on the southern side of Coombe Down (SP 009A).

The majority of the sherds have smoothed or wiped surfaces, with only four burnished examples (7%). There are four fragments with red surface-coatings, while most of the others are in various oxidised hues (78%). The diagnostic pottery includes two shoulder fragments from jars decorated with fingertip rows. These were found in the primary and secondary silts (contexts 11 and 16) and are made from a medium-grade sandy ware (fabric group 1c) and a fine sandy ware tempered with limestone (fabric group 2b). A rim from a third jar decorated with a fingertip row (Fig. 5.2, P55), in a coarse sandy ware tempered with oolitic limestone (fabric group 6f) came from the upper secondary silts (context 7).

The chronological evidence is clearly ambiguous given the character of the ceramics and the potential for residual material being incorporated in the ditch. However, it does raise the possibility that the enclosure originated during the Late Bronze Age.

More certainly it demonstrates that occupation did not continue into the Middle Iron Age.

The rest of the pottery reflects the character of the assemblage from the enclosure ditch (SP 023A) and includes a few fragments from Test Pits 7–9. The diagnostic material from the tertiary silts (context 4 in both 023A and 023B) is limited to one tiny coarse sandy fragment with a fingertip impression and a sherd from a cordoned bowl with red surface coating. Four fragments of Late Iron Age pottery with a currency extending into the early Romano-British period (fabric groups 7b, 15b, and 15c) came from these and overlying horizons in the ditch sections (contexts 2 and 4).

Warren Hill SP 049

The assemblage from Warren Hill is composed of 594 sherds, weighing 3962 g. Apart from two fragments from a small ditch terminal or pit (34) immediately inside the enclosure ditch, these are all from the enclosure ditch (12) and overlying contexts. The few sherds from the primary and lower secondary silts within this feature cannot be dated closely, but the larger group of pottery from the secondary silts suggests that these are most likely to have accumulated during the 5th century BC. There appears to be a gap in the sequence until the later part of the Middle Iron Age when reoccupation is indicated by the ceramics from deposits in the upper part of the ditch. The residual pottery from the tertiary silts and topsoil reflects the character of the material from the enclosure boundary, suggesting that the site had been abandoned once again by the Late Iron Age.

The primary and secondary silts of the enclosure ditch

The most deeply stratified assemblage from the ditch includes 203 sherds (1845 g). Very little of this pottery is derived from the primary and lower secondary silts (contexts 39, 41, and 43) which only produced nine sherds (83 g). All are featureless wall fragments made from fabrics with an extended currency between 800 and 50 BC (fabric groups 1d, 14e, and 14f).

A small group of sherds (28 sherds, 196 g) from the overlying horizons (contexts 20 and 38) include well preserved rims from two jars. The first is made from a ware tempered with oolitic limestone (fabric group 5a) and is likely to be derived from a shouldered vessel dating between 470 and 360 BC (Fig. 5.2, P56; Brown 2000a, form JB2). The second in a coarse sandy fabric (fabric group 1d) is from a barrel-shaped form also introduced around 470 BC, but with a much longer history of production throughout the Middle Iron Age (Fig. 5.2, P57; Brown 2000a, form JB4.1).

The secondary silts immediately above these layers (contexts 31 and 37) yielded a larger assemblage of 65 sherds (608 g). The group includes at least one demonstrably residual fragment, dating between 800 BC and the early part of the Iron Age, derived from a furrowed bowl (Fig. 5.2, P58) in a coarse sandy ware (fabric group 1d). As with the underlying contexts, most of the sherds are featureless and the fabrics cannot be dated closely (fabric groups 1c, 1d, 1e, 2b, 2e, 9a, 11a, and 14d), although they present a varied profile which would be more typical of the Early Iron Age on sites to the west. Certainly the only diagnostic rim sherd is from a shouldered jar of a type dating between 470 and 360 BC (Fig. 5.2, P59; Brown 2000a, form JB3.1) made from a glauconitic sandy ware (fabric group 1e).

Refitting sherds in contexts 19 and 25 suggest that these and the intervening layers (contexts 24 and 26) represented a series of rapid deposits. The combined assemblage is composed of 103 sherds (974 g) including a rim from a shouldered jar in a glauconitic sandy ware (fabric group 1e), decorated with a fingertip row (Fig. 5.2, P60; Brown 2000a, form JB1); and a fragment from a similar vessel with a line of fingertip impressions on the shoulder (Fig. 5.2, P61) made from a sandy ware containing shell (fabric group 9a). Both jars are likely to have been in circulation in the 7th–5th centuries BC. Six other sherds with red surface-coatings can be assigned to a similar period (800–400/350 BC).

The likely date for the deposition of these layers during the 5th century BC is provided by fragments from vessels with a more confined currency between 470 and 310 BC. These include a low pedestal-base (Fig. 5.2, P62; Brown 2000a, form JD2.2) made from a medium-grade sandy ware (fabric group 1c); and two well preserved rim sherds from a proto-saucepan pot (Fig. 5.2, P63; Brown 2000a, form PA1), made from a glauconitic sandy fabric (fabric group 1e) with smoothed surfaces.

The upper part of the enclosure ditch

The deposits in the upper part of the enclosure ditch produced later forms characteristic of the later part of the Middle Iron Age (contexts 14, 15, and 16). Flint-tempered wares including a new group of sand-free fabrics (fabric group 13) are far more prominent in these horizons, comprising 31% of the assemblage. This contrasts with the contemporary sites to the west, where such fabrics form only a minor component within the various assemblages.

The largest group of pottery came from contexts 15 and 16 which incorporated 291 sherds (1623 g). Sixty percent of this material is either in fresh condition or is only lightly abraded. The diagnostic Middle Iron Age sherds indicate a date of 250–50 BC. They include fragments from a developed saucepan pot decorated with shallow-tooled lines (Fig. 5.2, P64; Brown 2000a, form PB1.1). This has burnished

surfaces and is made from a glauconitic sandy fabric (fabric group 1e). The vessel was associated with rim fragments from at least three undecorated developed saucepan pots with burnished surfaces (Fig. 5.2, P65 to P67; Brown 2000a, form PB1.1), either in similar wares (fabric group 1e) or in a medium-grade sandy fabric (fabric group 1c). A sherd with burnished surfaces and shallow-tooled decoration (Fig. 5.2, P68) is represented in a contrasting flint-tempered ware (fabric group 13b). Vessels of this type are thought to have emerged in Hampshire during the later part of the Middle Iron Age (Brown 2000a, 122–4). Other forms include a rim from a small high-shouldered vessel with a possible lid-seating (Fig. 5.2, P69), made from a sandy ware tempered with shell (fabric group 9a), and several rim fragments in a coarse sandy ware (fabric group 1d) likely to be part of a high-shouldered jar (not illustrated; Brown 2000a, form JC2).

The uppermost of these horizons (context 14) contained 35 sherds (258 g), including two with shallow-tooled decoration. The most complete is made from a flint-tempered ware (fabric group 13a) and has a burnished exterior. As with the sherd from context 15 (Fig. 5.2, P68), the motif is composed of shallow-tooled lines and dots (Fig. 5.2, P70). The second sherd is decorated with a single curvilinear line and is probably from the same vessel (not illustrated). The occurrence of a single sherd in a sandy grog-tempered ware (fabric group 15a) provides a *terminus post quem* for the deposition of context 14 in the Late Iron Age.

The ditch terminal (cut 34)

The recut ditch terminal only produced two abraded fragments of pottery (3 g). Both are featureless wall sherds made from sandy fabrics (fabric groups 1c and 1e) with an extended history of use between 800 BC and the 1st century AD.

Prehistoric Pottery from the Lynchets, Test Pits, and Surface Collections

Late Neolithic to Middle Bronze Age

Very little earlier prehistoric pottery was recovered during the surface collections or lynchet excavations and there were no concentrations. The earliest group comprises eight abraded sherds of Beaker or Early Bronze Age pottery (32 g) made from sandy grog tempered wares, dating broadly to 2600–1400 cal BC. These come from the Chisenbury Warren (SP 073) and Weather Hill lynchets (SP 136 and SP 140), fields at Coombe Down (SP 021), East Chisenbury (SP 086), Shipton Plantation (SP 007), and Furze Hill (SP 045), and from a site near the Tidworth military cemetery (SP 105).

Middle Bronze Age ceramics, dating to 1400–1000 cal BC, are represented by five sherds (55 g), all tempered with common to abundant burnt flint. Three came from the Weather Hill lynchets (SP 137 and SP 142), while single sherds were found on Coombe Down (SP 018) and Warren Hill (SP 040).

Late Bronze Age plain ware

The Late Bronze Age assemblage, dating to 1000–800 BC, is composed of 1269 sherds, weighing 5993 g (Table 5.2). Although this material has not been the subject of detailed analysis as the period was not part of the research design the distribution and general character of the assemblages provides evidence of the earlier settlement pattern. This has allowed for the

Table 5.2 The relative quantities and distribution of Late Bronze Age plain ware

Area		*Site*	*Code (SP)*	*No.*	*g*
West of River Bourne	Study Area	Enford Farm	123, 124	7	52
		Upavon Hill	106C	2	7
		Chisenbury Priory	084, 085	5	37
		DGLA Track, E. Chisenbury	076, 087	6	38
		Coombe Hill	020, 021	2	19
		Mile Ball	111	1	7
		Everleigh Down	109	10	33
		Hazleberry Plantation	102a, 102b	20	83
		Hougoumont Farm, Gore Down, Sunny-hill Farm, & Colling-bourne Ducis	091, 092, 093, 097, 098, 101	14	104
		The Pennings	104	91	644
	WSA	Chisenbury Warren		1	6
		Chisenbury Warren lynchets, Badens Clump	001	25	113
		Baden Down Farm, Rainbow Bottom	064A, 067, 068, 071, 073, 075	6	14
		Coombe Lane	112, 113, 115	8	34
		Longstreet Down	011, 015, 016	24	72
		Coombe Down	014, 017, 018	27	91
		Weather Hill lynchets	136, 139, 140, 141	13	41
East of River Bourne	ESA	Tidworth lynchets	004, 005/B, 006	276	1023
		Furze Hill	045, 046/A	23	120
		Shipton Plantation	007, 027/A, 132	627	2882
		Snoddington Down	008/A, 060	37	248
		Old Coach Road	012	1	6
		Bedlam Plantation	030A	1	4
		Warren Hill	037, 040, 041	9	65
		Kimpton Down, Upper Newdown Copse	032, 059	8	63
		Shoddesden Grange	134	25	187
Total				1269	5993

identification of at least three occupation sites, one to the west and two to the east of the River Bourne.

In total 262 unstratified or residual sherds of Late Bronze Age pottery (1395 g), came from sites west of the River Bourne (including the Western Sample Area). In most places the distribution comprises a few sherds scattered widely across the landscape. These are likely to denote a low level of activity, although the density will clearly have been affected by problems of survival in fields with a long history of cultivation.

Slightly larger groups of pottery were recovered from the area occupied by the Chisenbury Warren lynchets, extending south-eastwards towards Badens Clump and across Longstreet Down and Coombe Down towards the field system on Weather Hill. Similar assemblages came from Everleigh Down and Hazleberry Plantation. The slight increase in sherd numbers may well indicate nearby occupation outside the investigated sites.

A single concentration of sherds at The Pennings to the east of Sidbury Hill marks the only settlement identified to the west of the Bourne. The pottery is made from fabrics which are typical of Late Bronze Age plain ware, but exhibits traits which suggest that it may include an element deposited towards the end of the period when the new All Cannings forms were being introduced. However, it was clearly abandoned before the adoption of the technological innovations which emerged during the final phase of the Late Bronze Age.

A larger group of 1007 sherds (4598 g), came from sites east of the River Bourne (including the Eastern Sample Area). This reflects the discovery of two settlements on the Bourne Ridge, one to the east of the linear ditch near the Tidworth lynchets and the other alongside Shipton Plantation. The smaller groups from Furze Hill and Snoddington Down probably denote areas of associated activity, while an assemblage of comparable size from Shoddesden Grange may be related to an undiscovered settlement.

In contrast to the material from The Pennings, none of the plain ware ceramics from the Tidworth lynchets or Shipton Plantation display attributes typical of the final phase of the Bronze Age. However continued activity into this period is indicated by All Cannings Cross sherds which coincide with the plain ware distribution at Furze Hill, Shipton Plantation, and Kimpton Down.

Table 5.3 Relative quantities and distribution of Late Bronze Age–Iron Age pottery

Area		*Site*	*Code (SP)*	*No.*	*g*
West of River Bourne	Study area	Enford Farm	116/A, 117, 123, 125, 143A	11	51
		Fifield Folly	130/A	44	283
		Upavon Airfield & Upavon Hill	088, 106/C, 107C/D/E	37	179
		Littlecott	081, 082/A	21	192
		DGLA track	076	8	58
		Lidbury	029	40	128
		Everleigh Down	109	8	29
		Polish Field, Gore Down, Hougoumont Farm, Hazleberry Plantation, Sunnyhill Farm, Collingbourne Ducis	078, 091, 093, 097–9, 101, 102A/B	26	156
	WSA	Chisenbury Warren & lynchets, Badens Clump	001, 063, 064A, 065–8, 070, 073–5	117	304
		Baden Down Farm, Rainbow Bottom	022, 025	17	48
		Coombe Lane	112, 113	3	13
		Longstreet Down	011, 015, 016, 019/A	74	286
		Coombe Down & Coombe Hill	014, 017, 018, 042	34	151
		Beach's Barn	026/A/B/C	14	104
		Weather Hill lynchets	136, 137, 139–42	16	56
East of River Bourne	ESA	Humber Lane, Tidworth	051	19	183
		Tidworth lynchets	004, 005/B, 006	38	130
		Furze Hill	045, 046/A	79	414
		Shipton Plantation	007, 027/A, 132	52	320
		Snoddington Down	008/A, 060	72	434
		Snoddington Down Farm	061, 062	3	16
		Old Coach Road	012	5	25
		Bedlam Plantation	013, 024, 030/A, 031	33	183
		Ashdown Copse	028	1	15
		Warren Hill	037, 040, 041, 055	35	268
		Kimpton Down & Upper Newdown Copse	032, 044, 059	15	99
		Kimpton Gorse	033, 039, 053A	6	48
		Kimpton Farm	057	3	16
		Shoddesden Grange	134	25	211
Total				856	4400

Late Bronze Age to Iron Age

The Late Bronze Age to Iron Age assemblage dates between 800 BC and AD 43, and includes a small group of wares with a Late Iron Age origin which continued to be produced after the Roman Conquest. A total of 856 sherds (4400 g) came from surface collections and predominantly later contexts in various small scale excavations (Table 5.3). These do include low level concentrations coinciding with known enclosures or pointing to previously unrecorded areas of occupation.

Virtually all of these ceramics are abraded wall fragments and many are made from fabrics which emerged during the final phase of the Bronze Age and continued in production into or throughout the Iron Age. However, many of the individual assemblages do include a small proportion of sherds which can be

dated more precisely, at least providing an indication of the origin of some the settlements.

In total 467 fragments of pottery, weighing 2069 g, were recovered from sites west of the River Bourne. The numbers of sherds from individual sites are generally low, and this is partly a reflection of poor survival in modern arable fields. This is demonstrated clearly by collections from the ploughsoil above known crop-mark enclosures. These include the three excavated sites on the northern side of Coombe Down (SP 014A/014B and SP 042) which collectively only produced 15 sherds. Most of this pottery came from SP 014 and was made from the more robust wares of the Late Bronze Age and Early Iron Age. A larger group was associated with the enclosure on Longstreet Down (SP 019/019A), where the ploughsoil assemblage denoted occupation not so much by its size as by its diversity, with the range of fabrics indicating the presence of at least 17 vessels.

This index also points to Iron Age occupation at Fifield Folly (SP 130/130A), Littlecott (SP 081 and SP 082/082A), and the upper part of the slope occupied by the Chisenbury Warren lynchets (focused on SP 073). Small collections of pottery associated with known enclosures include the sites on Coombe Down and Longstreet Down mentioned above, together with Chisenbury Trendle alongside Upavon Airfield on Upavon Hill, Lidbury (SP 029), and Beach's Barn (SP 026).

The surface collections and lynchet excavations east of the River Bourne produced 386 sherds of Late Bronze Age–Late Iron Age pottery, weighing 2362 g. Larger groups with a diversity of fabrics likely to denote occupation came from Humber Lane in Tidworth, the Tidworth lynchets, Furze Hill, Shipton Plantation (focused on SP 007), Snoddington Down (from the general collection SP 008), Bedlam Plantation (focused on 030A), Warren Hill, and Shoddesden Grange. Most of the Iron Age pottery from the lynchet excavations at Tidworth was recovered from Roman contexts, while the rest is so abraded that it is also likely to be derived from earlier horizons.

The Fabrics

A detailed approach was adopted towards fabric classification so that the distribution of individual wares across the landscape could be investigated. When the results were examined this proved to be over-refined and it was possible to explore the same themes using generalised categories based on shared attributes. This process of amalgamation has resulted in the identification of 18 fabric groups defined by inclusion type, which have been subdivided according to size and frequency (Table 5.1). The numbering system is independent from the sequence adopted for the Roman series. The distribution of the fabric groups are shown in Table 5.4, with the exception of Group 1, which occurs at all sites apart from the Beach's Barn excavation (SP 026). Detailed descriptions of the fabric subgroups are contained in the archive.

Groups 1a–1e – sandy wares

The fabrics have an origin in the Late Bronze Age and were used throughout the Iron Age and into the early Romano-British period. The earliest diagnostic pottery includes fragments from decorated All Cannings Cross vessels (Fig. 5.1, P8), as well as furrowed (Fig. 5.2, P58), high-shouldered (Fig. 5.1, P3 and P33; Gingell and Morris 2000, bowl type 3.2), cordoned, scratch-cordoned (Fig. 5.1, P27), and carinated bowls; together with a range of jars (Fig. 5.1, P22, P24, P29, and P32, and Fig. 5.2, P48, P49, P59, and P60; Brown 2000a, forms JB1, JB1.2, JB2; JB2.1, JB2.3, JB3.1, and JG2), some with fingertip rows on the rims or shoulders; and vessels with well defined necks (Fig. 5.1, P1 and P2), pedestal bases (Fig. 5.2, P62; Brown 2000a, form JD2.2) or red surface-coatings. The fine wares (Group 1a) appear to have been used exclusively for bowls during the Late Bronze Age and Early Iron Age, whereas the medium to coarse wares were used for a wide range of vessels.

Transitional to Middle Iron Age forms include developed and proto-saucepan pots (Fig. 5.1, P5, P9–P11, P13, P34–P36, P39 and P40, and Fig. 5.2, P45, P54, and P63–P67; Brown 2000a, forms PA1, PA2.1, and PB1.1), barrel-shaped jars (Fig. 5.1, P4, P25 and P37, and Fig. 5.2, P52 and P57; Brown 2000a, forms JB4.1 and JC1), high shouldered jars (Fig. 5.1, P6, P7, P12, P38, P41, P42, and Fig. 5.2, P53; Brown 2000a, forms JC2 and JC2.3) and globular jars (Brown 2000a, form JD1). The Late Iron Age to early Roman fabrics used for bead rim jars are of medium grade (Group 1b) and are distinguished by common iron ore in the same size range as the sand. The Group 1 wares occur at all of the excavated sites apart from Beach's Barn (SP 026) and are also represented amongst the assemblages from the various lynchet sections, and from all of the field groups in the western and eastern study areas.

Groups 2a–2f – sandy wares with limestone

These fabrics are of Late Bronze Age origin and were used into the Early Iron Age. Rims from Late Iron Age everted rim jars made from one of the fine fabrics (Group 2a) either indicate continuous production or a late reintroduction from a similar source. The diagnostic pottery includes an All Cannings Cross bipartite-carinated bowl (Fig. 5.1, P14), scratch-cordoned bowls (Fig. 5.1, P17 and P26; Brown 2000a, form BB1), carinated bowls, vessels with handles (Fig. 5.1, P23) and jars (Fig. 5.2, P50; Brown 2000a, form JB2), some with fingertip rows just below the rim or on the shoulder (Fig. 5.1, P20 and Fig. 5.2, P56) and one with diagonal impressions on the shoulder. A number of red-coated sherds are also represented.

Table 5.4 Prehistoric pottery fabric groups by site

Site	*SP*	*Area*	*Fabric groups (*group 1 present at all sites apart from Beach's Barn - SP 026)*																
			2	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*
Ashdown Copse	028, 036	ESA													x				
Badens Clump	067	WSA														x			
Beach's Barn *	026	WSA												x			x		
Bedlam Plantation	030, 030a, 031	ESA	x				x							x	x	x	x		
Chisenbury Field Barn	050	WSA	x			x	x							x	x		x		
Chisenbury Warren	001,066, 068, 070, 072-4	WSA	x											x	x	x	x		
Collingbourne Ducis	101	SA												x	x				
Coombe Down	009, 014, 014A, 014B, 017, 018, 019A, 042A, 135, 136	WSA	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	
Coombe Lane	112	SA															x		
Cropmark below Warren Hill	055	SA	x																
Enford Farm	123, 125, 131, 143	SA	x						x						x	x	x	x	
Everleigh	023	WSA	x	x		x	x	x					x	x	x	x			
Everleigh Down	109	WSA	x												x				
Furze Hill	045, 046, 046A	ESA	x					x						x	x	x	x		
Fyfield Folly	130, 130A	SA	x											x	x	x	x		
Gore Down	099	SA												x					
Hazelberry Plantation	102A, 102B	SA					x							x	x				
Hazelberry Plantation	106B, 106C	SA								x				x			x		
Hazelberry Plantation	107C, 107D, 107E	SA	x							x				x	x	x	x	x	
Hougoumont Farm	098	SA													x		x		
Humber Lane, Tidworth	051	SA	x										x	x	x				
Kimpton Down	032, 044	ESA								x					x				
Kimpton Farm	057	ESA												x					
Kimpton Gorse	033, 039	ESA											x	x	x				
Lidbury	029	WSA					x			x									
Littlecott	081, 082, 082a	SA							x	x				x	x	x	x		
Longstreet Down	015, 016A, 019	WSA						x						x	x	x	x		
Old Coach Road	012	ESA								x				x	x				
Polish Field	078	SA												x					
Rainbow Bottom	025	WSA								x									
Shipton Plantation	007, 132	ESA	x			x	x			x			x	x	x	x	x		
Shoddesden Grange	134	ESA	x				x		x	x					x		x	x	

Table 5.4 contined

Site	*SP*	*Area*	*Fabric groups (*group 1 present at all sites apart from Beach's Barn - SP 026)*																
			2	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*
Snoddington Down	008, 08A, 060	ESA	x			x		x		x			x	x	x	x	x		x
Snoddington Down Farm	062, 064B	ESA													x	x			
Sunnyhill Farm	091	SA												x					
Tidworth lynchets	004-6	ESA								x					x	x	x		
Upavon Airfield	088	WSA															x		
Warren Hill	037, 040, 041, 049	ESA	x				x		x	x		x		x	x	x	x		
Weather Hill	139, 140, 141, 142	WSA												x	x	x	x		
Widdington Farm	052, 053A	SA	x			x	x		x	x	x			x	x	x			

Groups 3a–3b – sandy wares with limestone and shell
These wares originated during the Late Bronze Age and continued to be used into the transition between the early and Middle Iron Age.

Group 4a –wares with oolitic limestone and shell
This group includes one fabric which is confined to Coombe Down, where it is dated to the Early Iron Age on the basis of its occurrence within the working hollow (SP 009A, Cut 47).

Group 5a – wares with oolitic limestone
This group incorporates a single ware with a likely origin in the Late Bronze Age. The diagnostic pottery includes sherds from Early Iron Age jars (Fig. 5.2, P47 and P56; Brown 2000a, form JB2) and a vessel with a fingertip row below the rim (Fig. 5.2, P47).

Groups 6a–6f – sandy wares with oolitic limestone
The fabrics are mainly of Early Iron Age date with a likely origin in the Late Bronze Age and were used for carinated bowls, jars (including one example with a fingertip row on the outer rim lip), a carinated vessel with a fingertip row on the shoulder, and vessels with red surface-coating. Continued production of one of the medium-grade wares is indicated by its use for a probable saucepan pot (Group 6e). The fabrics have a widespread distribution.

Groups 7a–7b – sandy wares with calcareous inclusions
The medium-grade ware (Group 7a) occurs in Late Bronze Age–Early Iron Age contexts at Coombe Down (SP 014B, Cut 3, context 25; and Cut 5, context 14), while the only featured sherd is derived from a fingertip-decorated jar. The distribution extends from Lidbury (SP 029), across Longstreet Down (SP 016) and Coombe Down (SP 042A and SP 014B) to Furze Hill (SP 046A) and Snoddington Down (SP 008). The coarse ware (Group 7b) was first produced during the Late Iron Age and is likely to have continued in use after the Roman Conquest. It was used for everted rim jars and the distribution is confined to Everleigh (SP 023).

Groups 8a–8c – shell tempered wares
The Early– Middle Iron Age currency of these wares is demonstrated by their occurrence in Early Iron Age contexts at Widdington Farm (SP 052, Cut 4, contexts 17, 18, 21, and 22), in horizons dating to the early part of the Middle Iron Age at Coombe Down (SP 009A, Cut 109, contexts 78 and 79) and in Middle Iron Age horizons at Warren Hill (SP 049, Cut 12, context 16).

Groups 9a–9b – sandy wares with shell
These wares have a potential origin during the Late Bronze Age and were used into the early part of the Middle Iron Age. Continued production throughout the Middle Iron Age may be indicated by their presence in later horizons at

Warren Hill (SP 049, Cut 12, contexts 14 and 16). Featured sherds are from a carinated jar with a fingertip row on the shoulder (Fig. 5.2, P61) and a high-shouldered vessel with a possible lid-seating (Fig. 5.2, P69). The glauconitic ware (Group 9b) is confined to the eastern study area.

Group 10a – sandy wares with shell and organic inclusions
This group is represented by a single fabric and although there are no featured sherds, an Early Iron Age currency is indicated by the occurrence of the ware in a deposit of this date at Widdington Farm (SP 052, Cut 4, contexts 17). The distribution is otherwise confined to Coombe Down (SP 014B and SP 009).

Group 11a – wares with organic inclusions
This group is represented by a single fabric confined to Warren Hill, where it occurs in an Early Iron Age deposit (SP 049, Cut 12, context 37) and in an upper horizon alongside Roman pottery (context 13).

Groups 12a–12d – sandy wares with organic inclusions
These wares were mainly produced between 800 and 400/350 BC, although continued use into the Middle Iron Age is indicated by their use for a developed saucepan pot (Group 12c; Fig. 5.2, P44; Brown 2000a, form PB1.1). Other diagnostic pottery includes an All Cannings Cross high-shouldered bowl (Fig. 5.1, P15; Gingell and Morris 2000, bowl type 3.2), carinated bowls and vessels with red surface-coating.

Groups 13a–13c – flint tempered wares
These wares were produced throughout the Iron Age, although they are only a minor component of the early assemblages. The diagnostic pottery includes Middle Iron Age sherds with shallow tooled decoration (Fig. 5.2, P68 and P70) and fragments from Late Iron Age bead rim jars.

Groups 14a–14f – sandy flint tempered wares
The fine fabrics are of middle to Late Iron Age date, while the medium to coarse wares were produced throughout the Iron Age. The featured sherds include Middle Iron Age saucepan pots and jars and Late Iron Age everted rim jars. The wares have a widespread distribution.

Groups 15a–15e – sandy grog tempered wares
Groups 15a and 15e have an origin in the Middle Iron Age, occurring in deposits of this date at Warren Hill (SP 049, Cut 12, context 14) and Coombe Down (SP 009C, Cut 3, context 41). The only Middle Iron Age featured sherd is a rim from an open dish (Fig. 5.2, P43; Brown 2000a, form DA1.2). Elsewhere it was used into the Late Iron Age for bead rim jars. The rest of the subgroups have an origin during the Late Iron Age and are likely to have continued in production after the Roman Conquest. The few featured sherds are either bead rim or everted rim jars. The distribution is widespread.

Groups 16a–16b – wares tempered with flint and grog
These wares have an origin in the Late Iron Age and were produced into the early Romano-British period. The diagnostic pottery includes sherds from bead rim jars.

Group 17a – sandy wares tempered with flint and grog
These wares have an origin during the Late Iron Age and continued to be produced after the Roman Conquest.

Group 18a – sandy wares with flint and shell
This group is represented by a single fabric of uncertain phasing which is confined to Snoddington Down (SP 008).

Discussion

The final phase of the Bronze Age on Salisbury Plain and more widely across southern England is characterised by a substantial change in the character of pottery. This is marked by the introduction of new vessel forms and decorative motifs, accompanied by technological innovation. The period was also one in which there was a change on Salisbury Plain from the local production of the plain ware horizon (Raymond 1994) to a system which continued to support a household industry, but also involved the procurement of ceramics from more distant sources. This echoes the developments noted to the east at Old Down Farm (Davies 1981) and to the west at Potterne, where the proportion of non-local pottery increased during the Late Bronze Age from 5% to 20% (Morris 2000, 166).

The character of the predominantly later assemblages recovered during the course of the project points to a significant level of continuity that persisted well into the Early Iron Age. A similar maintenance of established modes of production has been noted in the Stockbridge area, where it is illustrated most clearly by the ceramics from Houghton Down (Brown 2000a, 80; 2000b). On Salisbury Plain the most convincing evidence for this form of continuity is provided by the larger 5th century BC assemblages from Coombe Down (SP 009A). In spite of the introduction of new vessel types, some traditional jar forms (Brown 2000a, forms JB1.2 and JG2), occasionally decorated with fingertip rows, were still in use. These had been a prominent component of the Late Bronze Age assemblages from various sites including East Chisenbury (McOmish 1996; and pers. obs.), Potterne (Gingell and Morris 2000), and All Cannings Cross (Cunnington 1923). The persistence of less common elements such as vertically mounted handles is also in evidence, while the technological continuity is particularly striking. This includes the use of traditional surface treatments alongside the production of very hard fired wares, a characteristic

which appears to have waned by the Early Iron Age on sites further to the east (Brown 2000a, 80).

Many of the fabrics represented within the Late Bronze Age–Early Iron Age assemblages from Salisbury Plain compare closely with the 8th–7th century BC wares from the East Chisenbury midden (pers. obs. – fabric groups 1–3, 5–7, 9, and 12). The dominance of sandy fabrics and the diversity in the range of Early Iron Age wares is also highly reminiscent of this and other Late Bronze Age ceramic groups from All Cannings Cross (Cunnington 1923) and Potterne (Morris 2000). The limestone-tempered fabrics (fabric groups 2 and 3), including those with glauconite (fabric group 2f) and fossil shell (fabric group 3a and 3b) are similar to the Potterne wares (Morris 2000, type LM, 142–3) and may originate from outcrops to the west around Devizes. Parallels for the fabrics tempered with oolitic limestone (fabric groups 4–6) also occur at Potterne (Morris 2000, type OL, 144–5) and it is possible that they share a similar source in the Bradford-on-Avon/Budbury area, although they could equally be derived from almost anywhere along the Jurassic ridge. The presence of glauconite in wares of this type (fabric group 6f) is not unusual and while their origin is uncertain (Morris 2000, 144–5), outcrops of oolitic limestone close to Gault Clay and Greensand are mapped to the south-west in the Nadder Valley around Tisbury.

The continued use of non-local pottery during the Early Iron Age on Salisbury Plain is complemented on contemporary sites in the Andover and Stockbridge area (Morris 1995). 'Imported wares' occur at Lains Farm (Morris 1991), Old Down Farm (Davies 1981), and Danebury, where they comprise between 45% and 70% of the various assemblages (Morris 1991; 1995). Although this probably signals the existence of similar mechanisms for the distribution of pottery in neighbouring areas, contrasts in the non-local fabric types suggest that the Iron Age communities on the Hampshire sites were favouring a different set of contacts.

The Late Bronze Age–Early Iron Age assemblages from the various settlements to the east of the Avon on Salisbury Plain on Coombe Down (SP 014B and SP 009), at Everleigh (SP 023), and on Warren Hill (SP 049) include a significant proportion of wares tempered with limestone and oolitic limestone (fabric groups 2–6). This contrasts with the ceramic groups from sites further to the east. At Lains Farm, for example, the oolitic fabrics are absent, while less than 1% of the sherds contain limestone (Morris 1991, 19, group L). At Danebury there are no limestone tempered wares, and oolitic fabrics are rare (Cunliffe 1984, 246), while at Old Down Farm wares with limestone are scarce (Davies 1981, 92, fabric 3) and the few sherds containing ooliths are only represented during Phase 2, demonstrating a use confined to the 8th century BC (Davies 1981, 91, fabric 20).

The assemblage from Warren Hill (SP 049) on the edge of this catchment more closely resembles the ceramic groups from the sites further to the west. Yet it additionally includes particular fabrics which are either unique to the eastern study area or occur with greater frequency in this part of the landscape. The sandy shell tempered wares which also include common glauconite (fabric group 9b) are confined to sites on the eastern side of the Bourne ridge. This contrast is reinforced by the character of the glauconitic sandy fabrics at Warren Hill (fabric group 1e). Eighty-seven percent of the sherds made from these wares contain common glauconite (Fabrics feS/9 and feS/10), as opposed to 11% at Widdington Farm (SP 052) to the west of the Avon. In all of these fabrics, the high frequency of glauconite is consistent with a source in the Upper Greensand or deposits of Gault Clay (*cf.* Morris 1995).

Just as the presence of the limestone and oolitic tempered fabrics at Warren Hill seems to denote shared affiliations with communities to the west and south-west, the character of the glauconitic wares finds parallels most closely on sites to the east. At Danebury the majority of sherds made from these fabrics also contain common glauconite (Morris 1995, 241, fabric Q2), while similar wares feature prominently in the assemblages from Lains Farm (Morris 1991, 19–20, fabrics Q4 and Q7), Houghton Down (Brown 2000b, 78, fabric D15), and Old Down Farm (Davies 1981, 92–3, fabrics 1, 2, 5, 9, and 16). A possible source in the Nadder Valley near Salisbury has been suggested for the glauconitic wares on some of the Hampshire sites (Brown 2000a, 83, fabric D15), again pointing to south-western connections.

While this may well have been the case, it is somewhat curious that the percentage of pottery containing higher frequencies of glauconite is greater at Warren Hill than on some of the Wiltshire sites. These wares, including the fabric with ooliths (fabric group 6f), are certainly represented between the fringes of the Avon Valley and the Bourne, but the proportions are low. This seems to lend further support to the local evidence for a rather differently oriented exchange network on Salisbury Plain to the west of the Bourne. It also provides additional confirmation for the likely existence of a territorial boundary broadly congruent with the Bourne ridge (Cunliffe 2000, 178, fig. 4.28). Although some Early Iron Age vessel types may well have been moving widely across the Wessex landscape signalling regional affiliations (*ibid.*, 173), this appears to have been part of a composite system of ceramic procurement which relied heavily on the connections shared by communities at a local level.

To a large extent movements of this type will have been masked by the exchange of ideas, which had clearly led to the production of a regionally coherent repertoire of vessel types and to the development of a shared technology. The dominance of sandy fabrics in the Early Iron Age ceramic groups from Salisbury Plain is echoed on sites to the east in Hampshire, occurring at Lains Farm (Morris 1991), Danebury (Brown 1984a, 236–7), Houghton Down (Brown 2000b, 78), and Old Down Farm (Davies 1981). Yet these wares and the vessels made from them represent both local and non-local products, while contrasting sources were being favoured by communities in different catchments.

It is notable that many of the fabrics from the more distant sources on Salisbury Plain are fairly coarse, and although some were being used to produce burnished bowls, a wide range of jars and other vessels are also represented. As at Potterne (Morris 2000), the widespread circulation of pottery was by no means restricted to fine wares. However, the apparently complex exchange patterns of the Early Iron Age, seem also to have allowed for the selective movement of specific vessel types from preferred sources. This has been raised as an explanation for the distribution of scratch-cordoned bowls in Wessex (Cunliffe 1984).

Elsewhere limited petrological work has suggested that the majority of scratch-cordoned bowls may be derived from a single production site, exploiting deposits of brickearth somewhere to the north of Salisbury (Cunliffe 2000, 173). One of the scratch-cordoned bowls from Coombe Down (SP 009A, Fig. 5.1, P27) and all of the fragmentary cordoned sherds from this site (SP 009) and a number of the enclosures to the west of the Bourne (SP 052, SP 042A, SP 014B, and SP 023) are made from the same fine, ferruginous sandy ware (fabric group 1a, fabric feS:IA/5), suggesting that they are indeed derived from a single source. However, two of the Coombe Down vessels (SP 009A, Fig. 5.1, P17 and P26) share a contrasting fine sandy ware containing sparse limestone (fabric group 2a, fabric LS:IA/2) pointing to an alternative origin.

Even allowing for more than one source, the range of fabrics used for these bowls is far more restricted than for other vessel types. This apparent uniformity is further reinforced by the repetition of a fairly restricted range of motifs. The zig-zag pattern on the bowls from Coombe Down is a common decorative device, occurring in Wiltshire at Boscombe Down West (Richardson 1951, fig. 8, 31), Lidbury (pers. obs.), and All Cannings Cross (Cunnington 1923, Plate 28.4); and in Hampshire at Lains Farm (Morris 1991, fig. 8, 1), Quarley Hill (Hawkes 1939, fig. 15, 1 and 4), Danebury (Cunliffe 1984, various vessels in figs 6.57, 6.58, and 6.60; Brown 1991, fig. 6.12, 1476, 1506, and 1524), Houghton Down, Stockbridge (Brown 2000b, fig. 6.44, 132), New Buildings, Longstock (Brown 2000c, fig. 4.36, 25, and 33), Nettlebank Copse, Wherwell (Brown 2000d, P261, 17), and Winnall Down near Winchester (Hawkes 1985, fig. 52, 22).

By the mid-5th century BC on Salisbury Plain the sandy and glauconitic sandy wares were becoming increasingly prominent (fabric groups 1d and 1e). All of the proto-saucepan pots (Brown 2000a, form PA1) and transitional jars (Brown 2000a, form JB3.1) from the various settlements are made from these wares. This is also true of the barrel-shaped jars which have a similarly early origin, but were made throughout the Middle Iron Age (Brown 2000a, forms JB4 and JB4.1). Most of this pottery is much softer than in earlier phases, a characteristic possibly related to a new preference for dark brown, dark grey, and black surface finishes that could have been created most predictably by low temperature firings and 'smudging'. This may well have been an instance in which technology was being used not to maximise efficiency, but to achieve a desirable effect at its expense.

In Hampshire a potential source in the Nadder Valley has been suggested for the glauconitic wares, which had been a prominent component of the Early Iron Age assemblages (Brown 2000a, 123). Communities on Salisbury Plain may also have been acquiring a significant proportion of vessels from this established production site, but at a potentially later date. As the Middle Iron Age progressed very little or none of the limestone and oolitic limestone tempered pottery was being brought into the area. The explanation for this change is uncertain especially during a period when the mechanisms for ceramic distribution are so poorly understood. Ultimately the realignment appears to reinforce traditional contrasts in the character of the pottery used by the occupants of neighbouring areas.

None of the sites produced large Middle Iron Age assemblages so that the precise phasing is uncertain, hindering any attempt to chart ceramic change through time. The evidence does indicate that the preference for sandy wares was maintained following the introduction of developed saucepan pots around 310 BC and continued after the emergence of shallow-tooled flint tempered pottery around 250 BC. The character of the Middle Iron Age assemblages on the sites to the west of the Bourne contrasts markedly with the pottery from Hampshire. The dominance of sandy fabrics and in particular of glauconitic wares on other Wiltshire sites has been noted in the past and is regarded as one of the defining characteristics of the 'Yarnbury-Highfield style' (Brown 2000a, 122). The Salisbury Plain assemblages are too incomplete to allow for a

meaningful appraisal of stylistic affiliation, but in other respects the Bourne ridge does appear to mark a watershed between two distributions.

This is illustrated at Warren Hill by the later Middle Iron Age ceramics from the upper horizons of the enclosure ditch. Here approximately 30% of the wares are flint tempered and include burnished vessels with shallow-tooled decoration. This contrasts with the Middle Iron Age assemblages from the sites to the west, where 1–3% of the Middle Iron Age pottery is flint tempered.

As in earlier phases, the character of the ceramics from Warren Hill points to both eastern and western influences. Flint tempered wares emerged in Hampshire during the later part of the Middle Iron Age and were used in the production of 'St. Catherine's Hill-Worthy Down style' pottery (Brown 2000a, 122–3). Once again the evidence is too flimsy to determine stylistic affinities at Warren Hill, although the diagonal lines and dots on one of the decorated sherds (Fig. 5.2, P70) would certainly place it within this Hampshire-based group. Hints of an amalgamation of traits are provided by another of the flint-tempered sherds decorated with infilled arcs (Fig. 5.2, P68) more typical of the 'Yarnbury-Highfield' ceramics. A Wiltshire focus is also indicated by the sandy and glauconitic sandy fabrics from the same contexts, used for undecorated saucepan pots (Fig. 5.2, P65 to P67) and for a similar vessel carrying a series of shallow-tooled arcs (Fig. 5.2, P64).

This mixing of the two 'styles' of pottery is typical of other Middle Iron Age sites in Hampshire, which have produced variable proportions of flint-tempered and glauconitic sandy wares. As at Warren Hill, the sandy fabrics are dominant at Houghton Down, Suddern Farm (Brown 2000a, 123) and Old Down Farm (Davies 1981), but are in the minority at Danebury, Bury Hill, and Nettlebank Copse (Brown 2000a, 123). It has been suggested that this could mark a period when there were closer connections with the Wiltshire region (*ibid.*). While this may have been the case, more recent work on the assemblages from the Salisbury Plain sites to the west of the Bourne provides little evidence of a reciprocal Hampshire influence. If the pottery was being used to define relationships between regional groups it seems to have been a remarkably 'one way street'. It is not inconceivable that the distribution of the 'Wiltshire pottery' reflects the success of a particular production centre, notionally in the Nadder Valley, and the establishment of a widespread network of exchange. Such products may well have been accessible to different regional groups, and will therefore not necessarily provide a direct index of social or political affiliation, particularly if there was little concern at the time with using objects to delineate such relationships.

The dominance of flint-tempered wares from the late 3rd century BC in Hampshire certainly signals a change both in technology and supply. It also highlights the more subtle differences that had existed between the ceramics used by groups on either side of the Bourne ridge since the Early Iron Age. The Salisbury Plain evidence somewhat alters previous interpretations and rather than marking the waning of a Wiltshire influence (Brown 2000a) and a territorial realignment (Cunliffe 2000), this striking change might identify a period when it became crucial to signal regional identity. Under such circumstances the products of particular communities could have been proscribed and various objects including pottery may have been recruited as overt symbols of allegiance.

Late Iron Age and Roman Pottery

by R.H. Seager Smith

Overall 43,643 sherds, weighing 323.498 kg, were recovered. The assemblage was predominantly of Late Iron Age or early Romano-British date although significant quantities of late Roman material were found on the Chisenbury Warren settlement (SP 072) and associated with the corn drier at Beach's Barn (SP 026A and B). The assemblage from Coombe Down (especially trench A) also included small numbers of early to middle Saxon (5th–7th century) sherds.

Condition

By far the majority of sherds were very small pieces with rolled and battered edges and severe surface abrasion, often inadequately washed. Overall, the average sherd weight was just 9 g. This aspect of the assemblage is discussed in more detail below but it should be noted at the outset that the poor condition of the material recovered has had a significant effect on the level of detail attainable in recording, the reliability of the analysis and the conclusions drawn.

History and Methods

During the mid 1990s, Mike Fulford and Frances Raymond recorded virtually all of the surface collection and enclosure excavation assemblages. Material from the key excavations at Coombe Down South (SP 009), Chisenbury Warren (SP 072), and Beach's Barn (SP 026) as well as the surface collection assemblages from Shipton Plantation (SP 007), Snoddington Down (SP 008 and 008A), Bedlam Plantation (SP 030 and 030A), Furze Hill

(SP046 and 046A), and Kimpton Gorse (SP053 and 053A) was recorded by Isobel Wilde.

In addition to fabrics of known source or type (eg, samian, Black Burnished wares, New Forest wares), the assemblage was divided into fabric groups based on predominant inclusion types. In all, 58 fabrics were identified, although four (fabric 9 – flue tile, 11 – tile, 16 – Iron Age loomweight, and 33 – not ceramic) related to non-pottery items and can therefore be ignored. Sixteen fabrics were further subdivided according to the range, size, and frequency of the inclusions, sometimes (eg, fabrics 3 – Late Iron Age/early Roman coarse sandy wares and 17 – Grog-tempered wares) creating as many as 18 or 19 variants. In some instances, these subgroups were used during the initial recording, although in general, the fabrics were quantified according to their main fabric groups.

The original records included the number and weight of sherds by fabric type, identification of the vessel forms, and an indication of the date range of each context. The forms were assigned a project-specific alphanumeric code but those used by Fulford/Raymond and Wilde were entirely different. Fulford and Raymond's codes were based on vessel type (jars, bowls, lids, etc) while Wilde's were fabric-specific and based on, or at least cross-referenced to, published corpora (eg, Fulford 1975a; Young 1977; Swan 1975; Annable 1962; Gillam 1976; Anderson 1979; 1980; Marsh 1978). Details of both systems are contained in the archive. The pottery was initially recorded on paper, but Raymond later transferred this information into an Excel workbook for each site. Summary data based on fabrics was also created but no overall quantification was undertaken and no text, beyond the fabric and vessel form descriptions, was produced before all work on the project was shelved.

In 2004, when Wessex Archaeology became involved with the project, it was apparent that the proliferation of fabric types had hampered the consistent sorting of the assemblage, and had inevitably resulted in numerous fabrics being represented by only tiny numbers of sherds. Inconsistencies in the vessel form recording were also considered to be problematic and, during the intervening years, the original researchers had expressed doubts about some fabric identifications and dating of certain elements of the assemblage. Very little pottery had been separated by fabric during recording, making it difficult to trace individual sherds back to their original records when verification was required. However, given the size and poor condition of the assemblage, it was decided to completely re-examine only the pottery from the key excavations at Coombe Down, Beach's Barn, and Chisenbury Warren to ensure that the most crucial material was correctly recorded. These assemblages were scanned, recording major ware group, a broad indication of the number and type of vessel forms, any unusual sherds or features (such as perforations, residues, or graffiti), and date range. Other elements of the overall assemblage were checked only when directed by additional stratigraphic analysis or where consistent inaccuracies had been noted within the ceramic recording. With the exception of these three sites, then, all the data used in this report are based on the original records made by Fulford, Raymond, and Wilde.

The highly fragmentary, abraded condition of the assemblage rendered precise fabric identifications extremely time-consuming if not impossible, while rims were generally broken above the neck/shoulder junction hampering the recognition of form. To produce a workable recording system, the fabrics identified by Fulford *et al.* were further amalgamated, often into broad generalised groups, hence the gaps in the numerical sequence used in this report. Vessel forms were recorded using descriptive terms (eg, bead or everted rimmed jars, imitation Gallo-Belgic platters, flat-flanged bowls, etc). Where appropriate, terminology from the published corpora (such as Fulford 1975a; Young 1977) was used. All this information was also recorded in Excel workbooks for each site. To ensure compatibility across the project as a whole, copies of the data recorded by Fulford *et al.* were translated into the same abbreviated recording system, the original detail being maintained in the archive.

Nature of the Assemblage

The range and quantity of the various fabrics recovered during all phases of the Salisbury Plain Project are summarised in Table 5.5. For the three key excavations, information is presented by trench; overall summaries only are presented for the material from the smaller interventions and surface collections. Full details can be found in the archive.

Continental imports are scarce. Only samian occurs in any quantity, but at each of the three key excavations it still represents less than 1% of the total number of sherds from the site. The mean sherd weight is well below average, at *c.* 3 g, although most pieces survive in good condition. Although not assigned to particular production centres, visual inspection indicates that while Southern and Central Gaulish fabrics predominate, East Gaulish sherds, including two bead rim bowl fragments from a topsoil context at Chisenbury Warren (context D7), also occur in small numbers. The commonest forms belong to the form 18/31 series of dishes and bowls; others included form 27, 33, and 35 cups, form 30, 37, and 38 bowls, form 45 mortaria, and form

Table 5.5 Roman pottery: overall quantities (no./weight in g.) by fabric and site

		Coombe Down South				*Beach's Barn*			*Chisenbury Warren*				*Smaller*	*Surface*	*Total*
Fabric	*code*	*009A*	*009B*	*009C*	*009D*	*026A*	*026B*	*026D*	*072A*	*072B*	*072C*	*072D*	*excavations*	*collection*	
Imports:															
Samian	38	18/46	12/37	8/6	1/1	2/10	6/6	–	1/1	83/129	28/90	33/139	20/110	62/199	274/774
Misc imports	51	1/5	–	–	–	–	–	–	–	1/1	1/3	–	1/6	2/9	6/24
Dressel 20	55	–	–	–	–	–	–	–	–	1/12	–	–	–	1/80	2/92
New Forest wares:															
Parchment ware	4	16/166	3/16	–	–	7/45	4/15	–	–	6/49	10/82	5/43	2/50	39/259	92/725
Parchment ware mortaria	4A	–	1/15	–	–	–	–	–	–	2/19	1/29	–	–	–	4/63
Colour-coated wares	8	112/809	108/529	1/1	2/5	14/61	36/167	–	5/22	129/617	51/231	9/29	4/63	137/877	608/1411
Red slipped ware mortaria	8A	–	1/8	–	–	–	–	–	–	1/15	–	–	–	–	2/23
New Forest mortaria	20	–	–	–	–	–	–	–	–	–	–	–	–	6/64	6/64
Oxfordshire wares:															
Red/brown slipped wares	18	605/ 2137	247/952	10/61	1/4	20/121	44/148	–	3/7	226/ 1500	62/212	3/37	16/45	560/2803	1797/8027
Red/brown slipped ware mortaria	18A	16/119	11/71	–	–	–	6/82	–	–	10/150	16/187	–	–	36/254	95/863
Parchment ware	23	2/28	3/113	–	–	–		–	–	–	–	–	–	2/4	7145
White ware mortaria	25	10/161	2/51	–	–	–	3/31	–	–	8/91	–	–	2/16	17/228	42/578
White-slipped red wares	32	–	–	–	–	–	1/3	–	–	–	–	–	–	1/5	2/8
Coarsewares:															
Savernake type wares	1	1215/ 13521	495/6496	108/ 1047	257/ 5516	68/692	124/ 3305	6/257	111/ 1305	1605/ 19,423	1701/ 25,838	930/ 14119	490/4206	4853/ 47,888	11,963/ 143,613
South-east Dorset BB1	2	473/ 3672	565/3384	13/66	17/93	77/359	133/ 1251	–	55/314	919/ 5856	506/ 3108	172/926	115/455	238/1374	3283/ 20,858
Local LIA/ERB sandy wares	3	9/147	–	–	10/57	–	–	–	2/4	2/11	–	3/29	59/301	1349/7419	1434/7968
Sandy coarsewares	5	2510/ 14998	1858/ 9666	123/ 616	116/821	343/ 1457	670/ 3564	8/33	207/ 1037	5938/ 33015	1766/ 10331	1119/ 6100	1069/5622	5785/35448	21,512/ 122,708
Flint-gritted wares	13	48/668	–	6/29	34/1188	–	–	–	–	41/343	84/973	3/24	3/18	192/1304	411/4547
Shell-tempered wares	19	19/386	–	–	–	–	–	–	–	–	–	–	–		19/386
Oxidised wares	40	89/498	45/141	–	–	–	6/14	2/15	12/32	246/885	148/504	98/512	144/786	1229/4785	2019/8167
Sand + limestone tempered wares	47	–		–	–	–	–	–	–	–	–	–	3/9	1/7	4/16
Other fabrics and later wares:															
Lead-glazed wares	21	–	3/8	–	–	–	–	–	–	5/7	1/2	5/28	–	8/26	22/71
Unassigned mortaria	54	–	–	–	–	–	–	–	–	–	–	–	–	1/10	1/10
Briquettage	-	6/19	–	–	–	–	–	–	–	5/11	1/5	–	–	–	12/35
Saxon organic tempered wares	26	17/203	–	–	–	–	–	–	–	1/5	–	–	4/42	1/4	23/254
Medieval coarse sandy wares	-		–	–	–	–	–	–	–	–	–	3/65	–	–	3/65
Totals		5166/ 37,583	3354/ 21,487	269/ 1826	438/ 7685	531/ 2745	1033/ 8586	16/ 305	396/ 2722	9229/ 62,139	4376/ 41,595	2383/ 22,051	1932/ 11,729	14,520/ 103,045	43,643/ 323,498

46/Curle 15 vessels. Post-firing perforations, probably representing rivet-repair holes, were noted in three sherds from Chisenbury Warren and one from Coombe Down, indicating that samian was sufficiently highly prized to be considered worth repairing.

Other imported tablewares are confined to a mere handful of sherds. One piece from a Pompeian Red Ware platter (Fig. 5.3, P1), probably from Flanders (Peacock 1977, 155–6, fabric 7) was found in the tertiary silts (context 40) of pit C39 at Chisenbury Warren. Two rims from small, bag-shaped beakers in dark brown colour-coated fabrics from the Argonne region of northern France were found in the topsoil at Coombe Down (SP 009, context A2) and at SP 042 (Fig. 5.3, P2 and P3). Single Central Gaulish black slipped ware sherds, dating from *c.* AD 150 into the 3rd century, were found in pit B24 at Chisenbury Warren (context B36) and at Kimpton Farm (SP 056) in the Eastern Sample Area, while an unsourced imported sherd was found at Littlecott (SP 82A). The only other imported wares are two pieces of amphora, both from the globular, Southern Spanish type (Dressel 20) used to carry olive oil. One was from the topsoil in trench B at Chisenbury Warren, the other from Enford Farm (SP 143).

With the exception of the New Forest and Oxfordshire wares discussed below, the range of British finewares is similarly limited. Part of the reason for this may be the poor condition of the assemblage – without their defining surface treatments, many of the early Roman finewares, such as mica-dusted wares and north Wiltshire colour-coated wares, could have been subsumed into the 'catch-all' oxidised ware group. Indeed, one thin-walled, brown colour-coated sherd (from the topsoil at Chisenbury Warren, SP 072 context C4) has highlighted the presence of north Wiltshire colour-coated wares among this fabric group. Other thin-walled sherds, predominantly from beaker forms such as the native copies of butt beakers from a colluvial deposit at Chisenbury Warren (context C13) and the topsoil at Coombe Down South (SP 009) (Fig. 5.3, P4 and P5), present in this fabric group may also represent 'fine' tablewares. Otherwise, early finewares are confined to a small number of local lead-glazed wares from Coombe Down South (009B) and Chisenbury Warren (072B-D). These vary from dull olive green to orange in colour; recognisable forms include a conical beaker (Fig. 5.3, P6) and bead rim hemispherical bowls, sometimes decorated with combed wavy lines or incised parallel, diagonal lines beneath the glaze. Lead-glazed ware body sherds were also found during surface collection at Littlecott (SP 082), Upavon Hill (SP 106B, 107C and E), and Enford Farm (SP116 and 143A).

Table 5.6 Proportions of Oxfordshire and New Forest products

Site	*Total no. sherds*	*Oxfordshire products*		*New Forest products*	
		No.	%	No.	%
Coombe Down (SP 009)	9227	907	10	244	3
Beach's Barn (SP 026)	1580	74	5	61	4
Chisenbury Warren (SP 072)	16,384	328	2	214	1
Smaller excavations	1932	18	1	6	<0.5
Surface collection	14,520	616	4	182	1

From around the middle of the 3rd century, the New Forest and Oxfordshire industries began to supply pottery to the residents of the Salisbury Plain area. Together, tablewares and mortaria from these two centres account for 7% of the total number of sherds, a figure broadly comparable with the overall quantities from other sites in the region (eg, Millard 1996, 28, table 1; Seager Smith in prep.; Swan 1971, 104, table 1; Mepham 1993, 28, table 2). In contrast to the situation on those sites, Oxfordshire wares were more common and occurred in a wider range of fabrics than the New Forest. This was especially apparent at Coombe Down South (SP 009) and among the surface collection material where, when expressed as a percentage of the total number of sherds from each site, the Oxfordshire products were much more common than those from the New Forest, while at Beach's Barn (SP 026), Chisenbury Warren (SP 072) and the smaller excavations the proportions were more equal (Table 5.6).

However, the pattern of supply from the two industries, reflecting the strengths of each, remained consistent. The majority of red-slipped ware bowls are from Oxfordshire, being of superior quality to those produced in the New Forest, while flagon, jug, and beaker forms made in the hard, durable New Forest colour-coated ware were chosen in preference to softer, more easily abraded Oxfordshire versions. New Forest indented beakers are especially common (one complete example was found at Coombe Down South, Fig. 5.3, P7) while a range of other predominantly 4th century beaker, jar, flagon, and jug forms have also been noted (Fulford 1975a, types 2, 17, 18, 22, 30, and 57). The handful of red-slipped ware sherds include three bead rim bowl fragments, one with stamped decoration indicative of a 4th century date, as well as an abraded rim from an internally flanged bowl (Fig. 5.3, P8) from the tertiary fills of pit C39 at Chisenbury Warren (SP 072). The Oxfordshire colour-coated forms include flagon, jar, and beaker forms (Young 1977, types C3, 16, 18, 22, and 28) but only in very small quantities. Bowls,

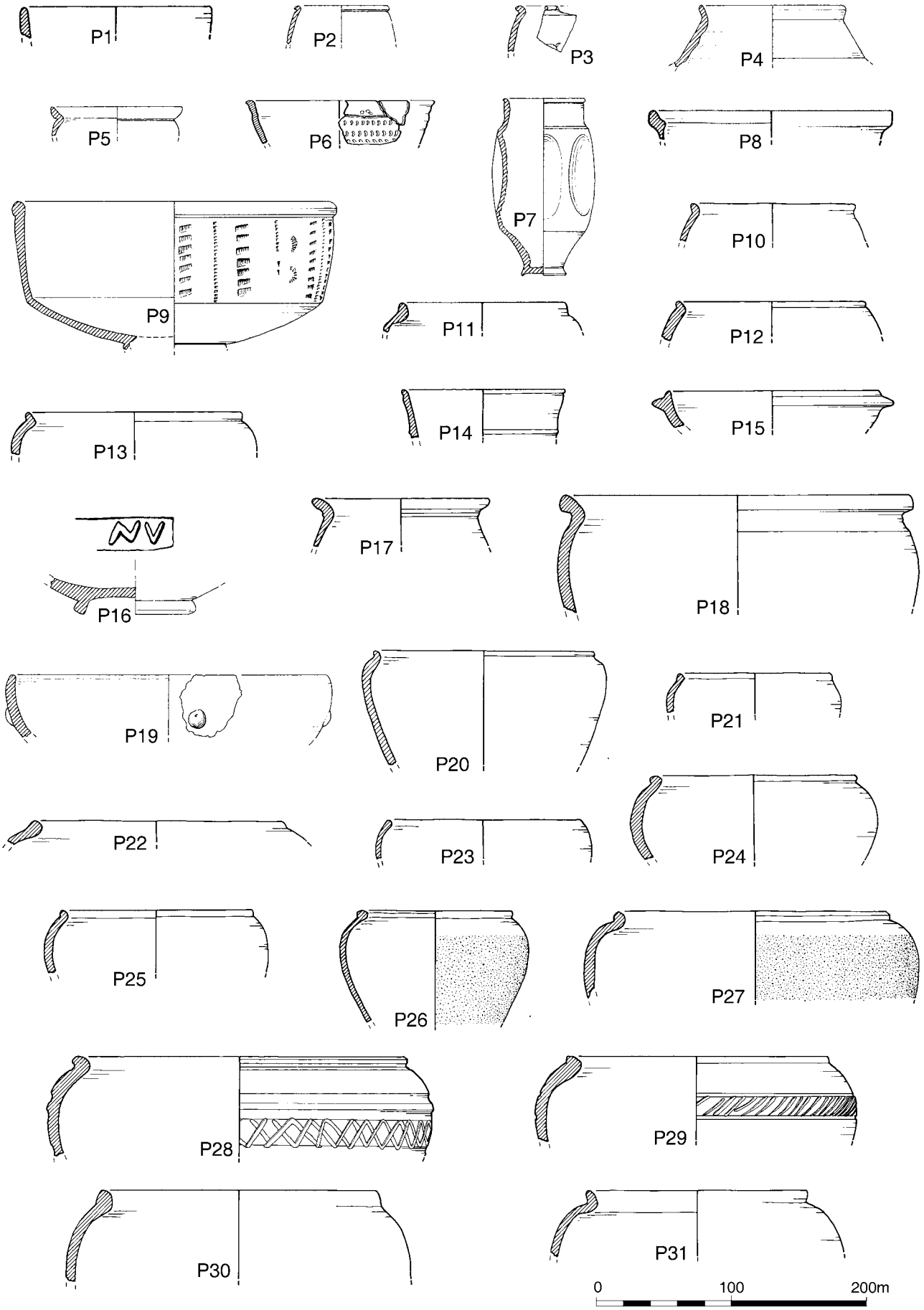

Figure 5.3 Roman pottery

especially the flanged form copying samian form 38 (*ibid.*, type C51) are far more numerous and although mostly made throughout the life of the industry (*ibid.*, types C45, C47, and C55), include three exclusively 4th century forms (types C64, C75, and C83). One of these vessels, from a variety of contexts on and overlying building platform B12 at Chisenbury Warren, has unusual impressed decoration in the form of vertical lines of comb impressions with short, horizontal rows between them (Fig. 5.3, P9).

New Forest mortaria are only represented by body sherds while the Oxfordshire types are relatively restricted too. The white wares comprise vessels with upstanding rims and closed, hooked flanges (Young 1977, type M18) or short, squat flanges (type M22), while examples of both main red colour-coated ware forms (types C97 and C100) are present. Indeed, with the exception of the two samian mortaria sherds from the topsoil at Coombe Down South (SP 009B) and one unprovenanced sherd found at Enford Farm (SP 116), the only mortaria in this assemblage are from these two industries.

Unsurprisingly, coarse, utilitarian kitchen wares form the bulk of the assemblage and sandy fabrics are numerically dominant amongst this group. These include a variety of unprovenanced but probably local, handmade, coarse sandy wares (fabric 3). These represent the continuation of the Early and Middle Iron Age ceramic tradition of the area but, from the three key excavations at least, most were residual. Among the far larger sandy grey ware group (fabric 5), fabrics vary from comparatively soft, fine, slightly micaceous wares to coarse-grained, dark brownish-grey wares, and much crisper, harder, fine-grained blue-grey fabrics. Almost all were wheel-made but clearly derive from a number of different sources. As the largest and closest of the known Roman pottery industries in the region, the New Forest kilns (Fulford 1975a), are likely to have been the major suppliers during the later 3rd and 4th centuries. Other potential contributors include the early 2nd–mid-4th century kilns to the west of Swindon (Anderson 1979) while the presence of probable glauconite in some of the sherds suggests sources in the Upper Greensand areas in the north and west of the county. Here, kilns are known at Westbury (Rodgers and Rodham 1991, 5) and Chapmanslade, north-west of Warminster (M.J. Heaton, pers. comm.) but others may await discovery. Alice Holt/Farnham products (Lyne and Jefferies 1979) and Oxfordshire reduced wares may also be present, although in general the Oxfordshire vessels were not transported far from the kilns (Young 1977, 208).

The sandy grey-ware vessel forms cover the whole Romano-British period. Early forms dated to around the Conquest or shortly after include bead rim and 'Belgic' style necked, cordoned jars, continuing the native, Iron Age ceramic tradition of the area, together with smaller quantities of platters influenced by Gallo-Belgic forms, butt-beakers and bowls (Fig. 5.3, P10–18). These include a stamped footring base sherd, probably from an imitation Gallo-Belgic platter form in a fine, slightly micaceous fabric, from the lynchet excavations at Chisenbury Warren (SP 068) (Fig. 5.3, 16). From the 2nd century onwards, jar forms predominate, a huge variety of wide and narrow mouthed types with upright, everted, flared and hooked rims all being recognised. Large, thick-walled storage jars are mostly represented by body sherds alone although this form occurs more commonly in the grog-tempered Savernake-type wares. Other forms comprise the full range of flanged, 'casserole'-type, straight-sided bowls and dishes, in addition to the shallow, circular and oval, plain-rimmed dish forms as well as numerous less common types, such as beakers, jugs, flagons, lids, and strainers in coarse- and fine-grained fabrics. Most of these forms find parallels within the repertoire of the New Forest industry but were made at other centres too so that only the more distinctive types, (eg, Fulford 1975a, 92, types 7 and 8) can be positively attributed to this source.

A far more restricted range of forms is present amongst the miscellaneous oxidised wares. This group includes all the white, pink, buff, orange, and red fabrics from a variety of sources, the majority containing variable quantities of sand. Most were used to serve food or liquids, providing a range of medium quality wares between the coarse food preparation and storage vessels used in the kitchen and the fine tablewares. Although necked and everted rim jars were noted amongst this group, most derive from flagon (cup-mouth and ring-necked forms), bowl (bead rim, imitation samian form 38 and round-bodied forms), or plain rimmed dish forms. As noted above, a small number of thin-walled beaker sherds may derive from North Wiltshire colour-coated ware forms, which can be dated to *c.* AD 125–140/150 (Anderson 1979).

The predominantly grog tempered Savernake-type wares account for approximately 27% of the assemblage overall and clearly provided competition for the other local coarseware production centres well into the 2nd century. Thereafter, these wares occur residually although it is possible that a small number of forms, most especially the storage jars, continued to be made into the 3rd century (Hopkins 1999) and possibly even beyond. A range of handmade, grog tempered vessels, including storage jars and smaller, thin-walled bowls, dishes, jars, and lids are known from late Romano-British contexts at the Downton villa (Rahtz 1963, figs 17 and 18, 9, 10, 21, 28, 38, 52, and 53), Durrington Walls (Swan 1971, figs 22–5, R4, 5, 13, 16, 25, 42, 51, 59, 67, 81, 95, and 101), and

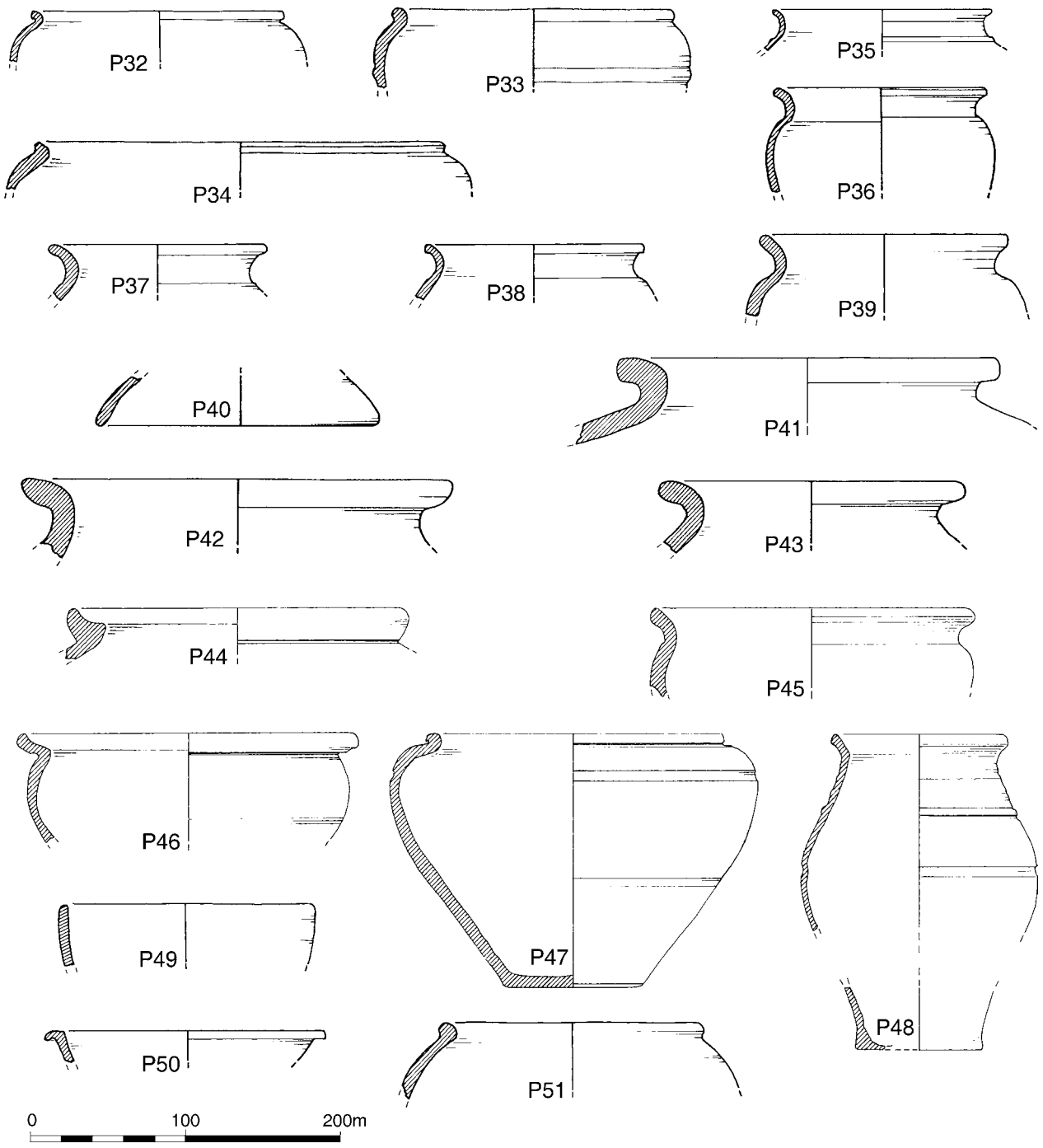

Figure 5.4 Roman pottery

Boscombe Down (Seager Smith in prep.). These vessels continue in the tradition of the Savernake potters, although at present there is no evidence to suggest where they were actually made. They also compare with the grog-tempered wares of Hampshire (HAMGT). One of these vessels, a shallow, plain rimmed dish with curved walls decorated with applied, circular bosses from a soil layer at Chisenbury Warren (SP 072 context B44) (Fig. 5.3, P19) compares with Portchester type 114 from the mid-4th century (Fulford 1975b).

However, the bulk of the Savernake-type wares are of 1st or 2nd century date. While bead rim jars predominate (Fig. 5.3, P20–31 and Fig. 5.4, P32–34), an extensive range of other types, including imitation Gallo-Belgic platters/dishes, carinated bowls/dishes, butt beakers, necked and cordoned jars (Fig. 5.4, P35–9), lids (Fig. 5.4, P40), and various larger jar forms (Fig. 5.4, P41–43) with upright, everted, beaded, and rolled rims, have also been recognised. Other, more unusual forms include large jars with lid-seated rims from the topsoil in Trench B at Coombe

Down South (SP 009), two round-shouldered bowls with out-turned cupped or lid-seated rims from pit C53 at Chisenbury Warren (SP 072) and a small, mortaria-like beaded and flanged bowl from pit D10 at this site (Fig. 5.4, P44–46). Also of particular interest for their degree of completeness in an otherwise highly fragmentary assemblage, are sherds from a more-or-less complete bead rim jar (Fig. 5.4, P47) and a butt beaker (Fig. 5.4, P48) found in the upper fill and layers above a shallow gully (C43) at Chisenbury Warren (SP 072).

Overall, south-east Dorset Black Burnished wares accounts for *c.* 7% of all the sherds recovered. However, this fabric is not equally represented in all stages of the project, forming less than 2% of the sherds found during surface collection, 6% from the other excavations and 10%, 12%, and 13% from Chisenbury Warren (SP 072), Coombe Down South (SP 009), and Beach's Barn (SP 026) respectively. The quantities from these three sites compares well with others in the area (Millard 1996; Mepham 1993; Seager Smith 1996; in prep.), the paucity of BB1 elsewhere being largely the result of difficulties in distinguishing between the various sandy fabrics of small, very abraded, and often rather dirty sherds. The vessel forms are among the most characteristic and widely distributed products of this industry. Later 3rd–4th century types (everted rim jars, handled jars, shallow, plain rimmed dishes, and dropped flange bowls/dishes; Seager Smith and Davies 1993, types 3, 9, 20, 21, and 25) predominate, strongly suggesting that BB1 became increasingly important during this period (Fig. 5.4, P49). Earlier forms included jars with upright or slightly everted and beaded rims, beakers, flat-flanged bowls/dishes, and lids (*ibid.*, types 1, 2, 7, 8, 10, 22, and 26) but these were present in far smaller numbers (Fig. 5.4, P50).

The remaining coarseware fabrics never represent more than very minor components of the assemblage. The flint tempered wares, probably of local origin, are of Late Iron Age/early Romano-British date, and continued the native ceramic tradition of the area. Vessel forms are limited to bead rim and upright-necked jars while a few thick-walled body sherds indicate the use of these fabrics for large storage vessels (Fig. 5.4, P51). The late Roman shell-tempered wares were found only at Coombe Down South (SP 009 contexts A15, A30, and A92) and included two sherds from hooked-rimmed jars. It is possible, however, that the sand and limestone tempered sherds recovered during a watching brief at Beach's Plantation (SP 076) and from two of the smaller interventions on the Chisenbury Warren lynchets (SP 068 and SP 070) and at Weather Hill (SP 139), may also belong to this group. Similar fabrics are known from most 4th century sites in central southern England. Production centres are known at Harrold, Bedfordshire (Swan 1984, fiche 1.207–10), Lakenheath, Suffolk (*ibid.*, fiche 5.606–7), and possibly in Northamptonshire (Sanders 1979, 47). Suitable areas for more local supplies might include the Corallian limestone to the west of Calne and the Cotswold region.

In addition, a small group of briquetage sherds in a smooth, fine-grained, virtually inclusion free fabric were identified at Coombe Down South (SP 009A) and Chisenbury Warren (SP 072B and C). In general, these pieces were associated with sherds of Late Iron Age/early Roman pottery and are therefore likely to belong to a similar period.

Discussion

The poor condition of the Romano-British pottery from the Salisbury Plain sites is worthy of further note. While the inclusion of material from the ploughzone may be expected to lower the average sherd weight, in most cases, even the material found within negative features had not faired significantly better. Table 5.7 shows the number and weight of sherds from the three key excavations that can be assigned to the fills of negative features, their average sherd weight and proportion (as a percentage) of the total number of sherds from each trench.

Overall, the sherds from features represent only 22% of all the sherds from the three key excavations. While low sherd weights might be expected for material that has undergone several cycles of deposition and redeposition, such as that from topsoil, ploughsoil, colluvial deposits, and other soil accumulation layers, the equally low weights for the pottery from excavated features is more unusual. Only at Coombe Down South (SP 009) Trench D was a respectable average sherd weight achieved, the sherds from the other trenches being little or no bigger than those from the project as a whole. It may be relevant here that the majority of the sherds from features were recovered from the uppermost fills and may therefore have been subjected to similar depositional and redepositional processes as the rest of the collection. Similar patterns of artefact distributions being more or less confined to the uppermost fills were also observed at Boscombe Down (Millard 1996, Seager Smith in prep.). It is perhaps likely, then, that domestic debris from the Romano-British settlements on Salisbury Plain was originally deposited in discrete middens that were only spread out after the abandonment of the sites, presumably by agricultural processes. Over time, the continual repetition of such agricultural practices would result in the highly fragmentary assemblages of mixed Romano-British date seen in the top fills of features and overlying soil deposits at these sites.

Table 5.7 Roman pottery from features

Site	*Trench*	*No.*	*Wt (g)*	*Av. wt (g)*	*% total from trench*
Coombe Down South (SP 009)	A	859	5972	7	17
	B	442	3642	8	13
	C	119	740	6	44
	D	236	4972	21	54
Beach's Barn (SP 026)	A	0	0	–	–
	B	50	438	9	5
	D	0	0	–	–
Chisenbury Warren (SP 072)	A	153	1180	8	39
	B	2070	16,301	8	22
	C	1062	12,725	12	24
	D	931	8988	10	39
Total		5922	54,958	9	

The range of fabrics and forms recovered was also typical of other Romano-British rural sites in the region (Rahtz 1963; Swan 1971; Davies 1990; Mepham 1993; 1998; 1999; Millard 1996; Seager Smith 1996; in prep.). All these assemblages were dominated by utilitarian 'kitchen' wares, with storage vessels well represented, and there was nothing among the ceramics to suggest that the sites represented anything other than farming communities of relatively low status.

A similar paucity of imported tablewares and amphorae was noted at Overton Down and Ashton Keynes in the north of the county, and at Durrington Walls (Swan 1971), Chilmark (Mepham 1998), Shrewton (Seager Smith 1996), and Boscombe Down (Millard 1996; Seager Smith in prep.) to the south and west. Although chronology may be largely responsible for this (these assemblages were predominantly late Romano-British in date, beyond the currency of most imported fabrics), imports were little better represented at the early Romano-British settlements in the region, (eg, Richardson 1951; Davies 1990; Mepham 1993; 1999). By contrast, the range of finewares from the 'small town' at Wanbrough (Seager Smith 2001, 299) was at least as extensive as that from the larger urban or military centres at Cirencester (Rigby 1982) or Kingsholm (Darling 1985). Whether for functional, economic, or status reasons, imported wares and, in the case of amphorae, the foodstuffs contained within them, seem to have had only limited availability to the inhabitants of the rural communities on Salisbury Plain. Similarly, early Roman mortaria were notable by their absence. During this period, mortaria are often interpreted as indicative of the adoption of Romanised methods of food-preparation and consumption although it is probable too that the distribution networks of these mostly imported types barely reached the more remote, small-scale communities like those on the Plain. Especially during the early Romano-British period, it is highly likely that only a relatively small proportion of the native, rural population was ever in direct contact with a market or an active participant in the Romanised economy at all (Condron 1995, 103).

As at other sites in the region, there is some evidence to suggest, changes in the pottery supply routes, and possibly cultural affinities too, between the early and late Romano-British periods. Although local sources predominated throughout, during the early period, most production centres were to the north of the Plain, in the Savernake Forest and in areas to the north and west of the county with only small amounts of south-east Dorset Black Burnished ware coming from the south. During the later 3rd and 4th centuries, these southern links seem to have been strengthened, with greater quantities of Black Burnished and New Forest wares reaching the area. although the continued supply of north Wiltshire greywares and Oxfordshire wares indicates that the northern contacts were not completely abandoned.

Saxon and Medieval Pottery

by R.H. Seager Smith

Small numbers of fine-grained sand and organic tempered sherds probably of 5th–7th century date, were noted among the assemblage. The majority were found at Coombe Down South (SP 009), in feature A48, midden deposit A15, and the overlying ploughsoil and topsoil deposits (contexts A1 and A3). One of the sherds from feature A48 has rosette stamped decoration but all the others are plain bodies. Single Saxon sherds were also found in the sorted horizon of the topsoil (context B3) at Chisenbury Warren and in one of the lynchets in this area (SP 068), at Tidworth (SP 005), Widdington Farm (SP 052), Weather Hill (SP 142), and at Snoddington Down (060). All these were, however, associated with much larger quantities of Roman pottery and no features or deposits could be assigned a Saxon date.

Three medieval (12th–14th century) cooking pot rims, made in a moderately coarse sandy fabric, were also found in the Ah horizon of the topsoil and among disturbed natural (contexts D7 and D27) at Chisenbury Warren (SP 072).

Fired Clay

by S. J. Allen and R.H. Seager Smith

A total of 250 fragments (2078 g) was recorded (Table 5.8). Relatively few of the pieces could be

Table 5.8 Quantification of fired clay by site and trench

Site	*Code (SP)*	*No.*	*Weight (g)*
Shipton Plantation	007	2	59
	027	2	8
	027A	10	98
Snoddington Down	008	11	77
Coombe Down	009A	68	593
	009C	1	3
	009D	6	20
	014	1	15
	014A	1	2
	014B	101	336
Everleigh	023A	3	4
Beach's Barn	026	1	78
	026B	3	22
Furze Hill	046A	2	15
Warren Hill	049	6	244
Chisenbury Warren	071	13	72
	072B	4	173
	072C	1	61
Sunnyhill Farm	093	1	22
Glebe Barn	095	1	18
Hougoumont Farm	098	1	18
Gore Down	099	1	12
Collingbourne Ducis	101	4	72
Hezleberry Plantation	102B	2	21
Upavon Hill	107D	1	13
Enford Farm	116	1	9
Fyfield Folly	130	1	10
Shoddesden Grange	134	1	3
Total		250	2078

assigned to particular object types although a small number of items associated with textile production, a bead, pieces from several clay discs, and a small crucible fragment were identified. The rest of the assemblage consists of small, featureless fragments probably of structural origin. All the pieces occur in oxidised fabrics containing variable quantities of chalk, grog, sand, organic materials, and crushed flint, either separately or in various combinations.

Items Associated with Textile Production

Corner fragments from two triangular weights were found during surface collection at Shipton Plantation (SP 027A, context 8) and Collingbourne Ducis (SP 101, run Y). Both are relatively thin, flat examples, 36 mm and 31 mm thick respectively. Other possible ceramic loomweight fragments were found during the surface collection at Shipton Plantation (SP 007), in pit 24 (SP 009A) and pit 3 (SP 014B) at Coombe Down North, and in ditch 12 at Warren Hill (SP 049, contexts 23 and 25). All of these are too fragmentary to determine shape.

Two spindle-whorls, both with flat, smoothed surfaces, curved edges and straight-sided perforations were found, in the uppermost fill of working hollow A47 (context A37) at Coombe Down South (SP 009) (Fig. 5.5, 1) and at Shipton Plantation (SP 027A, surface collection). Two joining fragments from an object with curved surfaces, possibly a spindle-whorl, were also found during surface collection at Furze Hill (SP 046A).

Triangular loomweights and spindle-whorls are both found on many sites in southern England, although often fairly sparsely, from the 5th century BC into the Romano-British period.

Bead

A single, roughly spherical clay bead (Fig. 5.5, 2) with a small, off-centre perforation was recovered from pit 3 (context 10) at Coombe Down North (SP 014B). Similar examples come from a Phase 3 deposit at Gussage All Saints (Wainwright 1979, 102, no. 4008), Glastonbury Lake Village (Gray 1917, 559), and at Danebury (Poole 1984a, fig. 7.44, 7.17), suggesting a Middle–Late Iron Age date for this object.

Discs

Fragments from eight fired clay 'discs', in oxidised orange-brown fabrics, coarsely tempered with crushed flint, chalk, or grog, were recovered (see also p. 140). They vary from *c.* 100 to 180 mm in diameter and 12–21 mm in thickness. They were recovered from Coombe Down South (SP 009A topsoil and SP 014 surface collection) and Chisenbury Warren (SP 072B, topsoil, building platform 12, midden deposit 45, ploughsoil 47, and SP 072C, buried soil 45).

Similar objects have been recorded from other Romano-British rural settlements in Wiltshire (Coe *et al.* 1991; Mepham 1993, fig. 13, 2 and 3; Seager Smith 1996, 58; Wessex Archaeology in prep.). Examples are also known from Oxfordshire (Miles 1978 fig. 57, 31; Sanders 1979, fig. 28, 124–7; Wessex Archaeology 1993), Gloucestershire, and Cambridgeshire (Perrin 1999). In every case the discs were associated with late Roman pottery, although at Figheldean, the deposits also contained residual Late Iron Age sherds (Mepham 1993, 34). Suggested functions include use as lids of cheese presses (Miles 1978, 78) or storage jars (Lambrick and Robinson 1979, fig. 28,124–7), as 'kiln furniture' in domestic ovens or hearths, 'hot plates' for keeping food warm at table (Perrin 1999, 124), and even bed-warmers. Similar items have also been found associated with

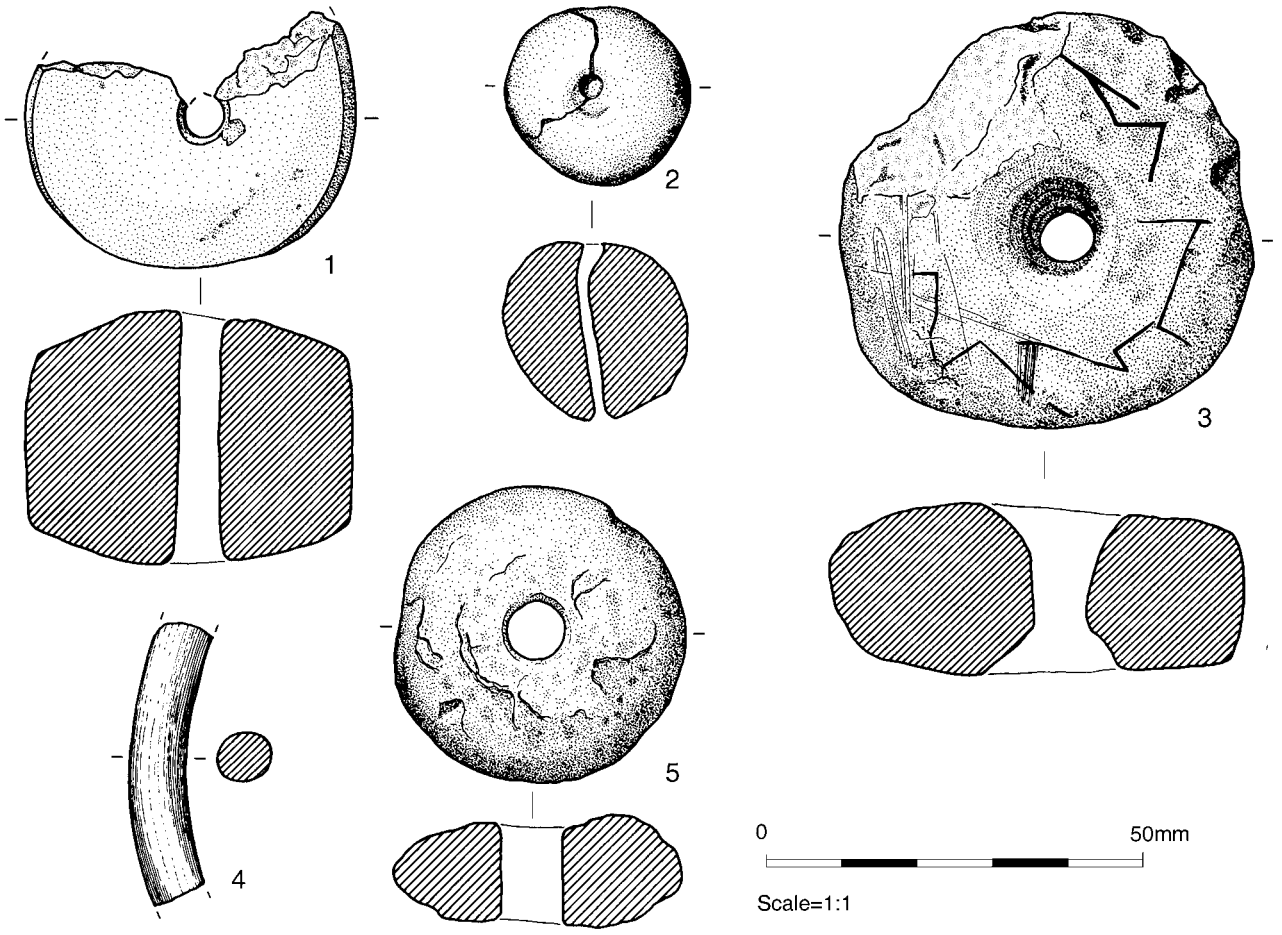

Figure 5.5 Fired clay (1) and chalk (3) spindle-whorls from Coombe Down South (SP 009); fired clay bead (2) from Coombe Down North (SP 14B); shale bracelet (4) and spindle-whorl (5) from Chisenbury Warren (SP 072)

pottery kilns (Hopkins 1999, pl. 3; Perrin 1999, fig. 74, 503, 504) although there is no evidence to suggest ceramic production at either Salisbury Plain site.

Crucible

A small, highly vitrified fragment of a ceramic vessel, probably a crucible, was recorded from the topsoil at Coombe Down (SP 009D) and is probably associated with the small-scale metalworking of late Romano-British date, evidenced by quantities of iron slag, identified in this vicinity. One other fired clay fragment from pit A24 on this site had a vitrified surface and may be from the furnace lining.

Metalwork

by S.J. Allen, George Boon†, Rachel Every, David Richards†, and R.H. Seager Smith

The metalwork assemblage collected during field-walking, test pitting, and excavations comprises 870 iron and 67 copper alloy objects (and a single lead waste fragment not discussed further). Part of the assemblage has been X-radiographed.

Copper Alloy Objects

The copper alloy assemblage includes 37 coins, 3 brooches, 1 awl, 1 earring, 1 fitting, 1 needle, 5 rings, 1 strap-end, a stud, a dish, and other fragments. Most of the objects were recovered from Coombe Down South (SP 009) and Chisenbury Warren (SP 072), with smaller numbers from Beach's Barn (SP 026).

Coins

All but three of the coins were recovered from Coombe Down South (SP 009) Trench A, Chisenbury Warren (SP 072), and Beach's Barn (SP 026). They are listed in Table 5.9.

Copper alloy vessel

A complete copper alloy dish, surviving in excellent condition, was found in the top of the midden deposit (A15) in Trench A at Coombe Down South (SP 009) (Fig. 5.6). The vessel has a plain, out-turned rim,

Table 5.9 Coins

Obj. no.	*Context*	*Description*	*Diam. (mm)*	*Date (approx.)*	*Condition*
Coombe Down South (SP 009)					
A1	A1	Gallienus DIANAE CONS AVG, -//XI Rome, RIC 181/Cu.1401		*c.* 267–8	Trace of wear?
A4	A7	Irregular radiate, blundered types (?'Fides Militum')	13	270s–early 280s	See Note 1
A5	A7	Irregular radiate, uncertain types	13		See Note 1
A6	A7	Irregular radiate, ?Pax Aug V* of Victorinus	12		See Note 1
A9	A7	Irregular radiate, blundered types (?Virtus)	13		Slightly worn?
A20	A42	Irregular radiate, blundered types (?Spes or Victoria)	14		
A35	A14	Irregular radiate, bundered types (corroded)	13		
A36	A14	Irregular raditae, 'Victorinus'/sacrificial implements	12		
?	A4	Constans FEL TEMP REPARATIO, -//TRS, Trier, RIC VIII, 234		348–50	Unworn
A14	A15	Gratian GLORIA NOVI SEACVLI -//TCON, Arles, LRBC ii, 529		367–75	Corr., slight wear?
A11	A17	Magnus Maximus SPES ROMANORVM -//SMTR, Trier, LRBC ii, 156		387–8	See Note 2
A13	A30	Arcadius VICTOIA AVGGG, mint uncertain		388–402	See Note 2
A10	A17	Honorius VICTORIA AVGGG, mint uncertain		395–402	See Note 2
Beach's Barn (SP 026)					
B1	B2	Constantine I PROVIDENTIAE AVGG -//TRP-, Trier, RIC VII, 475		*c.* 326	Corr., worn?
A2	A2	Constans/Cs II GLORIA EXERCITVS, 1 std. -//TRP, Trier, RIC VII, 592-3		335–7	Slight wear?
A1	A2	Constans VICTORIAEDDAVGGQNN, leaf//[...], Trier, RIC VIII, 185		*c.* 342–8	Unworn?
B2	B4	Valens SECRITAS REPVBLICAE OF III//CON, Arles, LRBC ii, 489		364–7	Unworn?
B3	B4	Gratian GLORIA NOVI SAECVLI -//SCON, Arles, LRBC ii, 529		367–75	Corr.
Chisenbury Warren (SP 071)					
B4	B23	Irregular radiate, 'Tetricu I'/uncertain rev. type	14		
C6	C14	Irregular radiate, blundered types	15		Worn?
B3	B22	Constantine II GLORIA EXERCITVS, 2 std. -//TRS*, Trier, RIC VII, 545		330–5	Slight wear?
B11	B44	Irregular Urbs Roma/wolf and twins	14	After 330	Some wear?
B10	B44	Irregular Gloria Execitus, 1 std.	12	After 335	Unworn
B15a	B44	Irregular Gloria Exercitus, 1 std., M on standard	13	After 240	Unworn
B16	B44	Theodora, commemorative issue, -//[...], Trier, as RIC VIII, 48		337–40	Slight wear
B19	B97	Helena, commemorative issue, -//TRS, Trier, RIC VIII, 63		337–40	Unworn
B2	B2	Constans VICTORIAEDDAVGGQNN, branch//TRS, Trier, RIC VIII, 210		*c.* 342–8	Unworn
B8	B31	Irregular, Two victories type, Magnentius, //'TRP'	18	*c.* 351–3	Unworn?
B13	B45	Irregular Fel temp, fallen horseman type	15	350s–60s	Unworn
B15b	B44	Irregular Fel temp, f.h. type, minim,	11	350s–60s	Unworn?
B7	B31	Valentinian I GLORIA ROMANORVM OF II// LVGS, Lyons, LRBC ii, 338		367–75	Very slight wear
B1	B2	Valentinian I SECVRITAS REIPVBLICAE OF III//CON[ ],Arles, LRBC ii, cf. 481, 521		364–75	Worn
B9	B31	Valens GLORIA ROMANORVM OF I //LVGP[ ], Lyon, LRBC ii, 300		367–75	Very slight wear
B18	B44	Uncertain, corroded fragments		Late 3rd/4th C.	
Other sites					
Coombe Hill (SP 020)		Counterfeit denarius, cast in a high-tin bronze ('potin') (?) from a denarius of Severus Alexander, RIC 5 AD 222			
Kimpton Farm (SP 056)		Gallienus FORTVNA REDVX, –//- Rome, RIC cf. 193/Cu.1215		*c.* 265–6	Unworn
Beach's Plantation track upgrade (SP 076)		Crispus PRINCIPIA IVVENTVTIS RS// QARL, Arles, RIC VII, 130		*c.* 317	Corr., some wear?

1. Three irregular radiates from SP 009A (context A7) were found in close association with a New Forest indented beaker, and probably came with it.

2. The poor production standard of many late Roman small bronzes, such as those from SP 009, contexts A11, A10, & A13, makes assessment of wear, which might hold significance for the latest loss date on a site, very difficult. None of these coins appears to be significantly worn. Coins A10 and A11 were found together.

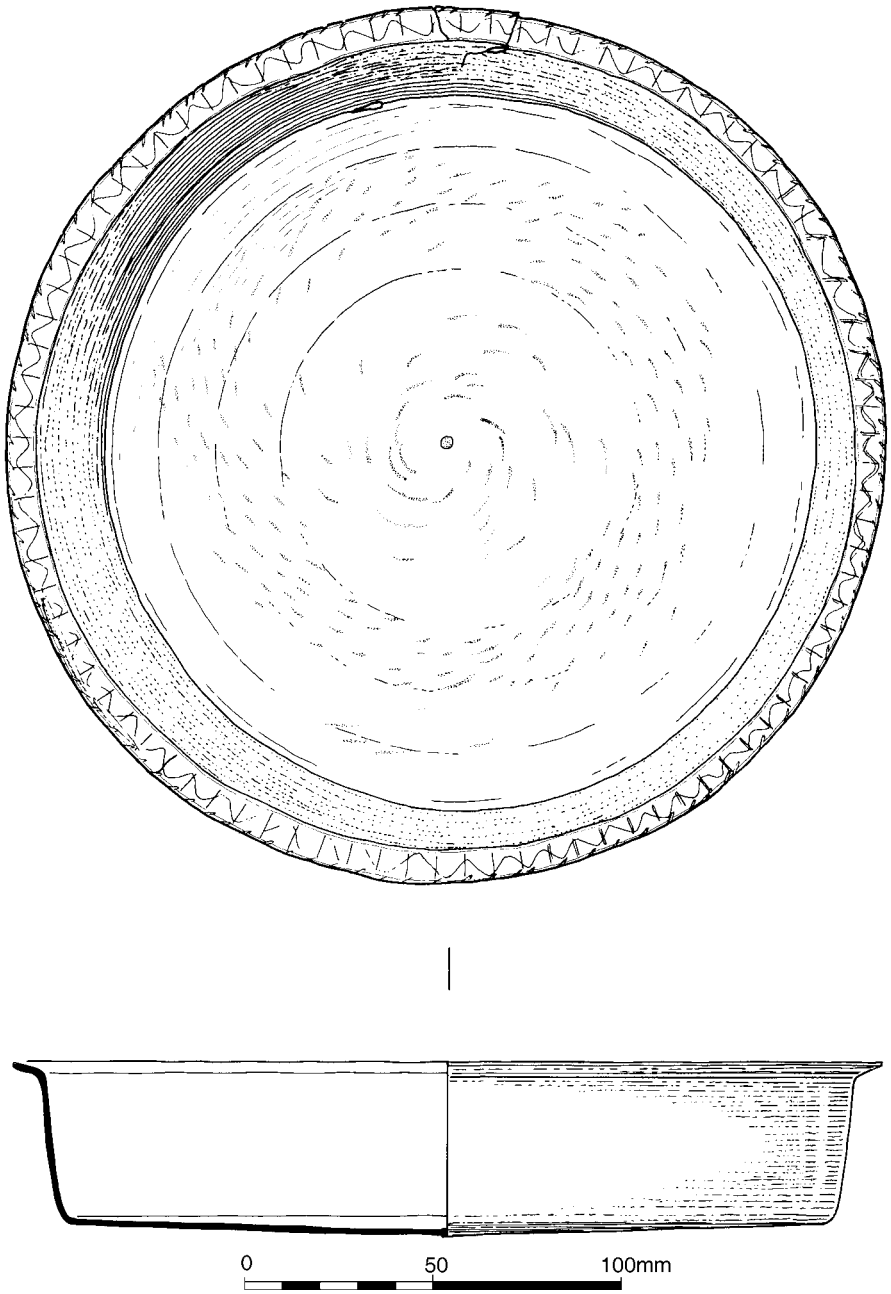

Figure 5.6 The copper alloy dish from Coombe Down South (SP 009)

steep, almost vertical walls, and a slightly convex base with a central metal plug made from a circular rod, 4 mm in diameter. On the inside, the surface of the plug is flat and slightly recessed; externally it has been broken off flush with the outer face and left rough. The dish is 230 mm in diameter and 37 mm high; the rim is decorated with a shallow engraved wavy line and short punched lines around its outer edge. It was probably made by raising sheet metal with a hammer; radiating scraper lines and traces of a spiral beating pattern are apparent on the inside, although the manufacturing marks have mostly been removed by polishing. No metallurgical analysis has been undertaken but the large number of vessels analysed by Den Boesterd and Hoekstra (1965) showed that the majority were of high tin bronze or brass.

Roman copper alloy vessels are rare finds on archaeological sites, their relatively high cost meaning that unwanted, worn-out or damaged ones were simply melted down and recycled. The survival of the Coombe Down vessel in such an 'unprotected' context is truly remarkable, and it is the only item recovered from any of the Salisbury Plain sites indicative of anything more than a rural farming community of relatively low-status. Two comparable vessels are known from a possible funerary context at Sutton Courtenay, Oxfordshire (Miles 1976). One of these (*ibid.*, fig. 2, pl. II, B), also has a central metal

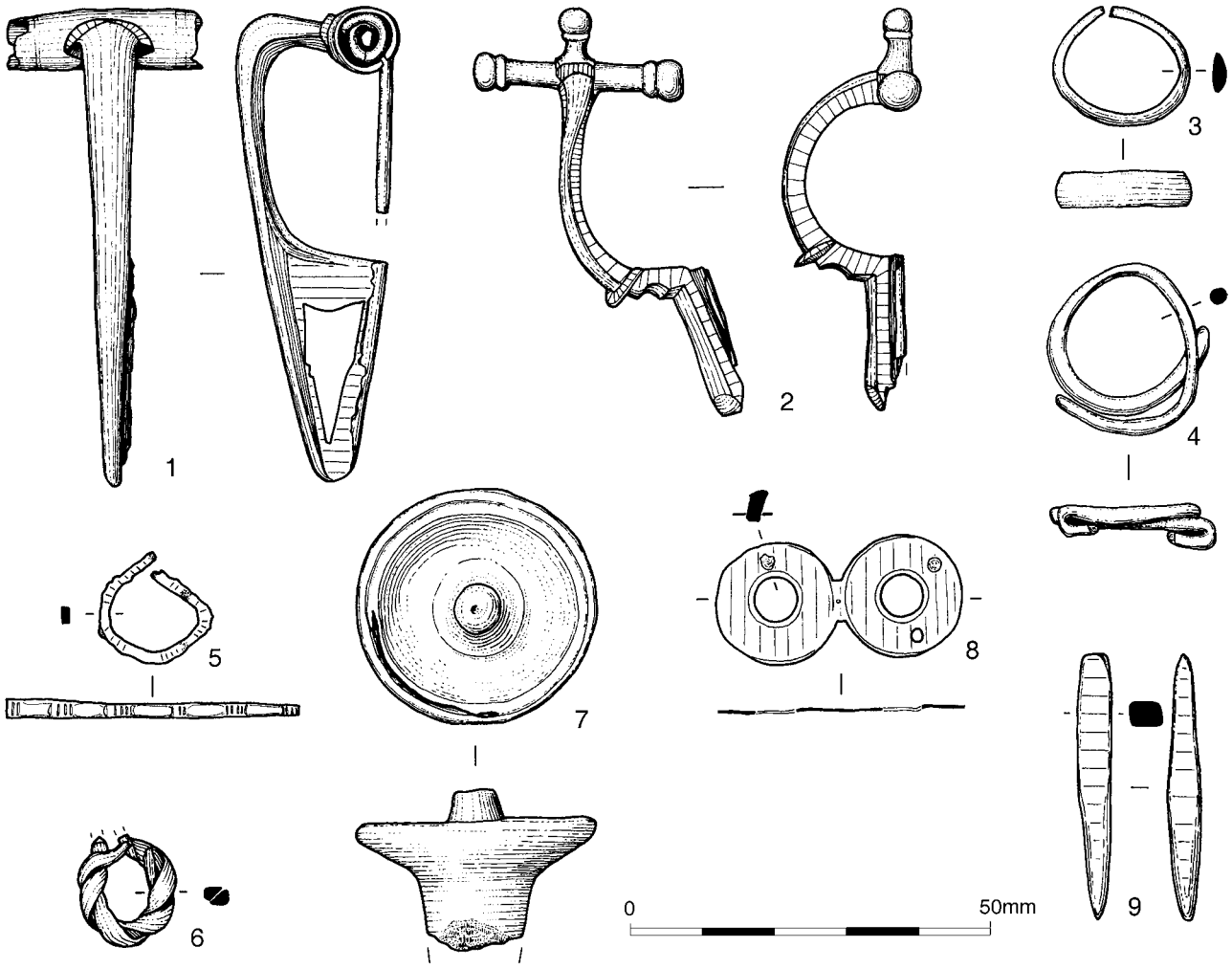

Figure 5.7 Copper alloy objects. Brooches (1–2) from Chisenbury Warren (SP 072); rings from (3) Coombe Down (SP 009), (4) Chisenbury Warren (SP 072), (5) Beach's Barn (SP 026); earring (6) Beach's barn (SP 026); bell-shaped stud (7) from Chisenbury Warren (SP 072); fitting (8) from Combe Down South (SP 009), and awl (9) from Coombe Down North (SP 014B)

plug. These vessels and the Coombe Down example belong to the highly variable *bassin uni* – a bowl with a plain out-turned rim – type of imported Gallo-Roman bronze vessels and their native copies (Kennett 1969, 138, fig. 2, 3, fig. 4, 6 and 7, fig. 5, 5, fig. 12, 8 and 9, fig. 14, 1). In Europe, broadly similar vessels are known from Nijmegen, the 1st–2nd century AD cemetery at Körchow in Mecklenburg (den Boesterd 1956, 57, pl. viii, 194) and in northern France (Roosens 1962, pl. ii, 4, pl. xii, 9).

Most known Romano-British copper alloy vessels are from hoards (often found while metal detecting), funerary contexts, or dredged from rivers. Most therefore lack good archaeological associations that, coupled with the apparent conservatism of design, their durability, relative ease of repair, and consequent long lifespan, means that such vessels are difficult to date, especially in the absence of any recent systematic studies. A 2nd–3rd century date was tentatively suggested for the Sutton Courtenay vessels (Miles 1976, 76), based on pottery found with inhumation burials from the same general vicinity. Considerable quantities of late Roman pottery and a coin of Gratian (AD 376–83) found in the same layer as the Coombe Down dish suggested that it was of late Romano-British date.

Other objects

The assemblage contains a number of items of personal adornment and dress, including two brooches found at Chisenbury Warren (SP 072). One (Fig. 5.7, 1), found unstratified in Trench C, has affinities with Hawkes and Hull Type XIIB, the 'Langton Down' type, dating from the later 1st century BC to mid-1st century AD (Hawkes and Hull 1947, 317–8). There is a close parallel from a Late Iron Age burial at King Harry Lane, Verulamium (Stead and Rigby 1989, 95, no. L2). The other brooch (Fig. 5.7, 2), from the topsoil in the same trench, is of early crossbow type and similar to examples from

South Shields (Allason-Jones and Miket 1984, 100, no. 3.51; 3.52), Vindolanda (Bidwell 1985, 119, no. 9), and Caister-on-Sea (Butcher 1993, 74, no. 5), these being dated to the 3rd century AD or later. A mid-3rd–early 4th century date range is likely.

Two finger rings were identified, a plain one from Coombe Down South (SP 009; Fig. 5.7, 3) and a spiral ring (Fig. 5.7, 4) from layer D61 at Chisenbury Warren (SP 072). It is uncertain whether the thin strip of metal with transverse groove decoration (Guiraud 1989, type 8d) found in a late Romano-British context (B4) at Beach's Barn (SP 026; Fig. 5.7, 5), derives from a third finger ring or an armlet similar to a later 4th century one from Lydney, Gloucestershire (Wheeler and Wheeler 1932, fig. 17, no. 58). A possible earring consisting of two strands of twisted wire (Fig. 5.7, 6) was also found in this context and is comparable with an example from South Shields (Allason-Jones and Miket 1984, 126, fig. 3.219).

The assemblage includes a number of possibly more functional items. A bell-shaped stud or lock-pin (Fig. 5.7, 7) was found in a layer of late Romano-British occupation debris (B44) in Trench B at Chisenbury Warren (SP 072). These items are of 2nd–3rd century date and appear to have been used as fittings and/or feet for wooden caskets and chests (Allason-Jones 1985, 95–105). A decorative fitting (Fig. 5.7, 8), possibly used on leather, was found in an Early Iron Age context (A64) in Trench A at Coombe Down South (SP 009), similar objects having been recovered from Danebury (Jope and Cunliffe, 1984, fig. 7.6, 1.40). An awl (Fig. 5.7, 9), recovered from the upper fill (context 6) of the ditch of the small Iron Age enclosure at Coombe Down North (SP 014B), is similar to examples from Hod Hill (Manning 1985, pl. 16, E18) and Glastonbury Lake Village (Bulleid and Gray 1917, 225). The rest of the assemblage comprises undiagnostic pieces of wire, sheet, and other fragments.

Iron Objects

Of the 870 iron objects recovered, 749 are nails. In general, the assemblage is in a very poor condition, with few diagnostic fragments. However, it is typical of assemblages from other rural sites in the south of England (Richards 1989), containing little high-quality material and with an emphasis on agricultural activity. Such activity is represented by a range of items, such as an ox-shoe from test pit A at Beach's Barn (SP 026) and a bladed weeding tool (or 'spud') (Fig. 5.8, 1) from a layer of late Romano-British occupation debris (B23) on a building platform at Chisenbury Warren (SP 072), similar to late Romano-British examples recovered from Suffolk (Manning 1985, pl. 19, F14). A spiral ferrule (Fig. 5.8, 2) or 'ox goad' from the topsoil at the north end of Chisenbury Warren (SP 071, context D11) is similar to examples from Cranborne Chase, Lydney, Silchester, and Verulamium and, although such items have good Romano-British associations, their currency may extend back into the Iron Age (Manning 1985, 142). Other ferrules, possibly used as collars to bind the ends of handles (Manning 1985, 141), were recovered from topsoil at Chisenbury Warren (SP 072), Trench C, context C6 (Fig. 5.8, 3), and from the upper fill of late Romano-British pit (D10) in Trench D.

Two tools were recovered during surface collection at Enford Farm (SP 119 and SP 117) – a chisel (Fig. 5.8, 4) with early Romano-British parallels from Hod Hill (Manning 1985, 10), and a 'dolly' (Fig. 5.8, 5) that may have been used with a chisel as a tool. A punch (Fig. 5.8, 6) from Chisenbury Warren (SP 072), context 48, was possibly used to work on leather. A small tanged chisel or punch for wood, leather, or metalworking was also found in the tertiary silts of a Middle Iron Age ditch (49) at Chisenbury Field Barn (SP050) and is probably Romano-British. A knife (Manning 1985, type 15) was found in the group of pits (D60, D64, D66) at the south-east end of Trench D at Chisenbury Warren (SP 072 context D25) (Fig. 5.8, 7).

Two Iron Age objects were recovered from Iron Age features in Trench A at Coombe Down South (SP 009) – a rod (Fig. 5.8, 8) from Early Iron Age pit A46 and a spiked hoop from a secondary, Middle Iron Age, fill of ditch A109. A number of structural items were recovered, including hinges, clamps, and a fragmentary key from a post-hole (B24) forming part of a possible late Romano-British timber structure at Chisenbury Warren (SP 072). Two joiner's dogs, used to fasten together pieces of wood or even stone in the Romano-British period (Manning 1985, 131), were recorded (Fig. 5.8, 9 and 10) from an upper fill (7) of the Iron Age enclosure ditch at Widdington Farm (SP 052) and from test pit 3 at Chisenbury Warren (SP 071/3).

A small number of dress or personal items have also been identified from Coombe Down South (SP 009). These include two needles/pins (Fig. 5.8, 11) and a ring, the latter from the late Romano-British midden deposit (A15). Two fibula brooches were recovered from the lynchet colluvium (A3), one of which (Fig. 5.8, 12) is a modified La Tène type 111 (Camulodunum type 111 – Hawkes and Hill 1947, 308). These objects date to the Late Iron Age or early Romano-British period.

A total of 18 cleats has been identified (Fig. 5.8, 13), mainly from Chisenbury Warren (SP 072), but small numbers are also present in the Coombe Down South (SP 009) and Beach's Barn (SP 026) assemblages. These are associated with hobnails and

Table 5.10 Quantification of nails by site and number

Site	*Code*	*Trench/ test pit*	*No.*
Coombe Down South	SP 009	A	172
		B	47
		C	3
		D	4
Beach's Barn	SP 026	2	1
		3	1
		6	1
		A	3
		B	23
	SP 026*		4
Coombe Down North	SP 014B		1
	SP 042A		3
Kimpton Gorse	SP 053A*		1
Chisenbury Warren lynchets	SP 063		2
	SP 065		2
	SP 066		2
	SP 068		3
	SP 069		1
	SP 071		6
Chisenbury Warren	SP 072	A	19
		B	292
		C	75
		D	49
Littlecott	SP 081*		1
Coombe Lane	SP 112*		1
Collingbourne Ducis	SP 101*		1
Upavon Hill	SP 106*		1
	SP 107*		9
Mile Ball	SP 111*		1
Enford Farm	SP 116*		5
	SP 117*		2
	SP 118*		1
	SP 129*		1
	SP 133*		1
Fifield Folly	SP 130*		9
Weather Hill lynchets	SP 142		1
Total			749

* = information from original records only

are thought to come from the soles or heels of boots (Manning 1985, 131). A single cleat measuring over 40 mm (from SP 026A) is possibly from a leather harness or may have been used to fasten wood. Examples of similar objects were recovered from Rushall Down, Wiltshire (*ibid.*, 131). An arrowhead, of medieval or later date, was recovered during surface collection from Polish Field (SP 078).

Nails

A total of 749 nails have been identified (Table 5.10), the majority of which are incomplete. The largest assemblages came from Coombe Down South (SP 009) and Chisenbury Warren (SP 072). They are generally square-shafted and of Romano-British date. The assemblage is remarkably uniform in both size and type with the exception of tacks, studs, and a couple of T-head holdfasts. The assemblage comprises the 'standard' Manning type 1B nails, which vary in length between 60 and 79 mm. They are generally in fair condition, with a moderate number almost free of corrosion. A small number of the larger nails have slight chisel points, a usual feature that also appears on two or three smaller and stouter examples. The presence of identical mould-marks, noted under the heads of some 'mint' specimens, indicates the same heading tool was used in the manufacture of many if not all of these nails. A moderate number of hobnails were also identified.

Slag

by Phil Andrews and D.N. Sim

A total of *c.* 20.9 kg of ironworking slag was recorded, 16.8 kg from excavations and 4.1 kg from fieldwalking (Table 5.11). The very small quantities of material from most of the fieldwalked sites were not examined for this assessment, but the larger quantities from Snoddington Down (SP 008) and Bedlam Plantation (SP 030A) are reported below. The ironworking slag has been subject to visual classification only, and no chemical or other analysis of the material has been undertaken. All of the excavated sites are of Romano-British date with the exception of Coombe Down South (SP 009), which has Early-Middle Iron Age as well as Romano-British features.

Coombe Down South SP 009

Trench A produced a total of 0.533 kg of amorphous iron-smithing slag (from contexts 15, 37, 64, and 79), with a further 0.329 kg represented by two fragments of plano-convex slag basins (contexts 79 and 92). In addition there is 5 g of fuel-ash slag (context 95), not necessarily derived from ironworking. Overall, most of the material (0.607 kg) came from the secondary, Middle Iron Age fill (context 79) of ditch 109, with much of the remainder (0.211 kg) from Romano-British contexts 15 (midden 41) and 92, though this may represent residual Iron Age material. A very small quantity (44g) is recorded from Early Iron Age contexts 37 and 64 (hollow 47). Trench D produced only 4 g of possible smithing slag.

Beach's Barn SP 026

The small assemblage of material comprised 219 g of smithing slag and a fragment of a slag basin weighing

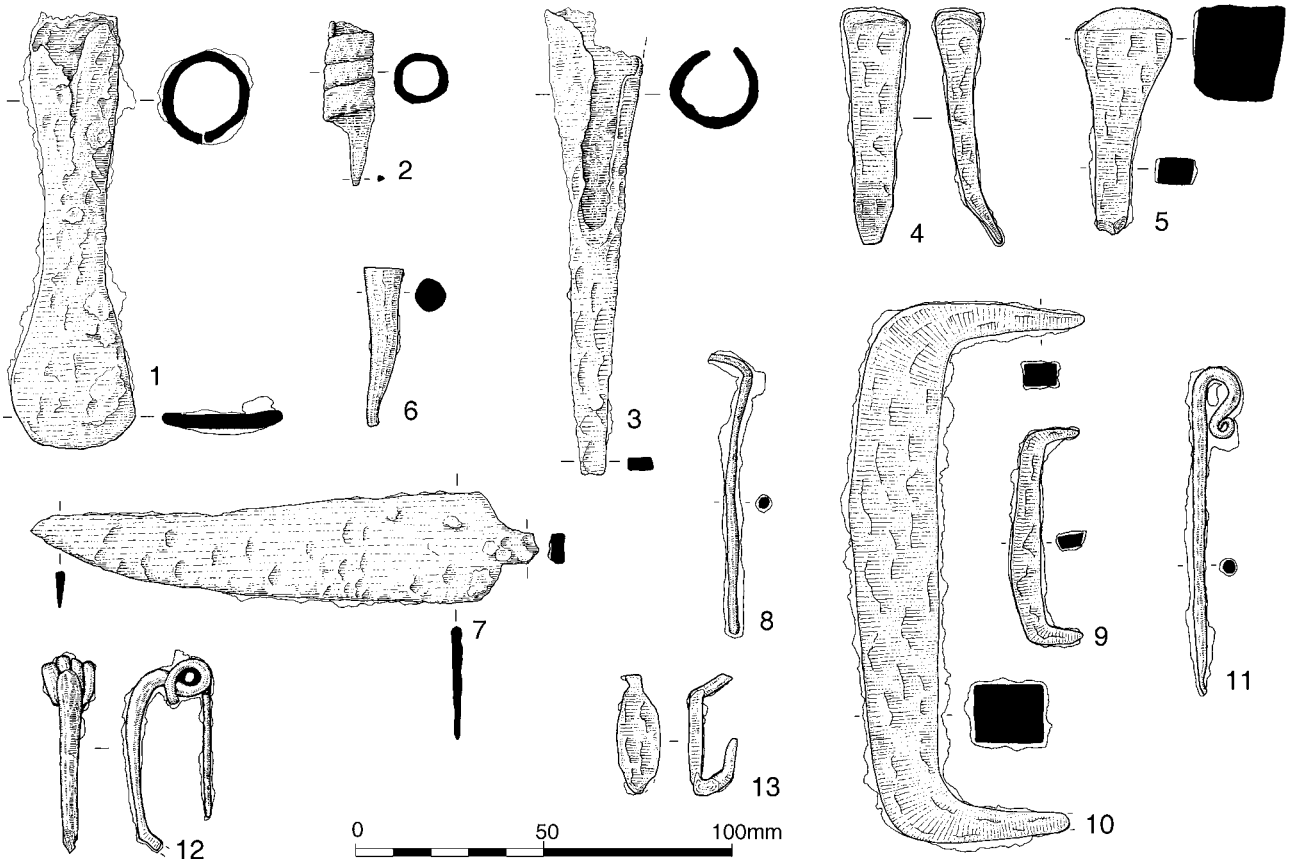

Figure 5.8 Iron objects. 'Spud' (1), spiral ferrule (2), socketed ferrule (3), knife (7), and joiner's dog (10) from Chisenbury Warren (SP 072); chisel (4) and dolly (5) from surface collection at Enford Farm (SP 119, SP 117); punch (6) from the DGLA track; rod (8), pin (11), and fibula brooch (12) from Coombe Down South (SP 009); joiner's dog (9) from Widdington Farm (SP 052), and cleat (13) from Beach's Barn (SP 026)

254 g, 17 g of fuel ash slag, and a small lump of melted glass (6 g).

Chisenbury Warren lynchet excavations and test pits SP 069 and SP 070

These excavations and test pits produced the largest assemblage of ironworking slag of all the Salisbury Plain sites investigated as part of this project, with an overall total of 13.80 kg. The material is undiagnostic and generally comprises small, often broken fragments of 'drip' slag. The largest quantity came from SP 071 (9.42 kg), with notable amounts from SP 071/1 (2.55 kg) and SP 069 (1.08 kg), and lesser quantities from SP 071/3 (679 g) and SP 071/4 (71 g). No certain slag basins were identified amongst this material and none of the debris appears to be of tap slag that would clearly indicate smelting.

David Sim noted (in 1995) that 'Marcasite has been found on the site, and marcasite nodules are a satisfactory source of iron if they have been fully oxidised to limonite. It is possible to make iron from this although it needs low-grade iron ore to be added to it to make a flux. This would suggest that other iron ore would have been brought onto the site. From the other material on the site it is possible that ore was imported either to supplement the marcasite smelting or to be smelted alone.'

Chisenbury Warren SP 072

These trenches produced much less than the test pits, with an overall total of 1.48 kg of probable iron-smithing slag and a fragment of a slag basin weighing 142 g. There is also 5 g of fuel ash slag and 8 g of clinker. Most of the debris came from trench 072B (1.265 kg), with much smaller amounts from 072D (227 g), 072A (75 g), and 072C (70 g).

Fieldwalking Sites: Snoddington Down SP 008 and Bedlam Plantation SP 30A

Approximately 3.35 kg of material was collected from Snoddington Down (including natural concretions weighing 90 g) accounting for some 75% of the

Table 5.11 Quantification of slag by site

Site	*Code*	*Weight (g)*
Shipton Plantation	SP 007	13
Snoddington Down	SP 008	3350
Coombe Down South	SP 009	871
RB midden A41		*85*
EIA hollow A47		*44*
MIA ditch A109		*607*
LRB layer A92		*126*
LRB layer A95		*5*
Weathered natural D2		*4*
Coombe Down	SP 017/018	104
Longstreet Down	SP 019A	22
Coombe Hill	SP 020	92
Beach's Barn	SP 026/026C	479
Bedlam Plantation	SP 030	480
Chisenbury Warren, lynchets, and test pits	SP 069, 071, 071/1/3/4, 072	15,440
Total		20,851

fieldwalked total. The slag is generally very similar to that from Chisenbury (SP 069 and 070), comprising small, often broken fragments of 'drip' slag. Again, no certain slag basins were identified amongst this material, and none of the debris appears to be tap slag that would clearly indicate smelting. A further 0.48 kg of material were collected from Bedlam Plantation, more than half of this (0.26 kg) comprising natural concretions and the remainder undiagnostic slag.

Discussion

Virtually all of the material examined can be assigned to ironworking, probably iron-smithing, although some debris, particularly that from the Chisenbury Warren lynchet excavations and test pits, may derive from iron-smelting. No hearths or furnaces were identified at any of the sites, though the presence of slag is likely to reflect ironworking nearby. The debris from Coombe Down South (SP 009A) is of some interest given the site's relatively early (Early–Middle Iron Age) component. The material from the Chisenbury Warren lynchet excavations and test pits (SP 069/071) may indicate that some iron-smelting as well as iron-smithing were undertaken in the immediate vicinity, at the north end of the Chisenbury Warren settlement (SP 072), during the late Romano-British period though, as noted above, no tap slag certainly indicative of smelting was recovered. If the fragments of possible slag basins are indicative of some iron-smelting, this would have required the importation of iron ore and clay for the furnaces, as well as large amounts of charcoal.

Table 5.12 Quantities of struck flint by site

Site	*Code*	*No.*	*No. tools*
Tidworth lynchets	SP 004/5	182	27
Coombe Down South	SP 009	455	17
Coombe Down North	SP 014	158	10
	SP 042	59	23
Everleigh	SP 023	73	4
Rainbow Bottom	SP 025	92	6
Beach's Barn	SP 026	30	5
Warren Hill	SP 049	294	10
Chisenbury Field Barn	SP 050	43	4
Widdington Farm	SP 052	87	4
Chisenbury Warren	SP 063–75	158	2
Weather Hill	SP 135–042	140	2
Total		1771	114

Worked Flint

by Matt Leivers

Struck flint was recovered from 12 sites, in the quantities given in Table 5.12. As the project was primarily concerned with Iron Age and Romano-British evidence the original methodology did not allow for the recovery of struck flint from fieldwalking. This has had the unfortunate effect of leaving the excavated samples in isolation: it is impossible to estimate to what extent the materials recovered from lynchets, settlement features, and enclosure ditches reflect the densities of background material present in the surrounding areas.

With one exception the technology and typology of the assemblage are largely consistent with an Iron Age date. The exception is a heavily patinated portion of a polished flint axe recovered from context 17 on SP 052. This material represents the lower portion of a midden dated by ceramics to the Middle Iron Age. However, the layer was cut by a grave containing the inhumed remains of a young man aged 14–16 years, and it may be that the axe fragment originated in this grave, since a number of bones probably belonging to this same skeleton were found in the midden deposit. If this is indeed the case, then the axe fragment would represent a curated item – possibly an heirloom or keepsake, or a curio found at some point on Salisbury Plain.

The characteristics of later prehistoric flintworking have been summarised most recently by Humphrey and Young (1999; Young and Humphrey 1999) who identify the following features:

- Raw materials highly localised and possibly very low quality;
- Small assemblage numbers;
- Crude hammers;

Table 5.13 Flint tool types by site

Site	*Code*	*Scraper*	*Notched*	*Core tool*	*Piercer*	*Burin*	*Misc. ret.*	*Total*
Tidworth lynchets	SP 005	3	1	–	–	–	23	27
Coombe Down South	SP 009	2	–	1	2	–	12	17
Coombe Down North	SP 014	2	–	–	–	–	8	10
	SP 042	–	–	1	1	–	21	**23**
Everleigh	SP 023	–	–	–		–	4	4
Rainbow Bottom	SP 025	–	–	–	1	–	5	6
Beach's Barn	SP 026	–	–	–	–	1	4	5
Warren Hill	SP 049	–	–	4	–	–	6	10
Chisenbury Field Barn	SP 050	–	–	1	–	–	3	4
Widdington Farm	SP 052	–	–	1	–	–	3	4
Chisenbury Warren	SP 063–75	1	–	–	–	–	1	2
Weather Hill	SP 135–042	1	–	–	–	–	1	2
Total		9	1	8	4	1	91	114

- Simple irregular cores and squat flakes using direct hard hammer percussion;
- Possible evidence of recycling earlier lithics;
- Unskilled knapping (obtuse-angled, thick, wide platforms; common hinge/step terminations; irregular dorsal scars; common chips and chunks; incipient cones of percussion on core striking platforms);
- A limited range of implement types.

All of these features are present in the Salisbury Plain material. Generally the flint is dark grey with a white cortex. The source of the material is doubtless local: either obtained from the Upper Chalk during the digging of pits and ditches or during cultivation, or from the clay-with-flint deposits. Cortex type and condition suggest that both of these sources were utilised, with a predominance of material from the Upper Chalk. As noted above, it is impossible to estimate total numbers, but the indications are of small assemblages. Technology is in every instance direct, hard hammer percussion, often utilising flint nodules as hammers, and producing crude flakes which were often re-utilised as cores. This re-use of flakes as cores was not limited to material produced by Iron Age knappers: there are some indications of the re-use of earlier material (at SP 014A, SP 025, SP 026A, SP 042A, SP 049, SP 052, SP 071, SP0 73, and SP 136), especially where patina has been removed by subsequent working. An evident lack of skill can be seen in platform breadth, obtuse angles, termination type, core preparation technique (or lack of it), and failed removals.

The majority of the assemblage consists of flakes, fragments, cores, and hammerstones, but there is a restricted range of tool types (Table 5.13).

Miscellaneous retouched pieces are the most numerous, followed by scrapers (as would be expected for an assemblage of this date). The other tools (denticulates, notched pieces, fabricators, piercers, and burins) are types which can occur fortuitously. The limited size of the collection means that only generalised conclusions can be drawn from the assemblage as a whole, and only the SP 009 and SP 049 material is worthy of any further comment.

Coombe Down SP 009

Early and Middle Iron Age

Trench A

Three conjoined Early Iron Age 'working hollows' contained 18 struck flints (Table 5.14). Such a limited quantity of debitage restricts the conclusions that can be drawn about the assemblage, but it is uniformly of hard hammer, direct percussion technology, and appears to have been a simple core/flake technology.

A large pit or ditch terminal (A102) contained a rather more extensive assemblage. As would be expected, the technology is identical to that from the hollows, except that some of the pieces from A102 have rather more regular dorsal flake scars, indicative of deliberate and purposeful knapping, as if with some definite result in mind. There are no formal tools, however, only edge-damaged pieces.

The pieces from Early Iron Age contexts are undoubtedly a small sample of a much larger assemblage. As such, they are most likely to represent the expedient use of an available raw material for a range of agricultural, domestic, or processing tasks. They probably entered these features as discarded rubbish.

Ditch A109 also contained struck flint. In this instance, although the general characteristics of the assemblage are the same as the previous examples, the range of pieces present is more diagnostic. While there are still only edge-damaged pieces rather than formal

Table 5.14 Struck flint from stratified contexts at Coombe Down South SP 009

Trench	*Feaure*	*Context*	*Core*	*Core frag.*	*Flake*	*Broken flake*	*Scraper*	*Piercer*	*Misc ret.*	*Debitage*
Early/Middle Iron Age										
A	Hollow A46	A44	–	–	2	–	–	–	–	–
	Hollow A47	A73	–	–	5	3	–	–	–	3
		A80	–	–	3	–	–	–	–	–
	Hollow A90	A91	–	–	2	–	–	–	–	–
	Feature A102	A62	–	–	10	–	–	–	–	2
		A78	–	2	10	–	–	–	–	–
		A94	–	–	3	2	–	–	–	2
	Ditch A109	A79	–	1	23	5	–	–	–	1
		A106	–	–	3	–	–	–	–	–
B	Ditch B5	B34	–	2	5	–	–	–	–	–
	Ditch B16	B19	–	2	6	1	–	–	1	1
		B21	3	–	7	–	–	–	–	–
Middle Iron Age										
C	Ditch C3:	C49	–	–	12	–	–	–	2	–
	primary silts	C47	1	–	2	–	–	–	1	–
		C48	–	–	2	–	–	–	1	–
		C41	2	2	19	–	1	–	–	4
	later silts	C36	–	3	19	–	–	–	–	9
		C38	7	–	7	3	–	–	–	3
		C31	–	–	4	–	–	–	–	1
		C29	1	–	22	1	–	–	–	8
		C32	–	1	6	–	–	–	–	4
Romano-British										
A	Buried ploughsoil	A3/A40/A45	–	–	9	–	–	–	1	2
	Layer	A14	–	–	3	–	–	–	1	–
	Feature A48	A42	–	–	–	1	–	–	–	–
	Layer	A7/A93	–	–	3	–	–	–	–	–
	Midden	A15	–	–	4	–	–	–	–	–
	Post-hole A16	A17	–	–	2	–	–	–	–	
	Layer	A37/A64	1	–	33	1	–	2	2	2
	Layer	A59	–	–	–	–	–	–	–	2
B	Pit B22	B49	–	–	1	1	–	–	–	–
		B45	–	–	–	–	–	–	1	–
C	Ditch C3	C28/C4–6	7	–	26	4	–	–	1	7
	Ditch C21	C22	–	–	4	–	1	–	–	–
	Feature C19	C20	–	–	1	–	–	–	–	–
	Feature C10	C11	–	–	1	–	–	–	–	–
	Buried ploughsoil	C9	–	–	2	–	–	–	–	5
D	Ditch recut	D15	–	–	1	–	–	–	–	–
	D3	D16	–	–	1	–	–	–	–	–
		D4	1	–	–	–	–	–	–	–

tools, the presence of a struck nodule fragment, and the fact that a primary and secondary flake refit allow the identification of the initial stages of core reduction. Several smaller flakes and a tablet struck to rejuvenate a core platform indicate later stages of production also.

Struck flint was recovered from a single Middle Iron Age feature, hearth A74. Only a single flake was recovered, and no inferences can be drawn.

Trench B

Trench B examined the outer ditch of the bivallate enclosure (B16) and the ditch (B5) running at an angle between the inner and outer ditches. Ditch B5 is considered to have filled naturally, but towards the top of the profile an accumulation of burnt flint (context B34) may have been deliberately discarded. The struck flints tabulated in Table 5.14 came from amongst this material.

The most noteworthy aspect of this assemblage is the varied nature of its patination. Two flakes have an all-over creamy white patina; three pieces are not patinated; the remaining two have a milky grey patina. One of these last has been roughly worked and crushed along one margin after the patina had formed. Taken together, this perhaps indicates the recycling of earlier lithic material identified by Humphrey and Young as a characteristic of Iron Age flintwork (1999, 59).

As with the material from ditch B5, the flint from fills B19 and B21 of the bivallate enclosure's outer ditch (B12) suggests the recycling of earlier pieces.

Also of note from B19 is a large portion of a nodule roughly worked into handle-and-blade form, the blade of which has rough retouch and much crushing.

Middle Iron Age

Trench C

Struck flint was recovered from throughout the fills of the inner ditch (C3) of the main enclosure. The primary silts produced a number of noteworthy pieces. Fill C41 contained a secondary flake roughly retouched into an end scraper; fill C48 a secondary flake with a retouched margin; fill C47 a core fragment with extensive marginal crushing; and fill C49 an irregular piece with retouch over patination. There was extensive evidence for recycled material throughout the feature.

Romano-British

Trench A

Numerous Romano-British features and layers contained struck flint (Table 5.14). None of this material is distinguishable from that already discussed, with the exception of three tools. Two of these come from layer A37/A64, which is not securely located within the stratigraphic sequence. Neither tool can be considered as more than the expedient use of available materials, as very little effort has been expended in their creation. However, they either fall into the categories identified by Humphrey and Young (above and 1999, 59) or have parallels in the assemblage from SP 049 at Warren Hill (see below and Stevens 1993).

One is a nodule from which flakes have been removed to produce a chisel-like edge which would have served as a crude chopping tool. The second is a damaged tertiary flake from which spalls have been removed, either by accident or design, giving a sharp point. In both instances the tools show evidence of having been used.

The third tool came from layer A40, a colluvial ploughsoil. The piece is a secondary flake with bifacial retouch on one margin, edge damage on the opposite margin, and polish on the ventral surface. It may have served as a crude knife.

Trench B

Pit B22 was flanked by a spread of dressed nodular flint, which may have derived from a ploughed-out wall. Several nodules of similar type occurred in the pit, in the lowest and highest fills. The inclusion of a small number of struck flakes (one utilised) in dumps of refuse and soil suggest residual material deposited in soils during rubbish disposal.

Trench C

Higher levels in ditch C3 represented plough-derived material entering the ditch in the Romano-British period. A tertiary flake from fill C28 had a rough retouch on portions of a margin, and edge damage elsewhere. A portion of a core from fill C30 had extensive crushing on one margin. These pieces are likely to have been residual from Iron Age activity.

A field boundary east of ditch C3 also produced worked flint. This was part of a complex of features, none of which contained struck flint except for the ditch (C21). This is perhaps significant since it was this feature that contained a partially articulated animal burial, possibly indicating some more structured deposition. A scraper was included amongst the assemblage, which may have been a curated object.

Trench D

The small quantity of flint and its limited distribution is a factor of its residuality. There is nothing notable about this material.

Warren Hill SP 049

The main enclosure ditch at Warren Hill contained struck flint throughout the fill sequence. Flint from topsoil and Romano-British contexts tends to be damaged and heavily patinated while that from Iron Age fills tends to be fresh. Three fills are associated with radiocarbon dates indicating an Early–Middle Iron Age range. Table 5.15 gives the quantities of struck flint recovered from Iron Age fills, in stratigraphic order from oldest to youngest.

Stevens (1993) undertook an analysis of the Warren Hill flint, and although much of the material included in her analysis has been rejected subsequently, many of her general observations and conclusions remain valid. She identified generally broad butts, with neither correspondence between butt breadth and flake type nor change through time. Hinge fractures are present in the assemblage, which – while not a dominant feature – suggest a certain lack of skill, as do the lack of formal core preparation and the incipient cones of percussion on core platforms.

The 42 cores are, in each instance, irregular nodules showing little or no formal preparation. As Stevens notes, very few examples conform to classic core morphologies, tending rather to be large flakes or large nodules from which only a limited number of flakes have been removed. Only two examples have flakes removed regularly from around a platform. The more normal removal sequence seems to have been the expedient system typified by Herne as 'rotate the core to find a flat platform above a ridged face and hit it' (1991, 47).

The lack of formal tools in this assemblage is notable. Some flakes have edge damage which may indicate use, and some cores have been used as crude

Table 5.15 Struck flint from Iron Age fill of ditch 12, Warren Hill SP 049

	Core	*Core tool*	*Flakes*	*Misc. ret.*	*Debitage*
Primary silt 41 (EIA)	3	–	26	–	4
Placed deposit 43 (E/MIA)	1	–	17	3	3
Topsoil 40	–	–	10	–	–
Layer 39	6	4	25	1	–
Chalk rubble 20	–	–	8	–	–
2ndry fill 31	–	–	20	–	–
2ndry fill 37	4	–	17	–	–
Deposit 25 (MIA)	12	–	28	1	5
2ndry fill 24	4	–	6	–	–
2ndry fill 26	–	–	6	–	–
Midden 23	3	–	5	–	–
Midden 19	5	–	23	1	–
Midden 16	4	–	10	–	–

chopping tools or reused as hammers. The only retouched piece is a fragment of a secondary flake from context 43. This lack of tools is a characteristic of Iron Age flint assemblages, but the small numbers from Warren Hill stand out amongst the Salisbury Plain assemblages where even the smaller collections tend to include scrapers, burins, or piercers.

A number of possibilities present themselves which may account for this discrepancy. First, the material recovered from Warren Hill is only a small part of a presumably much larger assemblage, within which a greater quantity of tools may occur (Stevens 1993), in which case this sample may represent knapping waste only, perhaps entering the ditch as refuse. On this subject it is worth noting that there is no more worked flint in the midden deposits (16, 19, and 23) than in the primary or secondary silts of the ditch and, if the discard of rubbish does provide a mechanism by which worked flint was entering the ditch, it is perhaps only one mechanism among several. This raises the second possibility concerning the skewing of the debitage/tool ratio: that this material (or some part of it) results from some kind of meaningful deposition as opposed to simple rubbish disposal.

This possibility needs to be considered largely because of the presence of the two cuts through the ditch fills that contained unusual materials. The first of these (feature 42) contained three placed cattle skulls and a flint assemblage consisting of three cores (two of which had been used as hammerstones), a retouched secondary flake fragment, and 20 flakes (one of which had signs of having been utilised). The retouched piece is the only example from the entire Warren Hill assemblage.

The second cut (feature 45) contained pottery, a loomweight fragment, animal bone, and a worked flint assemblage consisting of 13 cores (one of which had been used as a hammerstone), 1 burnt nodule, and 33 flakes (one of which had signs of having been utilised). This deposit has more than twice as many cores as the next most frequent (six examples from layer 39), and appears to include a collection of freshly knapped material which is either *in situ* or which was collected up and deposited immediately after its creation.

At first sight, the Iron Age flintwork appears to be opportunistic, and to conform to the picture suggested by Minnitt and Coles in which pieces are 'gathered, flaked, used and discarded at random by Iron Age people who placed no real value on flint as a raw material except for occasional edges and points' (Coles and Minnitt 1995, 161). However, the indications of the inclusion of worked flint in significant deposits suggests that the material remained rather more important, at least in certain contexts. If we accept that the cut features in the ditch fills at Warren Hill are in some way reflections of ritual behaviour, then it need not be surprising to find the more mundane material elements of people's everyday lives in those contexts.

The ways in which ritual tends to work is through the manipulation of symbols. Symbols form the basic units of ritual, and any such performance essentially involves a set of symbols which have been brought together in a particular space, for a particular time. These symbols can be words, actions, gestures, or material objects, and represent the bringing-together of the representative elements of the world as a whole, and the manipulation of them in such a way as to create relationships between them.

Conclusions

Iron Age flintwork is by now sufficiently well-attested to neither require special pleading nor to cause great contention. The beginnings of a corpus given by Humphrey and Young (1999) contain a number of broad parallels for the Salisbury Plain material, although none is local. A better parallel for the material in terms of its immediate geographic context is perhaps the Late Bronze Age material from the Marlborough Downs. In his analysis of that material, Harding (1992) suggests that the high frequency of miscellaneous retouched pieces may have resulted from the increasing availability of metal. He notes Marilyn Strathern's observation:

> 'that amongst some metal using cultures, where unspecialised stone tools are or were until recently still in use, blank selection was governed by the two factors of edge type and flake size. Most was used unretouched, with retouch sometimes used to resharpen a dulled

edge rather than to shape the initial tool' (Harding 1992, 133).

Harding concludes that the large proportions of unstandardised, unretouched flakes in Late Bronze Age assemblages may result from a similar practice, and it seems likely that the same is true in the Early Iron Age.

Worked Stone

Stone Identification

by Kevin Hayward

This petrological review briefly describes and sources the different rock types identified at sites that form part of the Salisbury Plain Project. Distance from outcrop and probable transportation route are also suggested.

Each rock type has been described in hand specimen, using a hand lens (Gowland x10) and the application of dilute Hydrochloric acid (Hcl) in order to determine the presence of carbonate. Where possible, the geological source is given using comparative geological specimens. In addition to my own knowledge of British geology, a contribution by J.R.L. Allen (University of Reading) on the source of the Quartz Conglomerate and Rachael Seager Smith (Wessex Archaeology) on the provenance of the Shelly Limestone supplemented by reference to British Regional Geology Guides for the Hampshire Basin (Melville and Freshney 1982) and Bristol and Gloucester District (Green1992) and the geological memoir for Salisbury (Reid 1902) were all used to determine the geological source.

Greensand

Geological source: Upper Greensand, Vale of Pewsey, 10–15 km to the north. By far the most common rock type identified in these rural sites is the use of a glauconitic sandstone in the production of whetstones, rubstones, and quern-stones. The 150 ft (*c.* 46 m) (Reid 1902) Upper Greensand exposure from the Vale of Pewsey is the nearest outcrop to this part of Salisbury Plain. The River Avon, which runs close to many of these sites, was the probable transportation route for this stone. It can be traced due north close to the Upper Greensand outcrop along the southern edge of the Vale of Pewsey (10–15 km away). It has also been used locally as building material (Reid 1902). On the basis of grain size, two types can be identified.

Coarse Greensand – glauconite rich (light green). Medium-grained sandstone. This material is extensively worked as quernstone and rubstone in most of the sites associated with the Salisbury Plain Project. Although not as hard as Neidermendig Lava, fragmented examples have the same rough texture and its selection may be an attempt to replicate the use of the Rhineland material using inferior local materials.

Fine Greensand – glauconite rich (dark green–dark grey) fine-grained sandstone. Again this is extensively used but only in the production of rubstones and whetstones. Sometimes mica-rich varieties are present and occasionally they can be dark red especially at Chisenbury Warren (SP 072).

Shelly Limestone

Geological source: Upper Jurassic (Upper Purbeck–Vale of Wardour)

Used as roofing material, especially at Chisenbury Warren (SP 072) and Beach's Barn (SP 026), are large irregular slabs of a highly fossiliferous, hard, fissile sandy limestone from the Upper Purbeck of the Vale of Wardour (Seager Smith pers. obs.). The presence of *Unio* shells rather than *Paludina* of the Purbeck Marble is more typical of the Upper Purbeck succession from the Vale of Wardour rather than the Isle of Purbeck (Reid 1902). A tributary of the Avon, the Nadder was the most probable transportation route. This runs through the outcrops along the Vale of Wardour, 30 km to the south-west of these sites.

Quartz Conglomerate

Geological source: Upper Devonian (Basal Conglomerate), probably the Forest of Dean rather than Mendips

Used in the production of quernstones, especially at Chisenbury Warren (SP 072), is a hard, light-brown quartz conglomerate, with sub-angular to sub-rounded white and pink fractured vein quartz pebbles up to 20 mm across. This is the Quartz Conglomerate from the base of the Upper Old Red Sandstone probably from the Forest of Dean (80 km north-west) (J.R.L.Allen pers. obs.). An alternative source may be the conglomerate from Upper Devonian Portishead beds of Bristol or the Mendips (55 km due west; Green 1992). However, the Quartz Conglomerate here is far less conspicuous as a rock unit and the quartz grains undergo pressure solution (J.R.L Allen pers. obs.) meaning the grains are more liable to be in contact. The grains in the quernstones from Salisbury Plain do not touch and are similar to the Forest of Dean conglomerates.

Local materials – flint, chalk, clunch, and tufa

There is relatively little local material from the Upper Cretaceous (chalk) that has been worked at these sites. Occasional examples of hard chalk (clunch) have been worked at Beach's Barn (026) but are too soft to be used in quernstone or rubstone production. One example of worked tufa derives from a Holocene fluvial deposit probably from the River Avon.

Table 5.16 Quantification of identified stone by material, object, and number/weight (g)

Type	*Local stone*	*Quartzite*	*Greensand*		*Sandstone*	*Quatz conglomerate*	*Shelly Limestone-Tisbury Purbeck*	*Total*
			Coarse	*Fine*				
Quern	–	2/3004	167/67,854	4/504	4/1634	39/48,449	–	216/121,445
Whetstone	–	1/22	–	19/1933	–	–	–	20/1955
Rubber	–	–	–	5/3434	–	–	–	5/3434
Hammerstone	1/463	3/901	–	–	–	–	–	4/1364
Spindle-whorl	1/70	–	–	–	–	–	–	1/70
Building material	2/2649	–	–	–	–	–	–	2/2649
Tile	–	–	–	4/3611	4/613	–	24/106,844	32/111,068
Rubble	3/155	–	6/735	7/105	–	–	–	16/995
Rubstone	–	–	3/772	135/31,452	4/1247	–	2/417	144/33,888
Other	2/292	2/113	4/314	6/3287	2/99	–	–	16/4105
Total	9/3629	8/4040	180/69,675	181/44,326	14/3593	39/48,449	26/107,261	456/280,973

Unidentified materials
Some hard fine sandstones identified in quernstones and rubstones could not be sourced. These may be from another facies from the Upper Greensand of the Vale of Pewsey.

Summary
Hand specimen analysis of the stone assemblage from the Salisbury Plain Project reveals comparatively few rock types. The extensive use of either glauconitic sandstones from the Upper Greensand (15–20 km away) or harder Devonian Quartz Conglomerates (55–80 km away) reflects the importance of crop production and tool sharpening at these rural sites. Local materials from the Upper Cretaceous Chalk were too soft for this purpose. There is also an absence of worked freestone for building material, emphasising the lower, utilitarian status of these sites. This would have been easily accessible from Upper Jurassic Chilmark Stone of the Vale of Wardour. Instead, inferior roofing materials from this outcrop (30 km) were used.

The River Avon, which flows close to these sites, would have provided an adequate means of transportation for stone from the Vale of Wardour and Vale of Pewsey.

Stone Objects
by Rachel Every

A total of 456 fragments (281 kg) of worked stone was recovered from 67 sites (Table 5.16). Most sites produced only a few pieces, but there were a number of concentrations, with 56% by weight coming from Chisenbury Warren (SP 072) alone. Other substantial assemblages were recovered from Lidbury (SP 053, 29 kg), Coombe Down South (SP 009, *c.* 14 kg), Kimpton Gorse (SP 033, 6.5 kg), Littlecott (SP 082, 6.7 kg), Upavon Hill (SP 107, *c.* 7.2 kg), and Shoddesden Grange (SP 134, 6.6 kg). The assemblage includes quernstones, whetstones, rubbers, tiles, hammerstones, a spindle-whorl, building materials, and other miscellaneous fragments.

Querns
A total of 216 quern fragments (*c.* 121.5 kg) were recovered, with concentrations at Coombe Down South (SP 009) and Chisenbury Warren (SP 072). The majority are either of coarse Greensand (55.9%) or Quartz Conglomerate (39.9%), with a few in fine Greensand, quartzite, and sandstone. The possibility of Greensand quern production in the Vale of Pewsey has been suggested (Smith 1977, 108). No complete lengths or widths are preserved. Fragments of upper and lower stones are represented, and although the fragmentary nature of the assemblage makes many identifications very tentative, lower stones appear to be far more numerous.

Most of the diagnostic fragments derived from rotary querns and are of Romano-British date. The rest of the assemblage comprises smaller fragments recognisable by their worked surfaces and may derive from either rotary or saddle querns. A small number of more intact quernstones come from Chisenbury Warren (SP 072), four of them from contexts on the building platform (B12) at the north-west end of Trench B – one in Greensand and three (pits 24 and 34) in Quartz Conglomerate. Another in Quartz Conglomerate (27 kg), overlay a shallow circular feature (C136) in Trench C. Significant numbers of fragments also came from Coombe Down South (SP 009), Lidbury (SP 053) and Upavon Hill (SP 107).

Whetstones
Twenty whetstone fragments were recovered from 13 sites, all of which (apart form one in quartzite) were

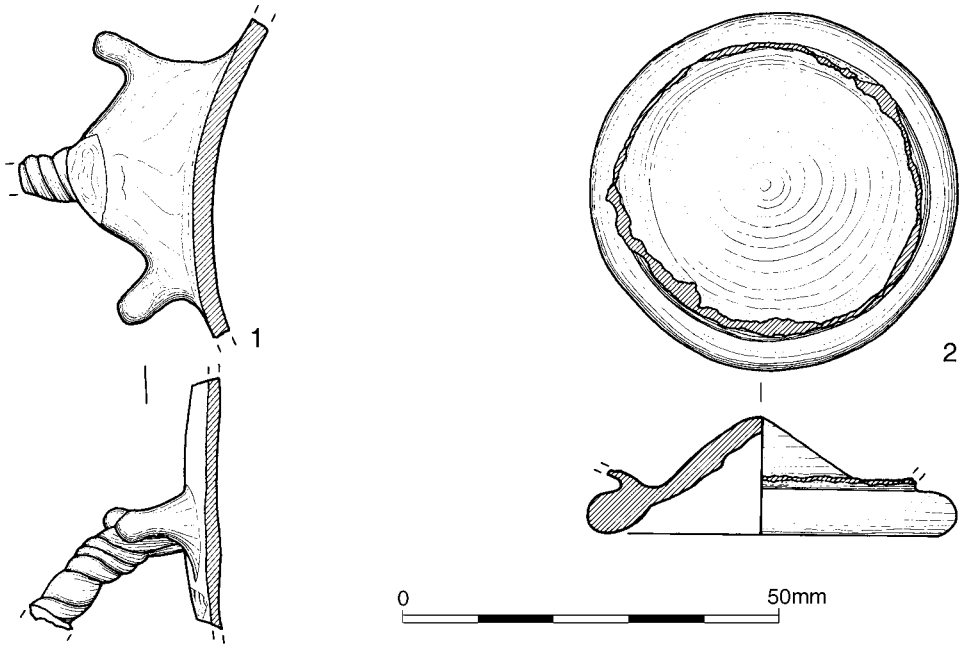

Figure 5.9 Glass lug (1) from Chisenbury Warren (SP 072C) and vessel base ring (2) from Kimpton Gorse (SP 053)

in fine Greensand. Parallels can be found in both the Potterne (Seager Smith 2000a, 216) and Danebury (Brown 1984, 412) assemblages. One, from Furze Hill (SP 045), has two grooves, measuring 1 mm deep on both sides, and has been broken at one end.

Rubber or hammerstones

Nine hand-held rubber or hammerstone fragments were recovered. Five are made from Greensand. They all have one surface which is worn or polished and either flat or slightly curved. Three of the others are quartzite and one is flint. These have pecked and grooved surfaces and were probably used as abrasive rather than hammering tools. Similar examples were found at Potterne (Seager Smith 2000a, 216).

Spindle-whorls

A single chalk spindle-whorl was recovered from an Early Iron Age working hollow in Trench A at Coombe Down South (SP 009) (Fig. 5.5, 3). It is subcircular with the central perforation intact, and faint incised lines on both faces, which may represent either decoration or wear patterns. Similar examples were identified at Danebury (Brown 1984b, fig. 7.61, 8.63).

Building materials, tiles, and rubble

Many of the retained stone fragments probably originated as building stones or roof/floor tiles. Some of the roof tiles have perforations for nails to keep them in place on the roof. One tile, in shelly limestone, from pit B24 at Chisenbury Warren (SP 072), has a groove parallel to one end of the tile, which may have helped with draining or keeping the tiles neatly together on the roof.

Rubstones

The remaining fragments are stones with at least one flattish, smoothed surface and are of uncertain, and possibly diverse, function. These were recovered in smaller quantities from a number of sites, with concentrations at Coombe Down South (SP 009) and Chisenbury Warren (SP 072).

Other

A single flake of pink quartz was recovered from the enclosure ditch at Widdington Farm (SP 052). This has ripples of percussion but is not obviously worked in any way.

Glass

by Denise Allen and Rachel Every

Twenty-nine fragments of glass were recovered (Table 5.17), of which 15 are of Romano-British date. The remaining 14 fragments are post-medieval and are not discussed in this report.

Most of the fragments of colourless or blue-green glass, bearing decoration of pinched-up knobs and lugs, are likely to come from a type of hemispherical cup with fire-rounded rims that was common in the mid–late 3rd century, such as examples found at Colchester (Cool and Price 1994, 86–7, nos 543–50a, fig. 5.14). These sherds were recovered in small quantities from Coombe Down South (SP 009) and Beach's Barn (SP 026).

An unusual green-tinged sherd from a fine tableware vessel was recovered from the layer of accumulated material (C35) behind the building wall (C16) in Trench C at Chisenbury Warren (SP 072). This has a pinched-up lug, which would originally have had three rounded points, two of which remain (Fig. 5.9, 1). There is also a twisted rod, which may have been part of a handle, attached to one side of the lug. Comparable twisted handles, usually made from two entwined strands with open-link part way round, occur on globular and ovoid jugs from the 3rd–4th centuries, examples being known from Cologne (Fremersdorf 1961, 57, pl. 111).

Table 5.17 Glass fragments by site and context

Site	*Code*	*Context*	*Type*	*Colour*	*Description*	*date*
Coombe Down South	SP 009A	A7	?V	blue-green	Obj. No. 8. Indeterminate frag. with pin-head bubbles & streaks	?Late RB
		A8	V	colourless	Frag. globular bodied vessel	?2nd–3rd C
			V	blue-green	Frag. folded part of handle, probably from bottle	1st–2nd C
		A30	?V	yellow-green	Obj. No. 12. Indeterminate frag.	RB
Beach's Barn	SP 026B	3	W	blue-green	Edge frag.	Post-med
	SP 026C	183509A	?	green-colourless	Frag.	Post-med
Kimpton Gorse	SP 053	K	V	blue-green	Complete tubular, pushed-in base ring of vessel, pin-head bubbles within metal. diam. 48 mm. Centre base rises to low point, pontil mark on underside. Broken vessel edges grozed to allow re-use of base, perhaps as gaming piece or counter	RB
		P	V	blue-green	Frag. thick base of prismatic bottle. Common Roman form. Remains of moulded circle on underside, almost certainly originally outermost of several concentric circles	Early–mid RB
	SP 053A	260470 73	V	blue-green	Frag. from shoulder of bottle of common Roman form	Early–mid RB
Chisenbury Warren	SP 072A	A12	V	green	Degraded vessel frag.	Post-med
	SP 072B	B4	V	colourless	Thin-walled frag.	RB
		B5	V	blue-green	Two frags, one possibly burnt	RB
	SP 072C	C3	?W	blue-green	Poss. frag. window glass	RB
		C5	V	colourless	Curved frag.	?Post-med
		C6	?	blue-green	Frag. with rounded edge ?window	RB
		C35	V	green-colourless	Frag. with pinched-up lug, originally with 3 rounded points, 2 of which remain. Attached to 1 side is a twisted rod extending beyond end of central point. Length of lug 32 mm	RB
		C45	W	green-colourless	Frag.	Post-med
Crown Inn	SP 077B		?	green	Two frags	Post-med
Littlecott	SP 082A	156	W	blue-green	Frag.	Post-med
Upavon Hill	SP 106B	AA	?V	blue-green	Frag. distorted by fire	?
	SP 107D	G	W	blue-green	Frag.	Post-med
	SP 107E	15	V	blue-green	Frag. folded rim, bottle of common Roman type	Early-mid RB
		40	W	blue-green	Frag.	Post-med
Enford Farm	SP 125	5	W	blue-green	Frag.	Post-med
	SP 143A	52	W	blue-green	Frag.	Post-med
Fifield Folly	SP 130A	35	?V	blue-green	Frag.	Post-med
Shoddesden Grange	SP 134	269487 S	?V	blue-green	Frag.	?RB

R-B = Romano-British; P-M = post-medieval

The complete base ring of a vessel was recovered during surface collection at Kimpton Gorse (SP 053) (Fig. 5.9, 2). Similar examples are found on a wide range of vessel types throughout the Romano-British period. The broken edges were grozed to allow re-use of the base, perhaps as a gaming piece or counter, such re-use of complete base rings being common practice.

Others vessels identified were three 1st–2nd century bottles of common Roman form, one from

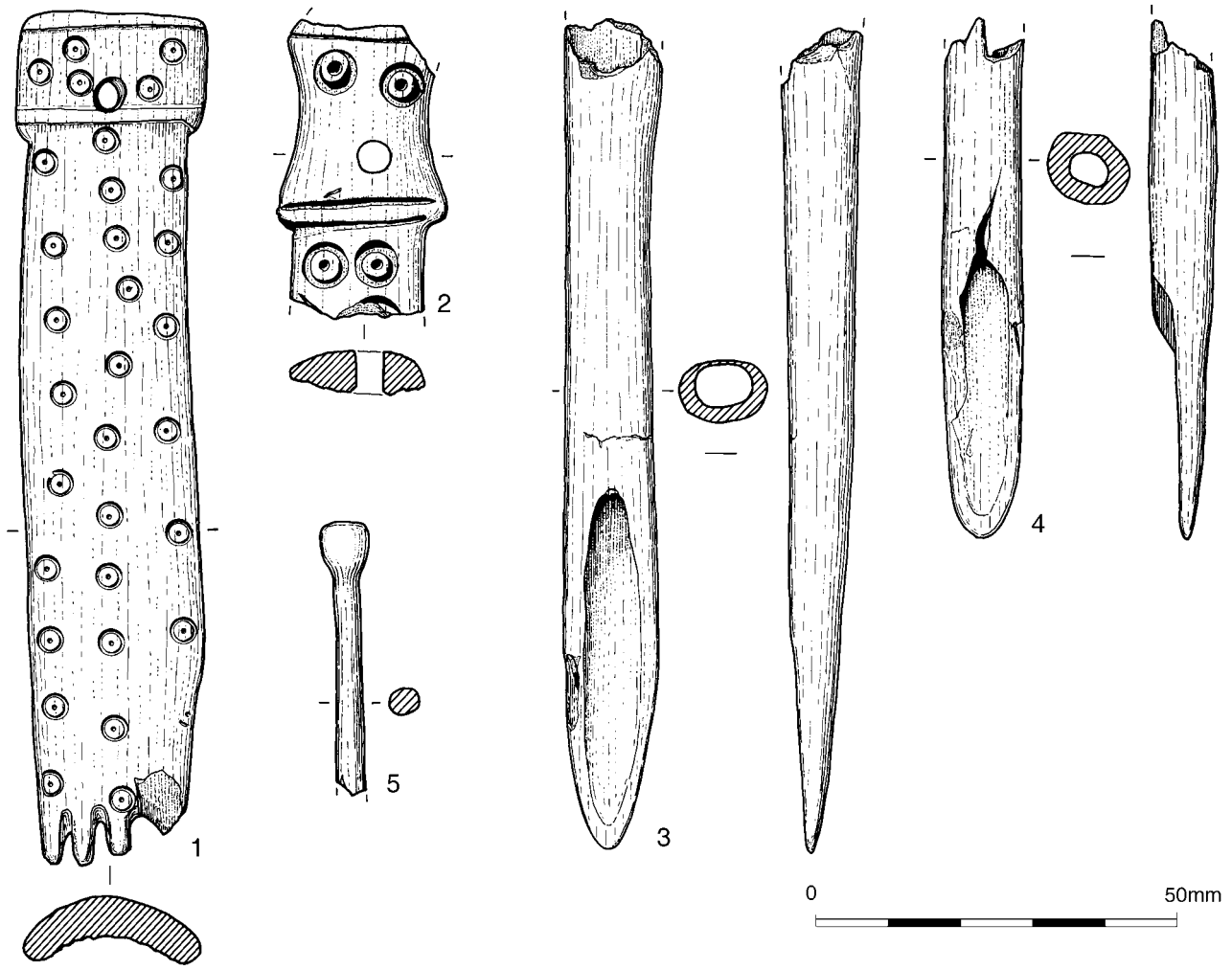

Figure 5.10 Worked bone objects. (1–2) weaving combs from Snoddington Down (SP 008) and Coombe Down South (SP 009); (3–4) gouges from Coombe Down North (SP 014B); (5) pin from Chisenbury Warren (SP 072)

the upper layer (A8) of the late Romano-British midden deposit (A41) in Trench A at Coombe Down South (SP 009), and two (one a prismatic bottle) recovered during surface collection from Kimpton Gorse (SP 053).

Worked Bone

by S.J. Allen and Rachel Every

A small collection of worked bone and antler objects was recovered from four sites. They include parts of two antler weaving combs, both decorated with incised ring-and-dot motifs. The more complete example (Fig. 5.10, 1), recovered during fieldwalking at Snoddington Down (SP 008A), is similar to examples from Danebury dating from the 3rd–1st centuries BC (Sellwood 1984, 375; 1991, 357). The other (Fig. 5.10, 2), from a secondary fill in an early Romano-British recut ditch (D3, context 13) at Coombe Down South (SP 009) is similar to one from All Cannings Cross (Cunnington 1923, 95). Other objects from SP 009 include a needle from a secondary fill (C41) of the inner ditch of the Iron Age bivallate enclosure, similar to examples from Danebury (Sellwood 1984, fig. 7.32, 380). There were also two other bone implements – one, from the upper fill (A37) of an Early Iron Age working hollow, with parallels at Potterne, Wiltshire (Seager Smith 2000b, fig. 93; 70) and Abingdon (Parrington 1978, fig. 60, 34), the other from the late Romano-British midden deposit (A15).

The small Early Iron Age enclosure on Coombe Down North (SP 014B) produced two shuttle tips or gouges, one from a lower fill (27) in pit 3 (Fig. 5.10, 3), the other from a secondary fill (27) of the enclosure ditch (5) (Fig. 5.10, 4). Both are similar to examples of Sellwood's class 1 from Danebury (Sellwood 1984, 385), and from Potterne (Seager Smith 2000b, fig. 90, 10–15).

A single object was found at Chisenbury Warren (SP 072) – an unstratified pin from Trench B (Fig. 5.10, 5). It is a Roman form, similar to Crummy's type 3A from Colchester, dating to the 3rd century or later (Crummy 1983, fig.19; 243).

Miscellaneous Finds

by S.J. Allen and Rachel Every

Shale

Part of a shale bracelet (Fig. 5.5, 4) was recovered from pit B30 at Chisenbury Warren (SP 072). It has an oval cross-section and was probably finished on a lathe rather than hand carved. Similar examples have been recovered from Silchester dating to the Romano-British period (Lawson 1976, 242). A complete disc-shaped shale spindle-whorl (Fig. 5.5, 5) with a straight-sided perforation was also found in a disturbed natural deposit (context C139) at this site and is probably of late Romano-British date.

Ceramic Objects

Four objects fashioned from modified pottery sherds were recorded. Three sherds were deliberately trimmed to form disc-shaped objects, possibly for use as counters (see also p. 122). These were recovered from layers B5 and B48 at Chisenbury Warren (SP 072) and layer B2 from Coombe Down South (SP009). The latter is not quite circular and may have been abandoned during manufacture. A possible spindle-whorl fragment in sandy greyware (fabric 5), also made from a modified base sherd, preserves the trace of a central perforation. It was recovered from layer D2 at Chisenbury Warren (SP 072).

Shell

The shell assemblage comprises 216 fragments of oyster shell (2719 g). There are approximately equal numbers of both left and right valves suggesting that the oysters were brought to Salisbury Plain whole and then prepared for consumption. Over 80% of the assemblage is from topsoil layers and occupation deposits at Chisenbury Warren (SP 072) although only one context (occupation deposit B22, 69 shells, 498 g) contained more than 12 shells. Far smaller quantities were found on the other Romano-British settlements at Coombe Down South (009A; 13 shells, 156 g) and Beach's Barn (026A; 8 shells, 124 g), and during fieldwalking at Upavon Hill (SP 107) and Enford Farm (SP 116).

Coal

Two small pieces of coal were found at Coombe Down South (SP 009) and 18 pieces were recovered from Chisenbury Warren. Most of these came from the topsoil in test pit SP 071, with other fragments from occupation material in trenches A and D (SP 072).

Wall Plaster

A single fragment of wall plaster, with the remains of red paint on one surface, was recovered during surface collection at Enford Farm (SP 116A).

Human Bone

by Jacqueline I. McKinley

Human bone from three sites within the study area was received for analysis. The remains of a single inhumation burial were recovered from Widdington Farm (SP 052). Redeposited bone was recovered from two trenches at Coombe Down South (SP 009) including three contexts in Trench B and two in Trench D. Three trenches at Chisenbury Warren (SP 072) contained human remains, including redeposited bone from eight contexts in Trench B, the remains of four burials and four other contexts containing redeposited bone from Trench C, and redeposited bone from one context in Trench D.

With the exception of one Middle Iron Age context (A27) from Coombe Down South and the Widdington Farm burial, which is Late Iron Age/early Romano-British, all the contexts are Romano-British. The bone from three topsoil/subsoil contexts at Chisenbury Warren, although residual, probably derived from Romano-British contexts.

(As a result of unclear labelling, there remains some doubt as to the provenance of a number of the infant bones recovered – they are either from grave D44 from Chisenbury Warren Trench D, or context A15 Coombe Down South Trench A (see archive report). For this reason they are not included in the numbers given below.)

Methods

The degree of erosion to the bone was recorded following McKinley (2004, fig. 6), as was calculation of the minimum number of individuals amongst the redeposited bone. Age was assessed from the stage of skeletal and tooth development (Beek 1983; Bass 1987; Scheuer and Black 2000), and the patterns and degree of age-related changes to the bone (Buikstra and Ubelaker 1994). Sex was ascertained from the sexually dimorphic traits of the skeleton (Buikstra and Ubelaker 1994).

Results

Disturbance and condition

Only five contexts represented the remains of *in situ* burials (Table 5.18); two of those from Chisenbury Warren had suffered disturbance resulting in

considerable loss of bone from the graves. The bone from the majority of contexts comprised redeposited material, most of which survived as fragments rather than complete skeletal elements. Of the 51 bones from Trench B at Chisenbury Warren only two are complete, the rest comprising only part of a skeletal element; of the 25 from Trench C only one is complete; and of the 38 from Trench D only three are complete bones. Similarly, at Coombe Down there are only 26 complete bones amongst the 193 within the assemblage.

The condition of the bone from the burials is generally good, that from Widdington Farm having a particularly 'fresh' appearance (Grade 0), and those from Chisenbury Warren being slightly more variable but still good (Grade 0–1). The redeposited bone from Coombe Down South is also in relatively good condition, varying from Grade 0 to 2 within any one deposit. The redeposited bone from the topsoil and subsoil contexts (B5, C3, and C14) at Chisenbury Warren is more abraded and eroded (Grades 2–3), reflecting its repeated disturbance and redeposition, but there is no weathering suggestive of exposure. With a few exceptions (B45, B82, B97, B103 and C78 at Grade 0–1) most of the other redeposited bone is only slightly abraded/eroded (Grade 1–2). In general, the condition of the bone is commensurate with the levels of disturbance and redeposition as suggested by its location.

Table 5.18 Summary of results from inhumation burials

Context	*Feature/ layer*	*% Skeletal recovery*	*Age/sex*	*Pathology/ non-metric summary*
Chisenbury Warren (SP 072)				
C146	C70	*c.* 85	neonate *c.* 1 mth	
C147	C95	*c. 30*	neonate *c.* 2–4 mth	
C148	C93	*c. 93*	neonate *c.* 1–3 mth	
C149	C101	*c. 25*	neonate *c.* 2–5 mth	
Widdington Farm (SP 052)				
28	19	*c.* 51*	subadult *c.* 14–16 yr ?? Male	calculus; hypoplasia; mv – retention deciduous maxillary left c/m2, over-crowding anteror mandibular & maxillary teeth, ossicles at lambda, bregma, asterions & in lambdoid, lateral squatting facets

* originally *c.* 99%, bone missing. mv = morphological variation/non-metrics

Demographic data

The total assemblage contains the remains of a minimum of 18 individuals including fragments of an adult male maxilla from the upper fill of a Middle Iron Age storage pit at Coombe Down South; a subadult from a Late Iron Age/early Romano-British grave at Widdington Farm; the Romano-British assemblage comprising the remains of a minimum of 16 neonates (Tables 5.18 and 5.19).

The trenches at Chisenbury Warren from which neonatal remains were recovered were over 100 m apart and it is unlikely that bone from one individual would be present within different trenches; consequently, minimum numbers were calculated for each trench. The trenches at Coombe Down South which contained human remains were only *c.* 20 m apart and it is plausible that the bones of one individual could be contained within each trench; therefore, the minimum numbers were calculated for the site as a whole.

Neonates from across the 0–6 month range appear to be represented, with no apparent clustering at any one stage other than within the group from Trench A at Coombe Down South, a minimum of three out of four of which were around full-term at the times of death. Amongst the many hazards facing the new-born infant was that of infanticide, which was generally carried-out immediately after birth and which was an accepted – under certain circumstances, encouraged – practice in the Roman period (Mays 1993). The neonates from the *in situ* burials at Chisenbury Warren and those whose remains were recovered redeposited in Trench D all appeared to have survived for at least one month after birth. The fragmentary nature of the remains from Trench B render it difficult to ascertain age beyond 'neonate' and those from Trench C include at least one foetal individual who died before full-term and is likely to have been still-born. No conclusive comment can be made with respect to the possible fate of the Coombe Down group – Aristotle referred to the natural low life expectancy of infants in his *Historia Animalium* vii (quoted in Philpott 1991, 101) '... most are carried off before the seventh day...' – but their inclusion within the midden deposit suggests they may not have received the initial formal burial as their Chisenbury Warren counterparts may have done prior to disturbance and redeposition.

The burial of young infants external to communal cemeteries or grave groups is a commonly recognised phenomenon in the Romano-British period, as is the frequent location of their graves in the proximity of settlements/buildings (Philpott 1991, 97–101). This is seen as reflecting the Roman belief that a child did not possess a soul until the age of teething and

Table 5.19 Elements, frequency, and minimum number of individuals from amongst redeposited human bone

Trench	*Element*	*Frequency*	*Min. No. Individuals*	*Comment*
Chisenbury Warren SP 072				
B	left femur (proximal)	4	4 neonates	other elements single, no skull recovered
	left humerus (distal)	4		
	left femur (distal)	2		
	right femur (proximal)	2		
	left tibia	2		
C	left ulna	3*	2 foetal/neonatal	other elements single; * left upper limb absent from 2 *in situ* burials, may be represented amongst redeposited bone
	left humerus	2*	(min. 1 foetal)	
	right humerus	2		
	right ulna	2		
D	left humerus	2	2 neonates	other elements single
	right tibia	2	*c.* 2–5 mth	
	left tibia	2		
Coombe Down South SP 009				
A&D	left occipital condyle	4	4 neonates (min.	2/3 duplicates, all other neonatal long bones &
	right humerus	4	3 *c.* 0–1 mth	innominate centres, other elements single
	left femur	4		
	right femur	4		
			adult *c.* 20–30 yr. ?? male	

therefore did not require the same burial rites as an older individual (*ibid.*, 101); yet one cannot help but feel there must be some significance in the frequent burial of these young individuals within the realms of the living rather than amongst the dead.

The only other known human remains from Chisenbury Warren represent those of an adult female (*c.* 30–45 yr), presumed to be Romano-British, excavated by amateur personnel in the 1980s (McKinley 1989). These were found outside a house platform west of Trench B (Nell Duffie, pers. comm.)

Pathology/non-metrics

The adult male and the subadult both had moderate-heavy calculus deposits (calcified plaque) indicative of a diet heavy in carbohydrates and poor dental hygiene. The adult male had one small occlusal carious lesion (1/12) in the left third molar. Both individuals also had faint lines of hypoplasia – developmental defects in the tooth enamel formed in response to growth arrest in the immature individual, the predominant causes of which are believed to include periods of illness or nutritional stress (Hillson 1979) – in the 2nd–3rd molar crowns (adult) and canine-premolar crowns (subadult).

Both individuals showed a number of non-metric traits predominantly within the dentition or the skull; those in the Widdington Farm subadult are shown in Table 5.18. In the adult maxilla, both 3rd molars are multi-cusped and enlarged bucco-palatially, and multi-rooted having a large double meso-palatial root branch with additional rootlets between distal and palatial roots in the right.

6. Farming, Landscape, and Economy of the Iron Age to Romano-British Periods

Reconstructing the Farmed Landscape

by Michael J. Allen

Unlike its predecessor, the Wessex Linear Ditches Project, this project did not at its outset embrace a formal palaeo-environmental programme, nor were any environmental research criteria specifically articulated. Some environmental sampling was, however, undertaken at the instigation of Roy Entwistle, largely to provide training and data for undergraduate student projects at Reading University. This insight has provided a limited dataset with which we can retrospectively address some outline research questions, and attempt to examine changes between the Iron Age and Romano-British occupation and farming

In later prehistory and the Romano-British period we know that Salisbury Plain was essentially cleared of woodland and existed primarily as open downland. What has not readily been explored is the nature of that landscape in terms of the presence of pasture versus tilled fields. There are distinct changes in the archaeological record between the Iron Age and established Romano-British activity. We attempt to examine if this is any way driven, or contributed to, by changing agricultural and economic regimes. In particular we ask whether there was a change from ard cultivation to mould board plough, and if so can we detect this and determine its effects. These may take the form of improved crop husbandry and crop yields or species, or be detrimental by increasing soil erosion.

These are aims that should now be addressed within wider landscape projects embracing these periods. However, we readily admit that, laudable though these aims may be, the possibility of answering them here is limited. These ideas have been embraced late in the post-excavation analysis programme, and the project was not designed to support these questions. Nevertheless the limited data it has acquired over and above its original research aims, allow us now to attempt to address these points in some small way.

Sampling and Analysis

Sampling for charred plant remains was undertaken at a number of sites. Molluscan analysis was confined to four sites. Sizeable animal bone assemblages were recovered from several of the ditch excavations and, after initial assessment, the samples from Warren Hill (SP 049) were submitted for radiocarbon assay.

Bulk samples were taken for charred plant remains and charcoal and processed at Oxford University Museum by standard methods under the supervision of Dr Mark Robinson and his team. Samples for snails were processed at Reading University under the supervision of Roy Entwistle.

The analysis was largely conducted on recovered remains (charred plants), identified or recovered remains (snails) at Wessex Archaeology. Only the charcoal was previously identified and reported upon. These three sets of data have, retrospectively, been examined in an attempt to provide some outline information about the environment and economy, and address some general questions about changes between Iron Age and Romano-British practices.

The Physical Environment and Land Use: Molluscan Evidence

by Michael J. Allen and Roy Entwistle

Molluscan analysis was not formerly a part of the research design for this project, but excavation did provide an opportunity for undergraduate students of Reading University to sample and undertake mollusc analysis as a part of coursework projects. One of us (RE) supervised these projects and subsequently the opportunity has been taken to use the data to provide some indication of local site land use. As such this work was not planned nor had the integrated research targets implemented for its predecessor project, the Wessex Linear Ditches Project (Entwistle 1994). Nevertheless, some specific land use questions were addressed in retrospect, and applied to all of the environmental data (see above).

Sampling for snails was confined to seven locations at five sites. Selective sampling was undertaken, under the supervision of Roy Entwistle, of boundary ditches at Tidworth Lynchet (SP 005) and Chisenbury Warren (SP 063, 068, and 072D), stabilisation horizons in two enclosure ditches at Coombe Down North (SP 014A and B), and a lynchet at Weather Hill (SP 137). A column and additional spot samples were taken from the enclosure ditch at Chisenbury Field Barn (SP 050) but these have not been analysed. Samples were processed and land snails extracted by students. Identifications were made by them and recorded for all sites except Tidworth Lynchet where the extracted

snails were subsequently identified by Sarah Wyles and Michael Allen. The sampled sequences range from Late Iron Age to Romano-British fills, and enable us to examine, in particular, land use associated with settlement and field systems. In this respect this enhances the interpretations provided by Entwistle (1994) for the Late Bronze Age and Iron Age fills of the Salisbury Plain Linear Ditch system.

For the most part, molluscan studies on Salisbury Plain have tended to concentrate on the nature of the Neolithic and earlier Bronze Age environment and land use, as demonstrated around Stonehenge (eg, Evans 1984; Allen *et al.* 1990; Bell 1989; Bell and Jones 1990; Allen in Cleal *et al.* 1995; Allen 1997), Durrington Walls (Evans 1971), and Woodhenge (Evans and Jones 1979), and from Neolithic long barrows in the Wylye Valley (Allen and Gardiner 2004). The later prehistoric land divisions on the Salisbury Plain Training Area (Entwistle 1994), Linear Ditches north of Quarley Hill (Allen 1991) and on Copehill Down, near Shrewton (Allen 1989), and a Middle Bronze Age ditch at Willis's Field Barn, near Warminster (Wessex Archaeology 1999) also provide a background corpus of analysed material. Few studies have examined later prehistoric and Romano-British land use, although recently a limited corpus of data has been acquired from a small number of Iron Age sites. These include pits and boundary ditches at Battlesbury Bowl (Allen in prep.), at a hilltop enclosure at Codford (Bryant 2001; Allen and Bryant in prep), pits and a hillfort ditch at Balksbury (Allen 1995; Allen 2001), features at Danebury (e.g. Evans and Hewitt 1991), Winklebury hillfort (Thomas 1977), and an enclosure ditch on Bossington Down (Allen in prep.). Relatively little has been done on the Romano-British land use, largely because, in very general terms, we can assume the majority of the settled areas had been cleared and existed as established downland.

From this evidence we know that, in general terms, 'the landscape of the Salisbury Plain was largely cleared of woodland by the time that the linear ditches system was founded during the Late Bronze Age' (Entwistle 1994, 101). Analyses reported here do not attempt to examine whether clearance was an early, or a progressive development punctuated by periods of regeneration (Entwistle *op. cit.*). Instead the samples here provided a limited opportunity to examine the Late Iron Age and Romano-British land use based on a selected sample series.

Molluscan sampling and analysis was conducted following the methods outlined by Evans (1972), with samples of 1.5 kg being processed. Assemblages are divided into ecological groupings based on Evans (1972), and his modifications (Evans 1984), as employed previously by Entwistle for the Wessex Linear Ditches Project (1994). Analysis of the data was performed at Wessex Archaeology, and the delta (ie non-lethal inter-specific to intra-specific encounters Δ_2 and ratio of inter-specific to intra specific encounters Δ_4), and Shannon/Brillouin species diversity indices employed. The selection and use of these indices is explained elsewhere (Entwistle 1994; Allen 2003; Allen in prep.). The results are presented in Tables 6.1–6.4 and as histograms of relative abundance in Figs 6.1–6.4), but histograms of absolute abundance were also produced to aid interpretation (archive). Mollusc nomenclature follows Kerney (1999).

Table 6.1 Tidworth Lynchet SP 005, land mollusc data from LBA Quarley High Linear Ditch

Site	*005*					
	Early Romano-British				*R-B*	
Ditch	*5*	*5*	*5*	*5*	*5*	*5*
Context	*19*	*4/19*	*4*	*4*	*3*	*3*
Depth (cm)	*105-115*	*97-105*	*90-97*	*83-90*	*75-83*	*65-75*
Wt (g)	*not recorded*					
Pomatias elegans (Müller)	1	2	-	5	4	3
Carychium tridentatum (Risso)	1	-	-	-	1	2
Cochlicopa lubrica (Müller)	2	4	2	3	1	1
Cochlicopa lubricella (Porro)	1	-	-	1	-	-
Cochlicopa spp.	-	3	1	3	2	-
Vertigo pygmaea (Draparnaud)	6	8	5	14	3	3
Pupilla muscorum (Linnaeus)	96	118	148	361	131	199
Vallonia costata (Müller)	115	28	35	90	40	67
Vallonia excentrica Sterki	159	127	82	139	75	93
Acanthinula aculeata (Müller)	1	-	-	-	-	-
Ena obscura (Müller)	-	-	-	-	-	-
Punctum pygmaeum (Draparnaud)	12	8	2	20	9	9
Discus rotundatus (Müller)	-	-	-	-	3	-
Aegopinella pura (Alder)	2	-	-	-	-	-
Aegopinella nitidula (Draparnaud)	5	-	-	-	-	1
Oxychilus cellarius (Müller)	-	-	-	-	1	1
Clausilia bidentata (Ström)	-	1	2	1	1	-
Clausiliidae	-	-	-	-	-	+
Helicella itala (Linnaeus)	35	50	6	51	21	40
Trichia hispida (Linnaeus)	52	22	3	11	7	15
Cepaea/Arianta spp.	-	1	-	2	5	1
Taxa	14	11	9	12	14	13
TOTAL	488	372	286	701	304	435
Shannon Index H'	1.74	1.66	1.27	1.48	1.67	1.54
Brillouin Index HB	1.69	1.61	1.22	1.44	1.59	1.49
Shannon Index – Brillouin Index	0.05	0.05	0.05	0.03	0.07	0.05
Δ2	0.78	0.75	0.63	0.67	0.73	0.71
Δ4	3.63	3.10	1.75	2.06	2.73	2.48

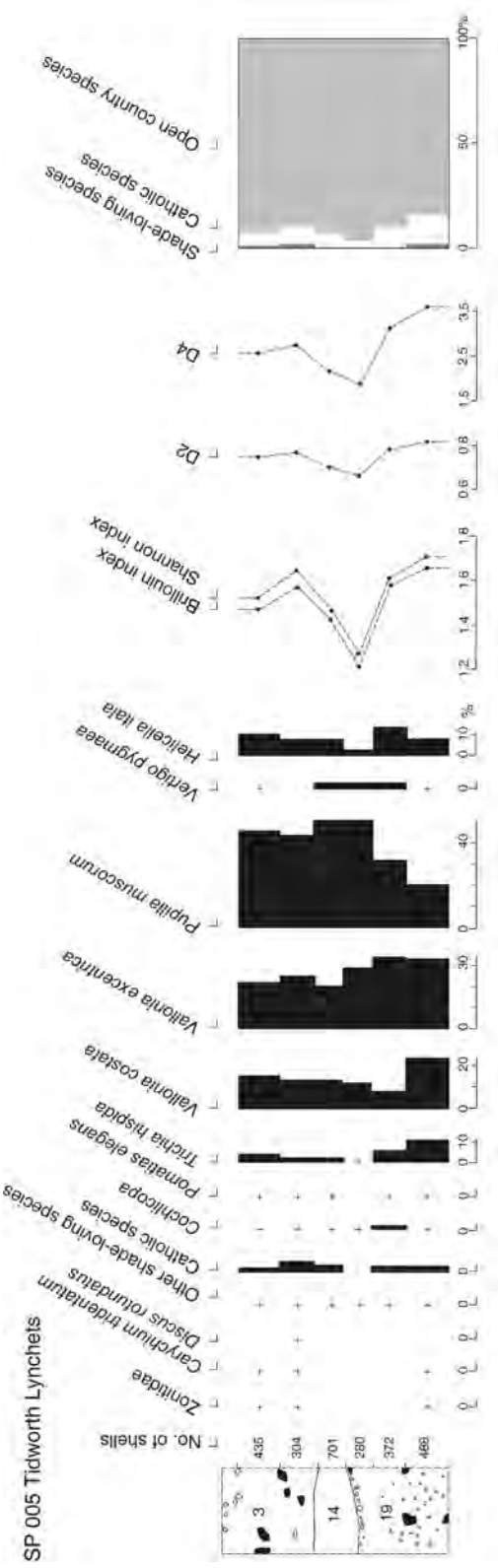

Figure 6.1 Tidworth lynchets SP 005, molluscs

Tidworth Lynchet SP 005, Ditch 5

The sampled sequence in this series is from the Late Bronze Age, 1.9 m deep, ditch 5; part of the Late Bronze Age 'Quarley High Linear Ditch' with the Romano-British 'Tidworth' lynchet sealing it. Six samples were selectively taken through the early Romano-British secondary fill (context 19), tertiary fill (context 4), and base of the toe of the Romano-British lynchet overlying the ditch (context 3).

All of the assemblages are relatively rich in shells and are typically overwhelming dominated by open country species (84.2–96.5%) with shade-loving species never in excess of 2% of the assemblage, or more than 9 shells. This indicates very open dry downland conditions throughout the sampled sequence. Although the delta species diversity indices are constant, there are variations in the assemblages relating to the changing local land use and this is also reflected in the Shannon and Brillouin indices (Table 6.1 and Fig. 6.1).

The early Romano-British secondary fill (context 19), typically representing local inwash during the use of the ditch, contained about equal proportions of the two *Vallonia* species, with *Pupilla muscorum* and *Helicella itala*. *Pupilla* and *H. itala* rise proportionately and in absolute numbers through this fill while *Trichia* and the *Vallonia* species decline (Fig. 6.1). This suggests very open dry calcareous environments with *Pupilla* suggesting bare, but not necessarily loose, earth. Significantly the Shannon and Brillouin indices are very close suggesting an autochthonous (*in situ*) assemblage reflecting the local ditch and immediate surrounding environment. Low delta indices and Shannon indices suggest a mature but low diversity environment.

There is no evidence for more mesic (damp) environments in the vicinity, not even of long damp grass in the ditch or over the bank, so this clearly represents a short-turfed grassland and arable environment against an open ditch with grazed bank. There is no evidence of trees, shrubs, or long grassy vegetation in the immediate vicinity. As sedimentation rates slowed, the upper portion of context 19 became almost stone free, but bare earth was still present. Eventually stasis and soil development occurred (context 4), and this is reflected initially in local acidification in the Ah horizon and reduction in snail numbers in the upper part of context 19, but dramatically increased shell numbers (from 286 to 701) in the A and A/B horizon of the soil itself. At this point both Shannon and Brillouin species diversities drop to about 1.5 and delta indices also decline. *Pupilla* and *Vertigo pygmaea* attain their maxima both numerically and proportionally, and *V. excentrica* reaches its proportional minimum, and near to its absolute maximum (Table 6.1). This undoubtedly

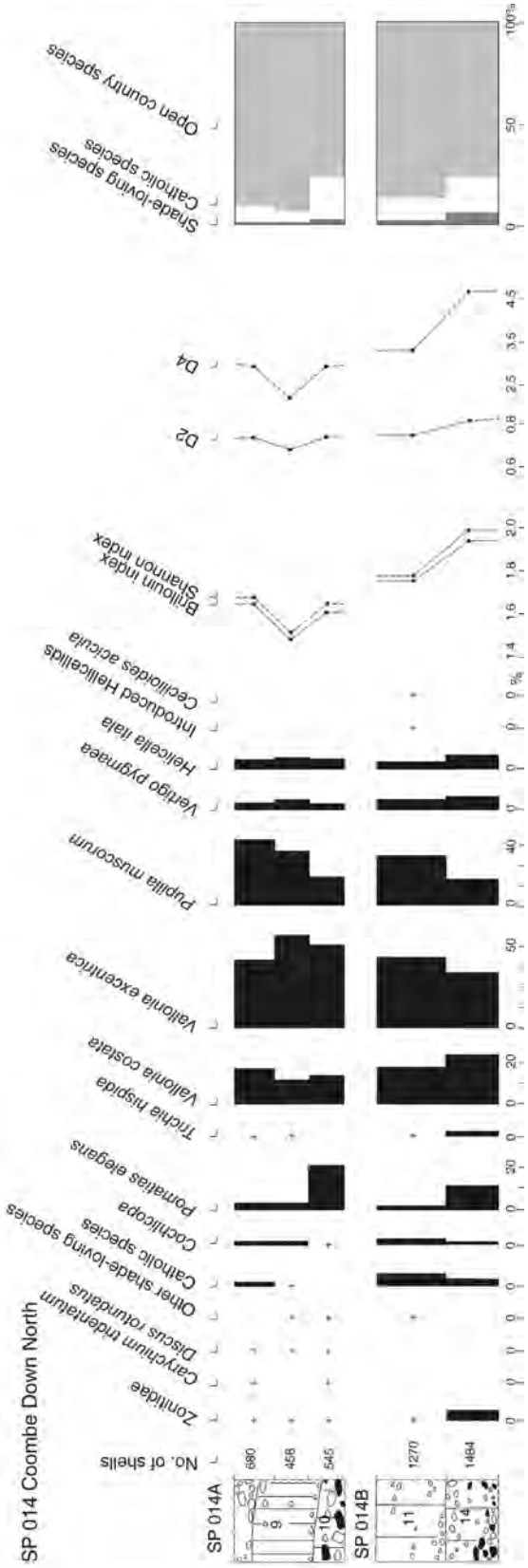

Figure 6.2 Coombe Down North SP 014, molluscs

represents a period of very stable short grazed grass within the ditch at least. The almost total absence of shade-loving species (one worn apex of *Clausilia bidentata* representing 0.1% of the assemblage) confirms that this environment extended beyond the ditch and does represent the adjacent fields at least. Here we can envisage typical downland comprising pasture and perhaps some intermittent arable.

Burying the stabilisation horizon in the Romano-British period was a mixed unsorted tertiary fill (context 3) containing less chalk wash, and more flints than the soil horizon (context 4). Shell numbers decrease initially then increase and this pattern is reflected in all diversity indices. The nature of the fills, the gradual increase in *H. itala* and of *V. costata*, both point towards arable land. In contrast some limited mesic damp conditions are suggested by a number of shade-loving taxa that are represented for the first time. These might represent slightly longer grasses growing on the bank, or even against a fenceline, while the remaining assemblage suggests open arable conditions.

Coombe Down North SP 014A & 014B, Enclosure Ditches 2 and 5

Within the deep V-shaped Iron Age enclosure ditches on Coombe Down North, stabilisation horizons were noted in ditches 5 and 2 at SP 014A and SP 014B respectively. Both stasis horizons had developed in and on the top of the secondary fill, just as in the Tidworth ditch described above. The buried soils and the top of the secondary fill in which they developed were sampled (Table 6.2; Fig. 6.2; for sections see Figs 3.7–8).

In both ditches a brown (7.5YR 4/3) almost stone-free silty clay (loam) buried soil (Ah horizon) developed in the top of the stony and flinty secondary fill. The stoniness of the latter is in part a product of stones eroding into a relatively stable ditch, and becoming concentrated by sorting as a result of earthworm working in the soil. Both sequences are suggested to belong to the Late Iron Age and early Romano-British period. They were considered contemporaneous, a fact confirmed by land snail analysis. The sequence in ditch 2 (SP 014A) sampled the upper secondary fill, the buried soil, and the overlying tertiary fill, thus providing a slightly longer sequence. Although there are some subtle differences between the two ditches, the short sequences of two and three samples in each mimic one another (Fig. 6.2) suggesting relatively good contemporaneity.

The stony, possibly worm-sorted, horizons in both were dominated by open country species (*c.* 75%) and were characterised by *V. costata*, *V. excentrica*, and

Table 6.2 Coombe Down North SP 014A & SP 014B, land mollusc data from stabilisation horizons in ditches 2 and 5

	Late Iron Age - Early Romano-British				
Site	*014A*	*014A*	*014A*	*014B*	*014B*
Ditch	*2*	*2*	*2*	*5*	*5*
Context	*10*	*9*	*9*	*14*	*11*
Depth (cm)	*18-27*	*10-18*	*0-10*	*57-70*	*40-57*
Wt (g)	*1500*	*1500*	*1500*		*1500*
Carychium tridentatum (Risso)	1	-	1	-	-
Cochlicopa lubricella (Porro)	6	17	16	10	45
Vertigo pygmaea (Draparnaud)	12	29	20	31	74
Pupilla muscorum (Linnaeus)	76	204	223	65	343
Vallonia costata (Müller)	76	90	116	115	248
Vallonia excentrica Sterki	222	352	227	129	490
Ena obscura (Müller)	1	1	-	-	-
Punctum pygmaeum (Draparnaud)	-	3	10	17	82
Discus rotundatus (Müller)	3	1	5	-	-
Vitrina pellucida (Müller)	-	-	-	-	6
Nesovitrea hammonis (Ström)	-	-	1	-	-
Aegopinella nitidula (Draparnaud)	3	1	1	16	14
Oxychilus cellarius (Müller)	2	-	-	4	2
Zonitidae	-	-	2	-	-
Limacidae	-	4	9	10	12
Cecilioides acicula (Müller)	-	-	-	-	1
Candidula intersecta (Poiret)	-	-	-	-	1
Helicella itala (Linnaeus)	26	37	30	27	47
Trichia striolata (C. Pfeiffer)	-	-	-	-	1
Trichia hispida (Linnaeus)	117	19	19	60	25
Taxa	12	12	13	11	14
TOTAL	545	758	680	484	1390
shells/Kg	363	505	454	323	927
Shannon Index H'	1.63	1.49	1.66	1.99	1.77
Brillouin Index HB	1.59	1.46	1.63	1.94	1.75
Shannon Index – Brillouin Index	0.04	0.03	0.04	0.05	0.02
Δ2	0.75	0.69	0.75	0.83	0.77
Δ4	2.96	2.26	2.97	4.89	3.43

P. muscorum with *T. hispida*. In both, some shade-loving species occur in low overall proportions (4.1% and 1.8%). These represent very open dry calcareous conditions, probably dominated by pasture, but with some broken soil and arable activity. The shade-loving species might reflect limited shady micro-environs of the ditch, longer grass on the bank or even along the land against the ditch.

The stable conditions favouring soil development and vegetation are reflected by rises of 140–270% in the number of shells recovered (Table 6.2). A maximum of nearly 1000 shells per kilogram was recovered (context 11; SP 014B). This increase in snail numbers is accompanied by an increase in the proportion of open country species (rising to 93.9%), and within that a rise in *Pupilla* and *Vallonia*, with concomitant decrease in *V. costata* and especially *Trichia*. Here again short-sward dry calcareous grassland was established in both ditches just as it was at Tidworth. More importantly the species diversity indices show a similar downward trend in the stabilisation horizon from which again we can suggest open pasture and trampled grassland surrounding the enclosure, possibly punctuated by short episodes of broken soil and tillage.

The upper part of the buried soil (context 9), and possibly the lower part of the tertiary fill (context 3) fill were sampled in enclosure SP 014A. In this sample, as *Pupilla* continued to increase *V. excentrica* decreased giving way to rise in *V. costata*. This may be taken to infer more broken ground locally, possibly tillage interrupting and sealing the stable grassland vegetation in the ditch. The very open country nature of both of these sequences indicate very open dry downland, with no trees, shrubs or long damp herbaceous vegetation in the immediate vicinity.

Chisenbury Warren Lynchets SP 063 & SP 068, Field Boundary Ditches F6 & 3

A possible plough-mark (at SP 072B) and two field boundary ditches were sampled at Chisenbury Warren (SP 063 and SP 068). Excavations through SP 063 sectioned a shallow (0.9 m deep) but broad (*c.* 2 m wide) early Romano-British field or trackway boundary ditch (F6). The second ditch (SP 068) was another early Romano-British field boundary ditch only 0.65 m deep.

Periglacial involution

The possible plough-mark was one of a number of very shallow (0.2 m deep) features sectioned beneath the lynchet at SP 072D and SP 072B. These were considered to be ard or spade-marks, however their fills are typically described as being 'dark yellowish brown' to 'orangey brown' silty clay loam and in section (Fig. 4.15) many are clearly slightly asymmetrical; both typical characteristics of periglacial involutions and stripes. The impoverished molluscan assemblage from one of these (Table 6.3) produced only 15 shells, but the xerophilic open country assemblage was typical of Late Devensian cold stage assemblages (cf. Kerney 1963) and could relate to Kerney's (1977) late glacial mollusc biozone Z. We would conclude that these features are periglacial.

SP 063

A sequence of six samples was taken to sample the full sequence except the initial 0.1 m of primary chalk rubble fill (see Fig. 3.19 for section). Samples from the Romano-British chalk rubble primary fill (context

Table 6.3 Chisenbury Warren lynchets 072D, 063 & 068, land mollusc data from periglacial involution (85) and ditches F6 and 3

Site	072D	063	063	063	063	063	063	068	068	068
	glacial	Early Romano-British								
Feature		F6	F6	F6	F6	F6	F6	3	3	3
Context	85	18	17	16	14	7	7	7	6	5
Depth (cm)	spot	70-83	57-70	48-57	39-48	29-39	22-29	48-62	36-47	28-35
Wt (g)		1500	1500	1500	1500	1500	1500	1500	1500	1500
Pomatias elegans (Müller)	-	1	-	1	14	15	3	1	-	1
Carychium tridentatum (Risso)	-	1	2	4	33	31	1	-	2	7
Cochlicopa lubrica (Müller)	-	-	-	-	9	-	-	-	-	-
Cochlicopa lubricella (Porro)	-	1	2	3	19	34	6	-	-	6
Vertigo pygmaea (Draparnaud)	-	1	-	1	8	23	6	-	1	5
Pupilla muscorum (Linnaeus)	3	4	6	7	15	72	15	-	2	13
Vallonia costata (Müller)	3	1	5	5	10	5	-	-	15	24
Vallonia excentrica Sterki	4	3	17	13	48	94	13	8	22	47
Acanthinula aculeata (Müller)	-	-	-	-	2	-	-	-	-	9
Ena obscura (Müller)	-	-	-	1	2	2	-	-	-	3
Punctum pygmaeum (Draparnaud)	-	-	3	1	6	24	2	-	3	3
Discus rotundatus (Müller)	-	-	1	1	29	6	-	-	1	6
Vitrina pellucida (Müller)	-	-	-	-	-	-	-	-	-	2
Vitrea crystallina (Müller)	-	-	3	-	10	-	-	-	-	-
Vitrea contracta (Westerlund)	-	2	30	37	35	9	-	-	-	-
Nesovitrea hammonis (Ström)	-	-	-	2	16	13	-	1	2	-
Aegopinella pura (Alder)	-	-	-	2	9	8	1	-	-	2
Aegopinella nitidula (Draparnaud)	-	-	-	1	44	19	-	1	2	21
Oxychilus cellarius (Müller)	-	2	2	-	36	3	5	-	-	-
Limacidae	1	1	7	11	30	90	24	-	3	7
Cecilioides acicula (Müller)	-	1	3	1	1	-	-	-	-	2
Cochlodina laminata (Montagu)	-	-	-	-	17	-	-	-	-	-
Clausilia bidentata (Ström)	-	-	-	-	-	-	-	-	-	-
Clausiliidae	-	-	2	1	-	5	1	-	1	12
Candidula intersecta (Poiret)	-	-	-	-	-	-	-	-	-	-
Helicella itala (Linnaeus)	3	-	5	5	18	33	4	1	10	5
Trichia striolata (C. Pfeiffer)	-	-	-	-	12	-	-	-	-	-
Trichia hispida (Linnaeus)	1	3	76	53	159	19	1	4	7	30
Helicigona lapicida (Linnaeus)	-	-	-	-	1	-	-	-	-	-
Cepaea/Arianta spp.	-	-	2	4	8	4	-	-	1	8
Taxa	6	11	15	19	25	20	13	6	14	19
TOTAL	15	20	163	153	590	509	82	16	72	211
Shells/Kg		13	109	102	393	339	55	11	48	141
Shannon Index H'	1.68	2.25	1.82	2.09	2.71	2.52	2.09	1.39	2.09	2.52
Brillouin Index HB	1.29	1.71	1.69	1.91	2.62	2.44	1.87	1.06	1.84	2.37
Shannon Index – Brillouin Index	0.39	0.54	0.14	0.17	0.09	0.08	0.22	0.33	0.25	0.16
Δ2	0.80	0.88	0.73	0.80	0.89	0.89	0.84	0.67	0.83	0.89
Δ4	6.00	12.6	2.78	4.20	8.49	8.47	5.52	2.53	5.20	8.59

18) produced few shells (Table 6.3) but did reflect a mixed assemblage seen in the overlying upper primary and secondary fills. The upper primary fill (context 17) and secondary fills (contexts 16 and 14) were typically calcareous light yellowish brown fills with many chalk pieces, sealed by brown secondary fills with chalk and flints. The assemblages from these contexts were mixed in stark contrast to comparable secondary fills at Tidworth and Coombe Down North. Open county species only represented between *c.* 24% and 30% of the assemblage, with *Trichia hispida* being the single most important species. The Zonitidae were consistently represented at just above 20% throughout these fills (Fig. 6.3). The upper primary fill was dominated by *T. hispida* with the Zonitidae (mainly *Vitrea contracta*). The strong shade-loving element (20%), however, comprise mainly species such as *V. contracta* which can be common in chalk soils with dense grassy swards, while the dominance of *Trichia* and presence of other catholic species with the restricted open country taxa (*Vallonia* species, *Pupilla*, and *Helicella*) seem to confirm an open downland, with a long grassy and herbaceous environment.

Throughout these fills the proportion of *T. hispida* declined while a number of other species including *Discus rotundatus* and other shade-loving species increased (Fig. 6.3). Shannon species diversity indices

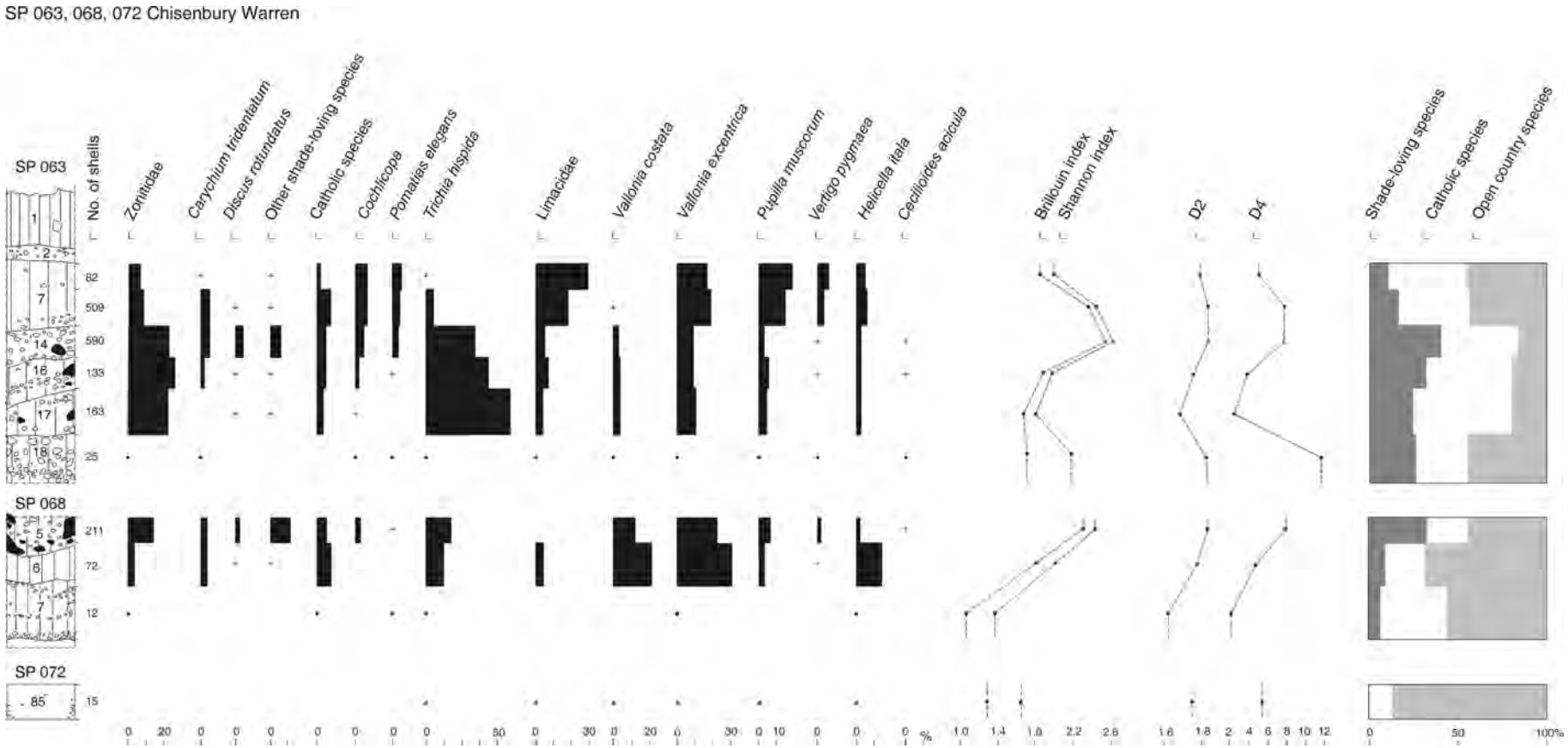

Figure 6.3 Chisenbury Warren SP 063, 068 and 072 molluscs

increased to over 2.0 suggesting very rich ecological environments with the influence of scrub, while high delta indices suggest that the samples are representative of a diverse local environment. We may infer that this represents widespread generally open conditions with a high level of local patchiness. Whether this is a ditch in rough pasture, or more open conditions with overgrown ditch and bank is not clear, though the former suggestion is favoured. The increased shade and significantly higher shell numbers in the upper secondary fill (context 14) may well reflect more stable conditions and local microenvironments and material discarded into the ditch, and loose broken soil (*Pomatias elegans*).

Sealing the stony secondary fills was a brown friable almost stone-free buried soil. Stabilisation of this surface is reflected in the continued high shell numbers (509). Open country species, especially *Pupilla*, *Vertigo pygmaea*, and *Vallonia excentrica* increased along with the Limacidae (slugs). Here we can see a stable short-sward grass in and around the ditch, but perhaps with longer grasses on the adjacent bank, lynchet, or field boundary. Some loose soil is still indicated by the relatively high numbers of *P. elegans*. Although the assemblage composition is maintained in the upper portion of the soil, snail numbers are drastically reduced, possibly because of more acidic conditions in the turf (Ah) horizon.

SP 068

Three samples were taken from a second ditch at Chisenbury Warren (ditch F6), which again sampled the early Romano-British top of the primary and the full secondary fills (contexts 7, 6, and 5; see Fig. 4.23 for section). The overlying buried soil (context 4) was not sampled. The calcareous yellowish brown primary fill (context 7) produced few shells (Table 6.3), but was dominated by open country taxa with few shade-loving species present. The dark yellowish brown secondary fills contained higher shell numbers with the lower secondary fill (context 6) dominated by the *Vallonia* species and *H. itala*. Open dry downland conditions are indicated, probably of short-grazed grass or limited arable activity.

The upper secondary fill (context 5), which seems largely anthropogenic in origin, showed an increase in Zonitidae, in particular *Aegopinella nitidula* and other shade-loving species (Clausiliidae, *Acanthinula aculeata*, *Ena obscura*). This suggest longer, dank vegetation and leaf litter in the ditch and possibly on the top of the adjacent lynchet. The low diversity indices suggest that this may indicate regeneration of this field boundary and its adjacent land, rather than being restricted to ditch vegetation. Soil and turf formed (context 4) over the flinty secondary fill.

Table 6.4 Weather Hill SP 137, land mollusc data from the lynchet hillwash

Site	*137*		
	Romano-British		
Context	*3*	*3*	*2*
Depth (cm)	*35-45*	*25-35*	*20-25*
Wt (g)	*1500*	*1500*	*1500*
Pomatias elegans (Müller)	5	10	1
Cochlicopa lubricella (Porro).	-	-	6
Cochlicopa spp.	2	2	-
Vertigo pygmaea (Draparnaud)	-	3	9
Pupilla muscorum (Linnaeus)	29	46	74
Vallonia costata (Müller)	7	9	31
Vallonia excentrica Sterki	31	50	110
Punctum pygmaeum (Draparnaud)	-	2	2
Nesovitrea hammonis (Ström)	-	-	2
Limacidae	7	6	5
Clausiliidae	2	-	-
Helicella itala (Linnaeus)	22	44	55
Trichia hispida (Linnaeus)	3	6	20
Cepaea/Arianta spp.	1	3	2
Taxa	10	11	12
TOTAL	109	181	317
Shells/Kg	73	121	211
Shannon Index H′	1.82	1.82	1.77
Brillouin Index HB	1.68	1.72	1.70
Shannon Index – Brillouin Index	0.14	0.10	0.07
Δ2	0.80	0.79	0.78
Δ4	4.08	3.90	3.59

Weather Hill Lynchets SP 137

Three samples were taken through the shallow (0.45 m deep), Romano-British field system lynchet comprising typical unsorted calcareous ploughwash colluvium (Table 6.4; Fig. 6.4). All assemblages are dominated by *Vallonia excentrica*, *Pupilla muscorum*, and *Helicella itala* comprising a typical ploughwash (arable) colluvial assemblage (cf. Evans 1972, 316–321) such as those on Fyfield Down and Overton Down (Fowler and Evans 1967). These accumulated in typical arable conditions, and compare well with the open-country setting and arable conditions in the upper, Late Iron Age fills of the Weather Hill Linear Ditch, LDP 083 (Entwistle 1994, 108–12).

Discussion

The area of the Wessex Linear Ditches Project (as defined by Bradley *et al.* 1994, 18–25) was recognised in the Late Bronze Age to have been one of mainly grassland (pasture), in which arable land was only recognised on a limited scale. Patches of mixed, probably managed, woodland existed amongst the downland. During the Iron Age Bradley *et al.* (1994)

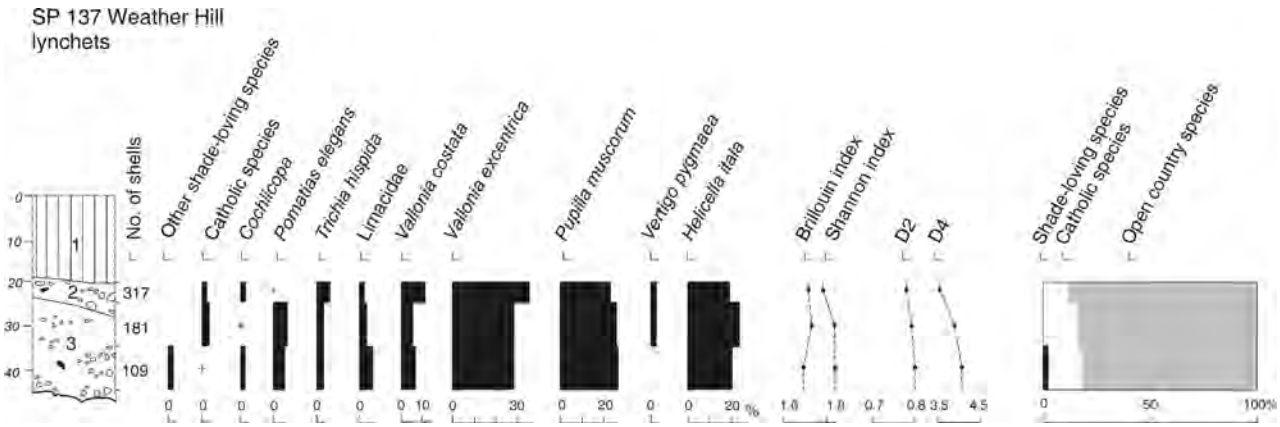

Figure 6.4 Weather Hill SP 137, molluscs

suggest the intensification of arable activity and the creation of pastoral enclosures. It is in this environment that we can see the enclosures and field systems examined here (ie, Tidworth Linear Ditch, Coombe Down enclosures, Chisenbury Warren field boundary ditches, and the Weather Hill lynchet) were set.

Bradley *et al.* (*op cit.*, 121) suggested that the Romano-British phase of cultivation is marked by a major ecological change, and their overall impression was of 'rather intensive cultivation with very rapid colluviation'.

Resolution of Interpretation at the landscape level

We have only limited evidence from the six short sequences probably covering a period of about 500 years maximum, but possibly as little as two centuries from the Late Iron Age to early Romano-British period. Sites analysed are dotted across the study area of nearly 150 km^2 of open downland. The sites of Chisenbury Warren, Coombe Down, and Weather Hill, all within the 18 km^2 area of the western study area all sit on high dry downland to the north-west of Sidbury Hillfort within *c.* 3 km of each other (Fig. 3.5). In contrast Tidworth Lynchets was the only site examined from the eastern study area (16 km^2; Fig. 1.3).

Our data cannot provide a detailed land use history of the later Iron Age and Romano-British farmed landscape from the selected sample series. Nevertheless, as very little work has been done to even attempt to establish the chalkland land use in the latter period (Fig. 6.5) this provides a useful and important contribution. However, we do not have any land snail information for well-dated middle or late Romano-British contexts.

The pre-Roman countryside and land use

What is clear is that open-countryside existed and had been long established in the locality of all of the studied sites, as suspected and shown previously (Entwistle 1994). The nature of that countryside seems, on the whole, to have been established downland, with no extensive woodland, with just a few tracts of woodland close to the sampled sites. Although trees and woodland obviously were a part of this landscape (see Gale 1994; and charcoal, below), the sampled areas were set away from woodland. The potted information we have indicates largely pasture at Coombe Down, and this can be seen to be comparable to evidence in general terms from the Wessex Linear Ditches Project (Bradley *et al.* 1994).

Is there change in the countryside in the Romano-British period?

At both Coombe Down and Tidworth lynchets there is evidence of increased broken ground, presumably arable, within the immediate vicinity of the sampled ditches (Fig. 6.5). Similar evidence can be seen at Chisenbury Warren within the early Romano-British period, and tillage is certainly present in the Roman lynchet at Weather Hill. With the exception of Weather Hill (SP 137) from which ploughwash in a lynchet was analysed, none of the other sampled sites indicates major ecological changes. Certainly there is a trend to an increase in tillage at or near the sampled locations, but there seems to be no major, radical change in the wider landscape. Had there been enough datasets it might have been possible, in retrospect, to attempt to compare Iron Age with Romano-British arable environments and to consider whether any differences might be due to changes in tillage from using an ard to those using a mould board plough. These cultivation techniques lead to significant differences in both the immediate field surface micro-environs and the consequent susceptibility of soils to erosion. It is possible that ard cultivation is under-represented in the molluscan interpretation due to the limited deformation of the soil structure, and the continued presence of low stand-height plants in arded fields (Reynolds 1979; 1981a)

	Late Iron Age	*Early Romano-British*	*Middle Romano-British*	*Late Romano-British*
Western Study Area				
Coombe Down	local: grazed and trampled grassland, some bare soil in ditch, ?some arable next to ditch wider: pasture and some arable	*local*: grass in ditch, possibly tillage adjacent *wider*: pasture but tillage present		
Chisenbury Warren		*local*: long, species-rich grass, becoming grazed pasture wider: long grassy downland, some shrubs		
Weather Hill		*local*: tilled field edge *wider*: arable and ?pasture		
Eastern Study Area				
Tidworth Lynchets		*local*: short grass and bare soil indicating pasture and ?arable, with grazed, grassy bank *wider*: open downland, ?mainly pasture	*local*: grazed pasture and grass over ditch and bank *wider*: pasture – paddocks, some evidence of arable	

Figure 6.5 Summary of environmental and land use derived from the molluscan evidence

Conclusion and comment

If, however, we view the increased level of arable activity at the sites analysed as being representative of the entire area, then certainly there is a significant increase in the areas of tilled land. From the land snails alone, however, we cannot judge the comment that this period saw increased colluviation (Bradley *et al.* 1994, 121), but that might be expected. The wider nature of the Romano-British economy and farming is discussed below.

Charred Plant Remains

by Chris J. Stevens

Eight bulk samples were taken for the recovery of charred plant macrofossils from three sites within the Western Sample area, Coombe Down South (SP 009), Beach's Barn (SP 026B), and Chisenbury Warren (SP 072).

The sampled features from Chisenbury Warren and Beach's Barn were all late Romano-British in date. Two samples from Chisenbury and one from Beach's Barn came from corn driers. Also from Chisenbury were samples from a possible horticultural soil and a midden deposit. The samples from Coombe Down South were Iron Age to early Romano-British in date and came from a pit and two hearth deposits.

Method

Samples were taken and processed at Oxford University Museum under the supervision of Mark Robinson. They were processed by flotation in a modified Siraf-type machine, with flots collected onto a 250 μm mesh. The residues were fractionated into 10 mm, 4 mm, 2 mm, and 0.5 mm mesh sizes. The flot was dried and the residue sorted by eye, while a low-powered binocular microscope was used for

sorting the flot. Plant macrofossils were extracted, identified and quantified. The plant taxa recorded from each sample are shown in Table 6.5 following the nomenclature of Stace (1997).

Results

All the samples contained cereal grains and chaff. Seeds of wild species, mainly arable weed species, were generally well represented. There was a broad correlation between different elements with samples rich in grain being rich in chaff and weed seeds. Cereal grains generally outnumbered weed seeds, while seeds of large seeded species also predominated.

The richest samples were from a pit at Coombe Down South, the corn drier flue from Beach's Barn and the midden from Chisenbury Warren. In these last two cases chaff was identified and counted within the flot rather than by sub-sampling. The samples from the Chisenbury corn drier were the poorest examined containing fewer than 10 charred items per litre.

Coombe Down South SP 009

Three samples were examined from an early Romano-British hollow (A81) and two Iron Age hearths (A74 and A116). Grains and chaff of spelt wheat were present in all three samples. Barley grains were also present in all, only outnumbering hulled wheat grains in hearth A74. No barley rachis fragments were present. A few possible grains of free-threshing wheat (*Triticum aestivum* sl) were recovered from hollow A81, but may be of short-grained spelt. A possible rachis fragment of free-threshing wheat was also recovered from Hearth A116. No other positive identifications of crop species were made, although a possible fragment of pea or bean and a possible seed of fennel were recorded. However, this latter seed may be of a similarly sized Umbelliferae, such as pepper saxifrage.

Of a more unusual nature were remains of roots, grass tubers, stems, and culms in all three samples. In hollow A81 several whole tubers of false-oat grass (*Arrhenatherum elatius* ssp. *bulbosum*) could be identified and other fragments may also be of this species. However no identifiable fragments of false-oat grass tubers were recovered from the hearths (A74, A116). It is also probable from the size and shape of many roots and tubers' fragments that species other than false-oat grass were present.

Seeds of large seeded species predominated in all three samples, mainly of common arable weeds. These included buttercup, fumitory, knotgrass, black bindweed, vetches/wild pea, ribwort plantain, cleavers, field madder, narrow-fruited cornsalad, thistle, oats, and brome grass.

Seeds of corn gromwell were frequent within one of the hearths (A74). The species is common on calcareous soils and its seeds are often preserved, partly through mineralisation by virtue of its high calcium carbonate content. Numerous seeds have also been recorded in other nearby sites such as Figheldean (Hinton 1999). Other species that might be classified as grain sized or slightly smaller, included black medick, perennial rye-grass and docks of which most resembled curled leaved dock. Of smaller species seeds of orache were quite common. Other species represented were fat-hen, clover, red bartsia, scentless mayweed and cat's-tail.

Crop husbandry

The three samples examined showed some variation in the proportion of the main components, chaff, grain, and weed seeds. Only in hearth A74 were glume bases more frequent than hulled wheat grains and so characteristic of the waste from dehusking. The two remaining samples also contained greater proportions of large weed seeds, so indicating crops in the later stages of processing. That from hearth A116 probably represents similar activities to that in hearth A74 but was too poor in plant remains to interpret.

Hollow A81 contained a high proportion of hulled wheat grain, which outnumbered both glume bases and weed seeds. Charring experiments show that glumes are destroyed far more readily than grain (Boardman and Jones 1990) so this may represent charring of a stored crop of semi-cleaned spikelets or perhaps a parching accident.

Several other Wessex Iron Age sites have produced occasional samples rich in false oat grass grains, for instance, Dorchester (Straker 1997), Easton Lane (Carruthers 1992), Battlesbury Hillfort (Clapham and Stevens forthcoming), and the Danebury environs project sites of New Buildings and Five Ways (Campbell 2000c). On many of these it is notable that remains, unlike those from Coombe Down South, do not occur in every sample as should be expected if they were a regular feature resulting from the harvesting of crops. This suggests that, while the burning of false-oat grass tubers was a frequent occurrence, it was not something that was conducted as regularly as the processing of crops.

Cleavers, which are present, have often been taken as indicative of autumn sowing (Reynolds 1981a; Jones, M. 1981; 1988), while field madder also germinates mainly in autumn (Grime *et al.* 1988) and corn gromwell is recorded as autumn germinating (Sharma and Vandenborn 1978). Given the high presence of these species within the samples it might be suggested that they were autumn sown.

Beach's Barn SP 026B

Only one sample was examined from a late Romano-British corn-drier flue. It contained large numbers of

Table 6.5 Charred plant remains

Site		*Coombe Down South SP 009*			*Beach's Barn SP 026B*	*Chisenbury Warren SP 072*			
Period		*LIA/ERB*			*Late Roman*				
Feature		*pit*	*hearth*		*corndrier flue*	*quarry scoop*	*corndrier flue*	*corndrier chamber*	*soil*
Feature number		*A81*	*A74*	*A116*	*13*	*A8*	*B34*	*B34*	-
Context		*A53*	*A88*	*A101*	*41*	*A23*	*B90*	*B91*	*B45*
Vol. size (l)		*10*	*2.5*	*3*	*7*	*10*	*6.3*	*10*	*2*
Flot size (ml)	*common name*	*75*	*25*	*60*	*75*	*50*	*120*	*60*	*10*
Cereals									
Hordeum vulgare L. *sl* (hulled grain)	barley	5	60	4	10	10	-	-	1
Hordeum vulgare L. *sl* (rachis fragments)	barley	-	-	-	5	4	-	-	-
Triticum sp. L. (grain)	wheat	-	-	9	25	-	-	-	-
Triticum cf. *dicoccum* (Schübl) glume base	emmer wheat	cf.1	-	-	cf.3	-	-	-	-
Triticum dicoccum (Schübl) (grains/tail grains?)	emmer	-	1	-	cf.10	-	-	-	-
Triticum spelta L. (grain)	spelt wheat	-	-	-	100	142	-	-	12
Triticum spelta L. (glume base)	spelt	7	23	2	770	134	-	-	2
Triticum spelta L. (spikelet fork)	spelt	4	2	-	10	-	-	-	-
Triticum dicoccum/spelta (glume base)	emmer/spelt	54	36	3	1400	1860	-	-	1
Triticum dicoccum/spelta (spikelet fork)	emmer/spelt	7	1	-	10	5	-	-	1
Triticum dicoccum/spelta (germinated grains)	emmer/spelt	2	-	-	-	9	-	-	-
Triticum dicoccum/spelta (tail grain)	emmer/spelt	-	-	-	-	18	-	-	-
Triticum dicoccum/spelta (grains)	emmer/spelt	345	10	9	-	-	11	15	-
T. cf. short grained *spelt/ aestivum sl*	spelt/bread	1	-	-	5	-	-	-	-
Triticum cf. *aestivum* L. (grains)	bread wheat	-	-	-	-	1	-	-	-
Triticum cf. *aestivum* L. (rachis fragment)	bread wheat	-	-	cf.1	-	-	-	-	-
Cereal fragments Indet. (est whole grains)	cereal	12	10	3	60	115	-	3	3
Cereal indet. (whole grains)	cereal	-	10	5	50	15	-	4	7
Cereal (germinated coleoptile)	cereal	-	-	-	-	5	-	-	-
Cereal/Poaceae fragments	cereal	+	-	-	-	-	-	-	-
Cereal (culm nodes)	cereal	-	-	3	1+brf	-	-	-	-
Ranunculus L. sp. subg *Ranunculus* arb	buttercup	6	-	1	-	-	-	-	-
Fumaria sp. L.	fumitory	1	5	-	-	-	-	-	-
Chenopodium album L.	fathen	-	1	-	cf.1	-	-	-	-
Atriplex sp. L.	oraches	3	7	-	4	12	-	-	-
Stellaria sp.	chickweed	-	-	-	-	12	-	-	-
Agrostemma githago L.	corncockle	-	-	-	-	2	-	-	-
Silene sp. L.	campions	-	-	-	-	2	-	-	-
Polygonaceae indet.	knot grasses	4	-	-	-	-	-	-	-
Polygonum aviculare L.	knot grass	3	-	-	1	-	-	-	-
Fallopia convolvulus (L.) Á. Löve	black	3	-	1	5	1	-	-	-
Rumex sp. L.	docks	-	-	-	-	18	-	-	-
Rumex cf. *crispus* L.	curled dock	18	-	-	5	-	-	-	-
Malva sp. L.	mallow	-	-	-	-	?1	-	-	-
cf. *Lotus* sp.	trefoil	3	-	-	-	-	-	-	-
Vicia L./*Lathyrus* sp. L.	vetch/pea	2	-	-	1	1	1	4	-
Lathyrus sp.	wild pea	-	-	-	-	-	-	1	-
Vicia sp./*Pisum sativum*	pea/bean	1	-	-	-	-	-	-	-
Medicago lupilina L.	black medick	10	6	-	-	3	-	-	-
Trifolium sp. L.	clover	2	-	2	-	-	1	-	-
Linum utatissimum	flax	-	-	-	cf.1	-	-	-	-
Foenicum vulgare Mill.	fennel	-	-	cf.1	-	-	-	-	-
Torilis sp. Adans.	hedge parsley	-	cf.1	-	-	-	-	-	-
Lithospermum arvense L.	corn gromwell	1	110	5	-	-	-	-	-
Plantago lanceolata L.	ribwort plantain	1	1	-	-	-	-	-	-

Table 6.5 Continued

Site		*Coombe Down South SP 009*			*Beach's Barn SP 026B*	*Chisenbury Warren SP 072*			
Period		*LIA/ERB*				*Late Roman*			
Feature		*pit*	*hearth*		*corndrier flue*	*quarry scoop*	*corndrier flue*	*corndrier chamber*	*soil*
Feature number		*A81*	*A74*	*A116*	*13*	*A8*	*B34*	*B34*	-
Context		*A53*	*A88*	*A101*	*41*	*A23*	*B90*	*B91*	*B45*
Vol. size (l)		*10*	*2.5*	*3*	*7*	*10*	*6.3*	*10*	*2*
Flot size (ml)	*common name*	*75*	*25*	*60*	*75*	*50*	*120*	*60*	*10*
Odontities vernus (Bellardi) Dumort	red bartsia	1	1	-	-	1	-	-	-
Sherardia arvensis L.	field madder	-	39	2	-	-	-	-	-
Galium aparine L.	cleavers	51	8	3	-	3	-	-	-
Galium sp. L. (small)	bedstraw	3	1	-	-	-	-	-	-
Valerianella dentata (L.) Pollich	narrow fruited corn salad	1	-	-	-	-	-	-	-
Carduus sp. L.	thistle	1	-	-	-	-	-	-	-
Anthemis cotula L.	stinking mayweed	-	-	-	-	5	-	-	-
Tripleurospermum inodorum (L.) Sch. Bip.	scentless mayweed	3	1	1	-	1	-	-	-
Poaceae indet stem/culm node	grass culm	10	20	-	-	-	-	-	-
Poaceae indet. root/culm base	grass roots	23	25	12	-	-	-	-	-
Poaceae seed indet (medium to large 2.5mm+)	grass	15	-	-	2	-	-	-	-
Lolium sp. L.	rye grass	5	-	-	-	3	-	-	-
Poa/Phleum sp. L.	meadow grass/cats'-tails	3	3	1	-	-	-	-	-
Phleum sp. L.	cat's tails	-	2	-	2	33	-	-	-
Arrhenathermum elatius subsp. *bulbosus*	onion couch	16	-	-	-	-	-	-	-
Avena sp. L. (grains)	oat	17	5	1	10	5	-	-	2
Avena sp. L. (awns)	oat	2	-	-	-	-	-	-	-
Bromus sp. L.	brome	1	6	-	-	-	-	-	-
Buds		-	-	6	-	-	+	4	-
large seedhead? indet.		-	-	-	-	-	-	1	-
Tubers indet. (Ranunculus ficaria?)		-	2	-	-	-	-	-	-

glume bases of which most were spelt, and also many hulled wheat grains. Barley rachis fragments were also present and a few possible grains of free-threshing wheat (*Triticum aestivum sl*) were recovered, but again may be of short-grained spelt. No other crop species were represented, although a large highly fragmented seed was tentatively identified as flax.

Weed seeds were relatively uncommon in the sample and, as with Coombe Down South, these were mainly of large seeded species, in particular oats (*Avena* sp.), black bindweed and probably curled leaved dock.

Crop husbandry

The high presence of glumes and relatively small numbers of seeds from predominately large seeded species, indicate that the sample derives from the waste following dehusking of semi-cleaned spikelets. Such assemblages are common within corn-drying-ovens and has lead to the suggestion that at least one of their functions may have been the parching of hulled wheat spikelets, a task that needs to be conducted before dehusking (van der Veen 1991). The absence of waste from earlier stages may indicate that such processes took place away from the corn drier/settlement.

It is probable that the crops were grown under similar soil conditions and using similar husbandry techniques to those discussed for Coombe Down South. However, the low amounts of seeds of weed species means that only a narrow range of ecologically unspecific species were present in the sample.

Chisenbury Warren SP 072

Four samples were analysed, two from corn drier B34, and one each from quarry scoop A8 and a possible horticultural soil (B45). Only the sample from a midden deposit (A23) in the top of the quarry scoop contained any significant quantities of charred macrofossils. The remaining samples contained only

small quantities of cereal grains, mainly spelt and occasional chaff fragments.

As with that from the Beach's Barn corn drier this sample contained large quantities of glumes, many spelt-type grains, and some barley rachises and grains. Unlike Beach's Barn several grains were recovered that either had sprouted embryos or had characteristic scars/grooves on their dorsal surfaces indicative of the mark left by the coleoptiles after germination. In addition, several elongated coleoptiles were recovered from germinated grains. While several grains showed no signs of germination, many were too degraded to tell.

The presence of weed seeds was very much tied to the quantity of cereals. The midden was relatively rich in weed seeds, while the remaining three samples had few. The corn drier only produced a single seed of clover and several of larger seeded vetches/wild pea, although one more closely resembles wild pea. Only seeds of oats (*Avena* sp.) were recovered from the possible horticultural soil.

The midden contained higher proportions of seeds from small seeded species than seen in the other samples. These were of cat's-tails, orache, and chickweed, while docks with intermediate sized seeds were also well represented. The sample also contained a few species that were not recorded from any other samples or sites, in particular stinking mayweed, corncockle, and campion.

Crop husbandry

Three of the samples are difficult to interpret given the low quantity of material. While they can be seen to represent burning of clean grain, spikelets, or processing waste, large weed seeds are still prevalent and may suggest similar activities and husbandry methods to those seen on the other sites.

The sample from the midden, like that from the Beach's Barn corn drier, contained high proportions of glume waste and undoubtedly came from the burning of waste following dehusking. The presence of germinated grains may be related to storage conditions, perhaps the grain had slightly spoiled. While a few germinated grains were present in very low numbers from Coombe Down South, it is only in the Romano-British period that such grains are found with any frequency, for example, at Catsgore (Hillman 1982). On some sites the association of such deposits with corn driers has led to the suggestion that they relate to brewing (van der Veen 1991).

While the corn-drier samples contained only small amounts of quite degraded hulled-wheat grain the feature may have been cleaned after the final use. That the contents of the midden might have come from the cleaning of spent fuel from the corn drier is a distinct possibility although no discernible relationship between these features was noted in the field. As with Coombe Down South, the high quantity of glumes is worthy of note.

While many of the weed species are similar to those from Coombe Down South, indicating similar cultivation practices, stinking mayweed has been taken as an indicator of the cultivation of heavier, clay soils and hence improved ploughs (Jones 1981). The evidence from Chisenbury seems to fit with this general picture, with evidence for the exploitation of these areas beginning in the late Romano-British period.

Discussion

Although only a relatively few samples and sites have been examined some comments can be made about the Romano-British farming activities on Salisbury Plain and of crop husbandry and site function.

Crops and cultivation

The range of cereal crops present conforms well to those from other Iron Age and Romano-British sites in the Wessex region. The predominance of spelt and barley, with an almost total absence of emmer, is well recorded, for example, from the Danebury Environs Project (Campbell 2000a), Brighton Hill (Carruthers 1995), Lains Farm (Carruthers 1992), Old Down Farm (Green 1981), Winnall Down (Monk 1985), Dorchester (Straker 1997), and Balksbury (de Moulins 1995; Ede 2001). The probability that some of the grains are of short-grained spelt wheat conforms with other studies within the Wessex area (Campbell 2000a).

All the species recovered are common weeds within crops grown on dry, light, calcareous soils and there is no indication of the cultivation of either heavier clays and/or wetter soils. Most are annuals and so indicative of high levels of soil disturbance. However, as species with large seeds tend to be annual rather than perennial, such a bias may result from smaller seeds having been removed, so being under-represented.

The period in which this stinking mayweed, typical of the cultivation of heavier clay soils, first appears is debatable. It appears here in a later Romano-British context at Chisenbury Warren. Elsewhere several seeds were recorded from a middle Iron Age pit at Easton Lane (Carruthers 1989) and a single seed is also known from later Iron Age Suddern Farm, both in Hampshire (Campbell 2000b). Jones records it as becoming more common within later Iron Age assemblages (Jones 1981; 1989). However, it is rarely recorded in any quantity prior to the 3rd century AD, only gaining real prominence on some later sites before becoming established as a common arable weed within Saxon and medieval times (Greig 1991).

The species is certainly far from widespread in the Romano-British period and appears only on a fairly limited number of sites, mainly of later Romano-British date and often in association with corn driers. Many of these are in southern England, for example, Alchester (Pelling 2002), Abingdon, Farmoor (Jones 1975; 1979), Gloucester (Clarke 1971), Milton Keynes (Jones, M. 1987), and Little Waltham (Wilson 1978), although it is also recorded from York (Hall and Kenward 1990), and Lancaster (Huntley in Buxton *et al.* 2000).

The low number of samples in general makes only the broadest interpretation possible for both the nature of crop husbandry and any changes within it. The range of species conforms well with other later Iron Age and Romano-British sites on the Wessex chalklands, for example both sites at Figheldean (Ede 1993; Hinton 1999) and Balksbury (de Moulins 1995; Ede 2001). The general impression is that, during the Iron Age, crops were grown on the lighter, dry, calcareous soils and no species were present that indicated the cultivation of heavier and/or wetter soils or those of a more acidic nature. From Chisenbury Warren at least there is some evidence for a possible expansion of cultivation onto heavier clay soils within the later Romano-British period. It is probable that crops were tilled with simple ards. However, it is possible that the use of metal-tipped shares or perhaps the introduction of asymmetrical ploughs made the cultivation of heavier, clay soils easier within the later period.

Harvesting

Crops appear to have been harvested in mid-to-late summer by sickle, fairly low-down on the culm, rather than uprooted, in both the Iron Age and Romano-British period. That at least two sites produced evidence for the processing of semi-clean spikelets probably means that crops were threshed, winnowed, and coarse and fine sieved, possibly in the field or on threshing floors within the settlement, before being stored. The cereals would then be taken from the stores, dehusked, further sieved, and larger weed seeds removed by hand, as and when grain was needed (*cf.* Stevens 2003).

At Coombe Down South the remains of grass roots and false-oat grass tubers were present and have been commonly recovered from sites in Wessex where their presence has been used to suggest harvesting through uprooting the crop (Jones 1981; de Moulins 1995; Ede 2001; Campbell 2000b; Clapham and Stevens in prep.). However this interpretation is in conflict with the composition of the sample. Hillman (1981; 1984) suggests that uprooting would only introduce seeds of those species that are twining in habit. Seeds of twining species are well represented in the samples, for example cleavers, fumitory, black bindweed, and vetches/tares. However, many other species are present (corn gromwell, field madder, black medick, and dock) that are free standing and are unlikely to have come into the assemblage unless they were harvested by sickle. Both corn gromwell and field madder are relatively low growing (0.4–0.5 m), which may further suggest that the crop was harvested relatively low down on the culm.

Crop processing

Many studies have demonstrated that charred remains frequently relate to cereal processing. The examination of the components within the assemblage can allow various stages of cereal processing to be deduced (Hillman 1981; 1984; Jones, G. 1984; 1987a; van der Veen 1992). In particular charred assemblages have been related to the routine processing of crops conducted after storage and prior to consumption (Stevens 2003), allowing some comments as to how the activities throughout the agricultural year were scheduled. Additionally, the ecological requirements of the weed species allow some insight into the conditions under which the crop was grown.

Weed seeds are generally removed so that, in the final processing stages, grains outnumber them. As larger weed seeds of similar size to the grain are more difficult to remove, assemblages coming from final processing also have proportionally more seeds from large seeded species than small seeded species (*cf.* Stevens 2003). This is the case here. The samples are, then, indicative of the final processing of semi-cleaned spikelets. That weed seeds outnumber grains in this sample is due to the high presence of seeds of corn gromwell. As already noted this species has highly robust seeds, which would have been removed largely by hand, while some seeds would have been left or ignored. Because of its exceptionally hard seed-coat past peoples may have gone to greater lengths to thoroughly remove these seeds before grinding grain into flour.

It is worth considering in more detail the appearance of extremely glume-rich samples within the late Romano-British period. Glume-rich assemblages are commonplace upon many Romano-British sites, but generally rare or absent from Iron Age sites, although some exceptions are known (eg, Battlesbury Bowl; Clapham and Stevens in prep.). In many cases they are directly associated with corn driers and often interpreted as waste from parching, as fuel for more parching or dehusking residues for brewing.

Drying of grain

Given that three samples came from late Romano-British corn driers at Beach's Barn and Chisenbury Warren some further discussion of the relationship between the samples and these structures is

warranted. The function of corn driers, despite their name, remains enigmatic. Experiments by Reynolds (1981b) seem to demonstrate that they are not entirely suited to the purpose of drying grain, be it to improve the condition of the grain for storage or to facilitate the removal of the glumes. Rather, Reynolds suggested that their features might be better suited to germination and malting of the grain for brewing. However, a review of the botanical evidence by van der Veen (1991) suggested that they may have been multi-functional, serving to dry crops before storage, for brewing, and to parch them prior to dehusking.

It is unclear from modern accounts whether spelt grain would be steeped (malted/germinated) before dehusking or after. The latter would seem unlikely as dehusking damages the embryo so that a significant proportion would not germinate. Hornsey (2003) notes that one advantage of modern wheats over hulled wheats is that the germinated embryos are more easily removed, implying that both the embryos (coleoptiles) and husks are removed from the grain simultaneously after steeping. Such deposits have been recorded from a number of corn driers in Britain (van der Veen 1991). It is possible that at least part of the sample comes from the preparation of grain for brewing.

Seeds from large-seeded species were, given the richness of this sample, very poorly represented, but grain was still more common which is unusual if the sample were to have come from the waste from earlier processing stages. One possible explanation is that the remains come only from the fine-sieving stage. Hence large weed seeds that are removed by hand are under-represented. An alternative explanation is that while the crop had been threshed, winnowed and coarse sieved, the initial fine sieving (often conducted in the field) had been omitted or some waste from earlier stages had become incorporated.

Activities represented, storage, and site function

As stated earlier the general assumption for small households is that grain was stored in the spikelet form and taken and processed piecemeal as and when needed. Such small operations could be conducted around the domestic hearth, and rich deposits of charred glumes are unlikely to be produced. Both the finds of high quantities of glumes and the presence of corn driers suggests that such operations, whether for clean grain for milling or for brewing, were conducted on a scale beyond the household. It may be that, rather than producing grinding grain for flour everyday, such operations were conducted less frequently in bulk using rotary querns both for dehusking and milling. The remaining possibility is that grain was produced and processed in bulk for exchange during this period.

It is assumed that within Iron Age and Roman Britain grain was stored as spikelets and taken from storage and processed piecemeal as and when needed (Hillman 1981). This raises some interesting aspects arising from the presence and interpretation of such glume-rich assemblages, especially at Beach's Barn.

While only a few samples were examined they suggest at least two changes in agricultural practices occurring between the Iron Age and later Romano-British period. The first is the expansion of cultivation onto heavier clay soils, possibly facilitated by the use of iron shares. The second is the scheduling of processing activities in which quite large quantities of cereals appear to be processed in bulk. This may be because larger social groups were involved and the storage of larger quantities of grain or flour became more desirable. Finally it is possible that both the expansion of farming and the processing of grain in bulk, whether for clean grain or beer, relates to an increased emphasis on production for exchange.

Such a change may be related to the development of towns through the 2nd century AD and the changes in the agricultural economy that such development would bring about (Fulford 1989, 189).

Charcoal

by Jaime Kaminski with Michael J. Allen

Bulk samples were processed using standard methods at the Oxford University Museum (see Stevens above), and the charcoal analysed by Jaime Kaminski as apart of his course work. This was done early in the post-excavation programme and was reported chronologically rather than by site. Subsequently several contexts and features were rephased. This report is a re-ordered and edited version based on that analysis (report held in archive).

Charcoal was recovered from 51 samples and identified from five sites from the Western Sample Area. These were from Early Iron Age to late Romano-British contexts and are dominated by assemblages from sites on Coombe Down (SP 009, SP 014A/B and SP 042) and Chisenbury Warren (SP 072), with one sample from the Everleigh enclosure (SP 023).

Little analysis has been conducted on charcoal of this period from the chalk of Salisbury Plain; main exceptions include material from the Sidbury Double Linear Ditch (Gale 1994, 119) and a peripheral assemblage recovered from Danebury hillfort approximately 19 km to the south-east (Poole 1984b, 481–3).

Methods

Charcoal fragments were fractured and tangential, transverse, and radial planes observed under a Wild M3Z stereo-microscope, at magnifications of up to x400. Identification was made using comparable wood anatomy (Schweingruber 1978; 1990) and modern reference material. Maximum tangential length and the maximum radial width were recorded on all fragments to allow some comparison of the state of preservation. Where possible the growth age of fragments was established by counting annual rings.

Some groups are normally only identifiable to the level of subfamily such as the Pomoideae, and Prunoideae subfamilies of Rosaceae. Where confirmed identifications to genus level were recorded, this is noted in the text. The taxa represented and botanical and common names used are listed below:

Quercus sp. Oak
Corylus avellana L.Hazel
Pomoideae Hawthorn type; hawthorn, *Malus sylvestris* (crab apple), *Pyrus communis* (wild pear), *Sorbus aria* (whitebeam), *Sorbus acuparia* (rowan), *Sorbus torminalis* (wild service tree)
Prunoideae includes *Prunus avium* (wild cherry), *Prunus padus* (bird cherry) and *Prunus spinosa* (blackthorn)
Fraxinus excelsior Ash
Prunus sp. Blackthorn type
Acer sp. Maple
Sambucus nigra Elder
Rhamnus catharticus Buckthorn
Alnus glutinosa Alder
Fagus sylvatica Beech
Ulmus sp. Elm
Euonymus europeaus Spindle
Buxus sp. Box
Taxus baccata Yew
Rosa sp. Roses

Coombe Down SP 009, SP 009C, SP 014A, SP 014B, SP 042A

Thirty-two samples were analysed mainly from Late Iron Age to late Romano-British contexts from SP 009, SP 014, and SP 042 (Tables 6.6–6.12). These are discussed chronologically. One sample was ascribed an incorrect context or site so has been excluded from the reporting here.

Early Iron Age

The Early Iron Age is represented in two sites on Coombe Down, the bivallate enclosure at Coombe Down South (SP 009) and the small enclosure on Coombe Down North (SP 014B) (Table 6.6). At the former, samples were examined from pit A46 and working hollow A47. The charcoal assemblage recovered contained both small diameter scrub and branchwood, in conjunction with older wood, including *Quercus* (oak) and rare examples of *Fagus* (beech) and *Ulmus* (elm). It is possible that these are remnants of closed woodland communities, although this is by no means certain as these taxa can exist as hedgerow or isolated trees. The younger wood was dominated by *Corylus* (hazel), Pomoideae, *Prunus* (blackthorn type), and *Fraxinus* (ash). The presence of *Acer* (maple) appears to corroborate the simultaneous exploitation of a more open environment.

The other Early Iron Age charcoal was recovered from the ditch of small enclosure SP 014B. The charcoal from pit 18 (which was truncated by ditch 5) was dominated by small diameter, twig and branch-sized fragments, while the remaining assemblage, from ditches 2 and 5, was essentially homogeneous. The dominance of smaller-sized material could introduce a bias into the assemblage; the low representation of taxa such as oak and the absence of elm and beech which are present in the other Early Iron Age samples could indicate the selective exploitation of scrub and brushwood in this context. This appears to be confirmed by the presence of taxa such as hazel, Pomoideae, and *Prunus*. The high numbers of some of the taxa represented is probably an indication of the greater degree of pre- and post-depositional fragmentation which is likely to affect smaller wood fragments, rather than a gauge of the proportions of various taxa in the natural environment.

The taxa recovered from these Early Iron Age contexts suggest a dominance of hazel, Pomoideae, oak, and ash. There might be some degree of bias resulting from the large number of twig-type fragments from SP 014B, which have tended to overemphasise the importance of hazel and other scrub type taxa to the detriment of other more mature trees. The presence of possible older woodland communities is indicated by the assemblage recovered from SP 009, which is dominated by oak, and encompasses taxa such as elm and beech.

Middle and Late Iron Age

Carbonised woody assemblages from the Middle to Late Iron Age were recovered, and analysed, exclusively from the Coombe Down complex (sites SP 009 and SP 042A) (Table 6.7). Within the bivallate enclosure (SP 009) charcoal was recovered derived from the fills of pit A11 (contexts A27) and hearth/oven base A116 (context A101). The charcoal associated with the pit, which contained a diagnostic Middle Iron Age 'strainer' in conjunction with a

Table 6.6 Charcoal from Early–Middle Iron Age contexts at the enclosures

Site	*SP 009A*							*SP014A*	*SP 014B*					*SP 014*	
Feature		*Pit A46*		*Hollow A47*				*Ditch 2*	*Pit 18*		*Ditch 5*				
Context type	*EIA fill*	*EIA fill*	*EIA fill*	*EIA fill*	*EIA fill*			*E-MIA buried soil*	*EIA fill*	*EIA basal*	*EIA primary*	*EIA lower 2ndry*	*EIA 2ndry*		
Context	*A44*	*A65*	*A69*	*A37*	*A73*	*No.*	*%*	*A11*	*B19*	*B21*	*B20*	*B17*	*B14*	*No.*	*%*
Quercus sp.	20	9	13	8	16	66	29.3	20	1	-	12	3	10	46	16.2
Corylus sp.	11	10	9	5	12	47	20.7	10	17	12	14	29	23	105	37.0
Pomoideae	4	7	12	7	15	45	20.0	11	15	4	7	14	18	69	24.3
Fraxinus sp.	7	3	10	8	11	39	17.3	4	5	6	-	7	10	32	11.3
Prunus sp.	2	1	5	-	7	15	6.6	5	10	1	2	-	1	19	6.7
Acer sp.	1	-	1	-	-	2	0.9	1	1	-	-	1	-	3	1.1
Sambucus	1	-	-	4	-	5	2.2	1	-	-	-	-	-	1	0.4
Alnus sp.	-	-	-	-	-	0	0	-	-	-	-	-	-	0	0
Fagus sp.	1	-	-	-	-	1	0.4	-	-	-	-	-	-	0	0
Ulmus sp.	-	-	-	1	-	1	0.4	-	-	-	-	-	-	0	0
Corylus/Alnus	-	1	1	2	-	4	1.8	-	2	-	1	2	-	5	1.8
Bark (unident)	-	-	-	1	-	(1)	0.4	-	-	-	-	-	-	0	0
Root (undient)	-	-	-	2	-	(2)	0.9	-	-	-	-	-	-	0	0
Total	47	31	51	35(3)	61	225		53	51	24	37	56	62	284	

number of animal skulls and fragments of a human jaw, was dominated by ash with intermittent examples of oak, hazel, and a rare example of *Taxus* (yew). Hearth A103 produced a very mixed charcoal assemblage which included oak, hazel, Pomoideae, Prunus, ash, and elder. This could be indicative of the multiple burning episodes which would have occurred in the structure or, alternatively, it could be a function of the degree of disruption sustained by the site from subsequent cultivation.

Further evidence for Middle Iron Age activity was recovered from the secondary fill (C41) of inner ditch (C3) of the bivallate enclosure; unfortunately the paucity of charcoal from this context negates a viable comparison. The context produced only two fragments of oak, one of which was a two year old twig, which was cut or ceased growing out of season. These were found in association with a fragment of ash and a rare example of *Euonymus europaeus* (spindle).

Early Romano-British

Assemblages of early Romano-British charcoals were only recovered from Coombe Down South (SP 009) (Table 6.8). The fills of irregular hollow A81 produced similar assemblages. The early Romano-British assemblages show a dominance of the usual oak, hazel, and Pomiodeaea taxa. This period witnessed an apparent increase in the representation of hazel, and may represent an expansion of the local hazel underwood at the expense of oak, although we do not understand the structure or management of woodland on the Salisbury Plain at this time. There is further tentative evidence of the expansion of open habitats suggested by the enhanced values of maple, and possibly *Rhamnus* (buckthorn). There also appears to be a general increase in the species diversity and especially of scrub taxa.

Late Romano-British

Charcoal was also recovered from three late Romano-British contexts (A7, A8, and A14) in trench A at Coombe Down South (SP 009) (Table 6.9). These layers were disturbed by cultivation which may account for the small size of the assemblage recovered. The charcoal appears to indicate a decline in the value of oak, although the small assemblage size could account for this. High proportions of hazel are still present, with a number of scrub taxa

Table 6.7 Charcoal taxa recovered from Middle–Late Iron Age enclosure contexts on Coombe Down SP 009 and SP 042

Site	*SP 009A*		*SP 009C*	*SP 042A*		
Feature	*pit A116*	*pit A11*	*ditch C3*	*ditch 6*		
	?MIA	*MIA*	*MIA*	*LIA*		
context type	*fill*	*fill*	*lower 2ndry*	*soil in ditch*		
context	*101*	*27*	*41*	*6*	*No.*	*%*
Quercus sp.	10	5	2	1	18	22.5
Corylus sp.	6	4	–	–	10	12.5
Pomoideae	5	–	–	1	6	7.5
Prunus sp.	1	–	–	–	1	1.3
Fraxinus sp.	6	29	1	2	38	47.5
Sambucus	1	–	–	–	1	1.3
Fagus sp.	–	–	1	–	1	1.3
Euonymous europeaus	–	–	1	–	1	1.3
Taxus sp.	–	1	–	–	1	1.3
Corlyus/Alnus	1	–	2	–	3	3.8
Total	30	39	7	4	80	

(maple, *Buxus* (box), buckthorn etc), as seen in the early Romano-British period

Chisenbury Warren SP 072B–D

Early Romano-British

Eighteen Late Iron Age and Romano-British contexts were analysed from Chisenbury Warren. The Late Iron Age/early Romano-British ditches in trench D produced small charcoal assemblages (Table 6.10) from which little comment can be specifically made. In contrast, early Romano-British pits in trench C were moderately rich with a relatively diverse taxa. The representation of taxa here, predominantly hazel followed by oak, is similar to that from Romano-British contexts at Coombe Down (Tables 6.8 and 6.9).

Late Romano-British

Much of the evidence for the late Romano-British period derives from the carbonised debris from the drier (B34) and oven (B20) in trench B at SP 072. A range of contexts was examined from the oven but, because of low numbers, these have been amalgamated in Table 6.11. These samples produced a wide variety of taxa, in low quantities, which is possibly the result of the number of burning episodes that would have occurred in the structure, and regular clearing of burnt debris from the firepits. Further, constant refiring and reduction of much of the material to ash was not conducive to its identification. All of the taxa identified derived from branchwood, with some twig sized material, implying the utilisation of scrub or lop-and-top as a major fuel source.

Table 6.8 Charcoal taxa recovered from largely early Romano-British contexts at Coombe Down South SP 009 (A, C, and D)

Site	*SP 009A*			*SP 009C*		*SP 009D*						
Feature	*Hollow A81*			*Ditch C3*		*Ditch D22*			*Ditch recut D3*			
	ERB	*ERB*	*ERB*	*IA–RB*	*LRB*	*ERB*	*ERB*	*ERB*	*ERB*	*ERB*		
context type				*upper 2ndry*	*tertiary*	*2ndry*	*upper*	*dump in recut*	*dump*	*upper*		
context	*A52*	*A53*	*A84*	*C29*	*C28*	*D18*	*D4*	*D9*	*D12*	*D8*	*No.*	*%*
Quercus sp.	*2*	*1*	*5*	*10*	*6*	*9*	*2*	*5*	*4*	–	*44*	*23.2*
Corylus sp.	5	5	3	5	4	7	–	4	12	2	47	24.7
Pomoideae	–	3	4	7	15	17	–	8	9	–	63	33.2
Prunus sp.	–	1	–	–	2	2	–	–	1	–	6	3.2
Fraxinus sp.	–	3	1	–	3	–	–	2	–	–	9	4.7
Acer sp.	–	–	–	1	–	1	–	2	–	–	4	2.1
Sambucus	–	–	2	–	–	–	–	1	–	–	3	1.6
Alnus sp.	–	–	–	–	–	1	–	–	–	–	1	0.5
Buxus sp.	–	–	1	–	1	–	–	–	–	–	1	0.5
Rhamnus sp.	–	–	–	–	–	1	–	2	1	–	4	2.1
Fagus sp.	–	1	–	–	–	1	–	–	–	–	2	1.1
Corylus/Alnus	–	–	–	1	1	–	–	1	–	–	3	1.6
Bark (unid.)	–	–	–	1	1	–	–	–	–	1	3	1.6
Total	7	14	15	25	33	39	2	25	27	3	190	

Table 6.9 Charcoal taxa recovered from late Romano-British contexts at Coombe Down South enclosure SP 009A

Site	*SP 009A*							
context type	*colluvium*		*midden deposit A41*					
context	*A3*	*A32*	*A7*	*A8*	*A14*	*A15*	*No.*	*%*
Quercus sp.	8	5	–	1	6	1	21	13.9
Corylus sp.	23	17	–	–	6	8	54	35.8
Pomoideae	3	10	–	–	7	4	24	15.9
Prunus sp.	2	4	–	–	1	–	7	4.6
Fraxinus sp.	7	1	–	–	7	4	19	12.6
Acer sp.	3	4	–	–	–	1	8	5.3
Sambucus	–	1	–	–	–	–	1	0.7
Alnus sp.	–	1	–	–	–	–	1	0.7
Buxus sp.	–	–	1	–	–	1	2	1.3
Rhamnus sp.	3	4	–	–	–	–	7	4.6
Fagus sp.	–	–	–	–	1	–	1	0.7
Corylus/Alnus	2	2	–	–	–	1	5	3.3
Bark (unid.)	–	–	–	–	1	–	1	0.7
Total	51	49	1	1	29	20	151	

Everleigh SP 023A

Two fragments of ash and one of oak were recovered from the fill (context 7) of an Early to Middle Iron Age post-hole (5) just outside the ditch of the Early Iron Age enclosure.

Discussion

The majority of the material derives from scatters in pits and ditches. These are mainly secondary deposits, in which the charcoal has been casually discarded or blown in. As such few contexts are single event dumps. Most may, therefore, have slightly mixed assemblages, potentially incorporating earlier charcoal, which could blur any temporal variations.

Woodland: changes in exploitation of woodland resources

Previous research undertaken on Salisbury Plain (Entwistle 1994), suggests that, by the onset of the Early Iron Age, the environment had been subject to considerable clearance. The charcoal samples here suggest that there was exploitation of more open and scrubby vegetation. The woodland included some beech with oak and one piece of elm. Although it might be tempting to suggest the persistence of localised mature woodland, the elm and beech may have existed as individuals or small stands of trees. The width of individual tree rings of these taxa are suggestive of mature trees.

The representation of hazel fluctuates and is less well represented in the Middle–Late Iron Age (Table 6.12), but this may be site-specific utilisation or even sampling bias.

Oak woodland commonly has a hazel understorey, but it is not clear whether the oak charcoal was 'standard' trees, as very few examples were of mature wood. It may indicate the preferential utilisation of branchwood. Much of the oak may have existed as scrub. Certainly the dominance of hazel and oak may imply scattered oak and hazel scrub with other shrubby taxa including roses, hawthorns, and blackthorns. Management and cutting of scrub and light woodland would favour the advance of hazel, a light-loving pioneer-type taxa. This would colonise clearings quickly, suppressing the expansion of oak. The presence of other light-loving taxa such as the Pomoideae, buckthorn-type, and maple, which are more prevalent in the later phases (Table 6.12), might indicate the intensification of clearance. Ash, however, which favours cleared areas, appears to decline.

During the late Romano-British period oak, ash, and hazel increase in value, while the Pomoideae and buckthorn-type decline. This may be a function of the selection of fuel, as this assemblage is heavily biased by samples from oven debris (Tables 6.11 and 6.12). By the late Romano-British period there are slight hints at some possible regeneration of scrub and shrubs shown in the increase in species diversity and presence of scrub taxa.

Wood size

A tentative extrapolation of the diameter of the annual rings suggests that the majority of the taxa derived from wood less than 40 mm in diameter. There is also extensive evidence for twigs in the less than 10 mm range. Examination of the spacing of the annual rings to provide a gauge of tree maturity confirmed that the majority derived from faster rather than slower growing species. Some of this material may indicate managed woodland.

The size of the wood recovered contrasts to that recorded during the Linear Ditches Project (LDP) from the charcoal lenses within the Middle Bronze Age primary silts of LDP 101. There was no evidence for twiggy material, but no comments on the maturity of wood could be made as a result of the small fragment size (Gale 1994, 119). This is just one sample and it is difficult to make any wider comment on this. The intensification of land use postulated in the Romano-British period by Entwistle (1994, 101–19, fig. 70) might explain the greater reliance on scrub and brush wood as a fuel source during the Romano-British era.

Table 6. 10 Charcoal taxa recovered from Late Iron Age to early Romano-British contexts at Chisenbury Warren (SP 072)

	SP 072D						SP 072C							
Feature	*ditch D97*		*ditch D104*				*Pit C53*	*Pit 107*		*Pit 117*	*Pit 111*			
	LIA-ERB	*LIA-ERB*	*LIA-ERB*	*LIA-ERB*			*ERB*	*ERB*	*ERB*	*ERB*	*ERB*	*ERB*		
context type	*occ debris*	*soil at top*	*colluvium*	*fill*				*lower*	*upper*		*lower*	*upper*		
Context	*D70*	*D106*	*D105*	*D116*	*No.*	*%*	*C54*	*C109*	*C65*	*C118*	*C115*	*C79*	*No.*	*%*
Quercus sp.	-	3	2	1	6	24.0	3	1	-	7	8	-	19	10.3
Corylus sp.	-	-	1	-	1	4.0	6	12	9	24	12	-	63	34.2
Pomoideae	-	-	-	-	0		5	6	12	4	7	16	50	27.1
Prunus sp.	5	-	-	1	6	24.0	1	-	5	-	-	3	9	4.9
Fraxinus sp.	-	-	2	-	2	8.0	-	1	9	8	-	-	18	9.8
Acer sp.	-	-	-	-	0		3	-	2	4	-	1	10	5.4
Sambucus	-	-	1	-	1	4.0	2	-	-	-	-	-	2	1.0
Alnus sp.	-	-	-	-	0		-	-	1	-	-	-	1	0.5
Fagus sp.	-	-	-	-	0		-	-	1	-	-	-	1	0.5
Rosa sp.	1	-	1	-	2	8.0	-	-	-	-	-	-	0	0
Rhamnus sp.	-	-	-	-	0		-	1	-	2	1	3	7	3.8
Corylus/Alnus	-	-	1	-	1	4.0	-	2	-	-	-	-	2	1.0
Bark (unident)	-	3	3	-	6	24.0	-	1	1	-	-	-	2	1.0
Total	6	6	11	2	25		20	24	40	49	28	23	184	

Table 6.11 Charcoal taxa recovered from late Romano-British oven (B20) and drier (B34) at Chisenbury Warren SP 072B

Site		*SP 072B*		
context type	*oven B20*	*oven B34*		
context	*21*	*various**	*No.*	*%*
Quercus sp.	2	22	24	22.2
Corylus sp.	7	26	33	30.6
Pomoideae	1	16	17	15.7
Prunus sp.	–	6	6	5.6
Fraxinus sp.	7	8	15	13.9
Acer sp.	–	3	3	2.8
Sambucus	–	1	1	0.9
Alnus sp.	–	1	1	0.9
Corylus/Alnus	1	2	3	2.8
Rhamnus sp.	–	3	3	2.8
Bark (unid.)	1	1	2	1.9
Total	19	89	108	

* = contexts B35, B37, B71, B72, B77, B90, B91

The wider environment

Few previous charcoal assemblages have been investigated within the boundaries of the Western Sample Area. All the species identified in the few Bronze Age samples at Sidbury (dominant ash at LDP 100, and hazel, oak, and elder at LDP 101) were also identified from the Iron Age and Romano-British assemblages reported here.

Charcoal assemblages from Danebury hillfort have a similar taxa composition to that recorded here (Poole 1984b, 481–3). The general trends at Danebury, as with the WSA, are for relatively high values for oak. At Danebury, however oak forms a higher percentage of the assemblages (40–50%) and this is complemented by the moderate values for elm (5–14%) which is a rare component of the Salisbury Plain assemblages. This may be a function of more extensive clay-with-flints in the Danebury area, compared with the WSA and the proximity of clay lithologies in its hinterland. The Danebury assemblage does not contain the classic chalkland taxa such as box, buckthorn, and spindle.

Animal Bone

by Adrienne Powell, Pippa Smith, Kate M. Clark, and Dale Serjeantson (1995); edited and amended by Stephanie Knight (2004)

The diversity of excavated sites, in terms of date range and morphology, provided an excellent opportunity to examine continuity and change,

Table 6.12 Charcoal representation by main period

Taxon	*Common name*	*EIA*		*MIA–LIA (inc. LIA–ERB)*		*ERB*		*LRB*	
		No.	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*
Quercus sp.	oak	112	22.1	24	22.4	63	16.8	45	17.4
Corylus sp.	hazel	152	30.0	11	10.3	110	29.4	87	33.6
Pomoideae	hawthorn type	114	22.5	6	5.6	113	30.2	41	15.8
Fraxinus sp.	ash	71	14.0	40	37.4	27	7.2	34	13.1
Prunus sp.	blackthorn type	34	6.7	7	6.5	15	4.0	13	5.0
Acer sp.	maple	5	1.0	2	1.9	14	3.7	11	4.2
Sambucus	elder	6	1.2	2	1.9	5	1.3	2	0.8
Alnus sp.	alder	–	–	–	–	2	0.5	2	0.8
Buxus sp.	box	–	–	–	–	1	0.3	5	1.9
Rhamnus sp.	buckthorn	–	–	–	–	11	2.9	10	3.9
Fagus sp.	beech	1	0.2	1	0.9	3	0.8	1	0.4
Rosa sp.	rose	–	–	2	1.9	–	–	–	–
Euonymus europeaus	spindle	–	–	1	0.9	–	–	–	–
Taxus	yew	–	–	1	0.9	–	–	–	–
Ulmus sp.	elm	1	0.2	–	–	–	–	–	–
Corylus/Alnus	hazel/ader	9	1.8	4	3.7	5	1.3	5	1.9
Bark (unid.)		1	0.2	6	5.6	5	1.3	3	1.2
Root (unid.)		1	0.2	–	–	–	–	–	–
Total		507		107		374		259	

and geographical variation, in animal husbandry on the Plain during the 1000 years of settlement represented. Consideration of the origin of bone deposits was also a major aspect of the analysis.

The number of animal bones recovered from the nine excavated sites varies greatly, with only eight retrieved from one of the Coombe Down Iron Age enclosures and over 15,000 from Coombe Down South (SP 009). The contexts containing bone were assessed in relation to the amount of residual pottery present and those contexts with a high residual content were not considered for further study of the animal bone. Detailed assessment was made of the material from those sites that were not studied further and the results are available in the site archive. This enabled us to focus on those sites that produced a good sample of securely dated animal bones. However, re-analysis of the ceramics has shown that some contexts that contained high residual ceramics have, in fact, been included at one of the sites (see Chisenbury Warren, below).

Four important assemblages were recovered that merited detailed further study. The material from Beach's Barn (SP 026) came from securely dated contexts with very little evidence of residuality. That from the Iron Age ditch at Warren Hill (SP 049) was also considered to be of high priority because of the security of the contexts. The two settlement sites of Coombe Down South (SP 009) and Chisenbury Warren (SP 072) were large assemblages that were thought suitable to provide information on settlement and economy in the study area. All four sites were thought suitable for investigation into depositional practice.

All of the selected sites contributed bones of the domestic dog *Canis familiaris*, and consequently a very useful series has emerged from the Early Iron Age to the Late Romano-British period. It is rare that such a sequence becomes available within one group of sites and these remains cover a particularly interesting timespan in the evolution of this animal. There are indications that canine diversity may begin to occur earlier than the Romano-British period (Clark 1994; 1995), and this largely contradicts the traditional view. However, the paucity of data relating to the earlier dogs, particularly metrical data, has made it difficult to test theories of differentiation within the species earlier than the 1st millenium AD. These Salisbury Plain specimens thus make a substantial contribution to the data set of prehistoric and protohistoric dogs.

Methods

The assemblage consists only of hand-retrieved material. A zone system was applied in which each element (with the exception of the patellae, sesamoids, carpals, and smaller tarsals) was divided nominally into eight sections so that for any fragment the presence or absence of each zone could be recorded (Serjeantson 1991). This produced a basic

fragment count, or number of identifiable specimens (NISP). Since differential fragmentation and survival may affect the relative proportions of species present in an assemblage, MNE and MNI of the domestic animals were also calculated where appropriate. The sum of the most frequent zone, with no account of symmetry, produced the minimum number of elements (MNE) excluding loose teeth. Where the total MNE for a period was considered to be of sufficient size the minimum number of individuals (MNI) was calculated from the most frequently occurring element, taking symmetry into account.

Where identification to species was not possible, fragments were assigned to either large mammal (LAR in tables) or sheep-sized mammal (SHS in tables) categories. Differentiation between the bones of sheep and goat were made where possible using the methods of Boessneck (1969), and Payne (1985) for distinction on dp_4. The incidence of burning and butchery was noted and quantified, with the latter categorised as either chop marks or knife cuts. These and other taphonomic characteristics, such as the incidence of carnivore and rodent gnawing, were quantified as a percentage of the entire assemblage of each site. The relative proportion of loose teeth has also been used to gauge the state of preservation of the material, since these are particularly durable elements, surviving and remaining identifiable when mandibles and maxillae have disintegrated.

Tooth wear was recorded after Grant (1982), and attribution to wear stages and respective ages was based on Halstead (1985) for cattle and O'Connor (1988) for pigs. For sheep and goat the stages of Payne (1973) were used. However, because of the scarcity of complete mandibles much of the ageing was based on a modification of Payne's technique (1988) which used loose deciduous fourth premolars and third molars. This method relies on the eruption times of the fourth premolar and the third molar. Since these erupt at approximately the same time (at around 2 years) a mandible which contains a deciduous fourth premolar will not usually have the third molar in wear (but see an anomalous sheep mandible from Warren Hill, below). The proportion of deciduous fourth premolars in a group is taken to represent that proportion of the group which were dead by 2 years of age. The wear on the third molar is then used to assign these teeth to subsequent age stages. These are calculated as the percentage killed within an age range and as a cumulative percentage (Payne 1988). Horse teeth were aged using Levine's (1982) measurements of crown height for adult cheek teeth and wear categories for juvenile cheek teeth, and incisors were aged on the wear state of the infundibulum after Huidekoper (1903).

Epiphyseal fusion was also used to age the material from these assemblages, although it is generally less reliable than tooth eruption and wear. Timing of epiphyseal closure is based on Sisson and Grossmann (Getty 1975). The term 'juvenile' has been applied to remains which, while lacking fusion evidence, are considered, on their morphology, to have originated in animals below breeding age.

The material was sexed where possible: cattle, sheep, and goats on their pelves (Grigson 1982), pigs on the morphology of the upper and lower canine teeth (Schmid 1972), and horses on the presence or absence of canine teeth.

Measurements after von den Driesch (1976) were taken on all fragments where possible. Data from contemporary sites in the Animal Bone Metrical Archive Project (http://ads/adhs.ac.uk/catalogue/specColl/abmap/index.cfm) were used for comparison. The analysis of the dog bones is concerned primarily with the metrical and morphological data, and these are also based on the measurement templates of von den Driesch with some modifications.

Warren Hill SP 049

This was not a large assemblage, only 849 fragments in total from a section across the enclosure ditch (Ditch 12). However 37% of bones were identified to species overall, although the proportion was slightly lower in the material from Middle Iron Age contexts and slightly higher in that from the Early Iron Age (Table 6.13). This could indicate better preservation of bone from the basal layers of the enclosure ditch, a relatively common situation (Wilson 1985), and corroborated in this case by the fresh condition of the pottery from these layers.

Taphonomy

Few butchery marks were observed on the bone, only 3% overall (Table 6.14). A larger fraction of the assemblage, although still not substantial at 8%, showed damage from carnivore gnawing, including three bones (two sheep/goat and one pig) which showed signs of having passed through a dog's digestive system. Burnt bone was very infrequent. The proportion of loose teeth in the assemblage was relatively high. There was a substantial increase in the proportion of loose teeth in the upper layers of the ditch and this, together with the decrease in observed butchery marks and carnivore damage, would tend to support the assertion that bone was better preserved in the basal layers. When the proportions of loose teeth were compared for cattle and sheep/goat, the figures for the latter were far greater (10–28% and 30–42% respectively). This greater susceptibility to fragmentation and destruction has been noted in sheep or goat bones at other sites (eg, Maltby 1987a),

Table 6.13 Warren Hill SP 049, number of identified animal bone specimens

	Period	*Horse*	*Cattle*	*Sheep/ goat*	*Pig*	*Dog*	*Water vole*	*SHS*	*LAR*	*Unid.*	*Total*
NISP	EIA	6	65	50	8	2	1	39	33	111	315
	E/MIA	3	20	26	7	–	–	28	14	56	154
	MIA	6	39	56	17	4	–	83	48	127	380
	Total	15	124	132	32	6	1	150	95	294	849
	% major species	5	41	44	11						
MNE	EIA	3	47	25	7						
	E/MIA	2	13	7	1						
	MIA	3	20	23	7						
	Total	8	80	55	15						
	% major species	5	51	35	10						

and is undoubtedly related to their being finer-walled and less robust than homologous cattle bones.

Cattle

In the Early Iron Age and Early/Middle Iron Age contexts the bones of cattle were the most frequent of all the species, occurring almost twice as commonly as those of sheep and goat (Table 6.13). In the Middle Iron Age contexts cattle were slightly outnumbered by sheep, but the numbers were so small that the difference is insignificant. The larger discrepancy in the NISP figures for cattle and sheep was due primarily to the greater frequency of sheep loose teeth.

The total for the Early Iron Age includes some groups of associated bones. Parts of a left hind limb in context 25 included a femur, tibia, astragalus, and navicular cuboid; an adjoining right radius and ulna were found in context 40, the former with chop marks at the proximal end laterally. Ditch fill 43 contained a left fore limb group consisting of a radius, ulna (also showing proximo-lateral chop marks), and adjoining magnum, radial, intermediate, and ulnar carpals. In addition there were four skulls in varying degrees of completeness from the base of the ditch, three in context 43 and one in context 41.

The fragmentary nature of the skulls limited the number of measurements that could be taken (archive). However, least frontal breadth, least occipital breadth, and breadth of occipital condyles (all measurements with significant differences between the sexes) were compared with modern cattle skulls and Grigson's (1974) measurements on skulls of several domestic breeds. The archaeological specimens fell into the range of the females, usually at the bottom end of the range, and one fell below this range for least occipital breadth.

Another noteworthy feature of these skulls was the presence of two naturally polled specimens. This appears to have been rare in southern Britain, although it occurs at a few sites in Wessex (Harcourt 1979) from the Early Iron Age onwards (eg, All Cannings Cross (Jackson 1923; Davis 1987). Morphologically, two of the skulls' intracornual ridges showed a double arch and both had a convex frontal profile (Grigson 1976). The other skulls differed, one with a slight boss and the other with a pointed boss on the frontal, the latter skull had a high double arched intercornual ridge.

Two of the skulls had full adult dentition. The teeth were absent on the other skulls, but one at least was from an immature animal, since the cranial sutures were not fully closed. The remainder of the material indicated two mature adults from the Early Iron Age and another animal at least 30 months in age. An animal probably 30–36 months old was represented in Early/Middle Iron Age layers and in the Middle Iron Age there was evidence of an animal less than one month old. Fusion data for the site was also minimal and consisted mostly of fused bones (Table 6.15) with no surviving evidence of very young animals and the few unfused bones from older juveniles.

Table 6.14 Warren Hill SP 049, taphonomy

Period	*% butchered*	*% burnt*	*% carnivore gnawed*	*% indentified*	*Loose teeth (% of ID)*	*Total bone*
EIA	5	<1	10	42	20	315
E/MIA	1	5	7	36	50	154
MIA	2	1	7	32	41	380
Total	3	1	8	37	34	849

Sheep

None of the sheep/goat material was identified as goat, whereas 19 bones, mostly from the Early Iron Age contexts, were identified as sheep, which term will henceforth be used for ovicaprid remains. As mentioned above, sheep were outnumbered by cattle except in the Middle Iron Age (Table 6.13). There were no groups of articulated bones present, and the distribution of anatomical elements

Table 6.15 Warren Hill SP 049, fusion data

	Age (months)	*Early Iron Age*				*Middle Iron Age*			
		Unfused	Fused	Total	% survival	Unfused	Fused	Total	% survival
Cattle	7–10	–	7	7	100	–	1	1	100
	12–18	–	9	9	100	–	2	2	100
	24–36	1	3	4	75	–	1	1	100
	36–48	1	6	7	86	1	1	2	50
	Total	2	25	27		1	5	6	
Sheep/goat	6–10	1	6	7	86	–	3	3	100
	1316	–	–	–	–	–	1	1	100
	18–28	–	1	1	100	1	1	2	50
	30–42	1	1	2	50	–	1	1	100
	Total	2	8	10		1	6	7	
Pig	12	1	1	2	50	–	1	1	100
	36–42	1	–	1	0	–	–	–	–
	Total	2	1	3		0	1	1	

present does not suggest preferential dumping of any body part in any period.

Ageing information was sparse, although there was slightly more dental data than for cattle. Of the four mandibles from Early Iron Age contexts, two had tooth wear indicating an age of four to six years (Payne stage G) and a third made a pair with one of these. The fourth mandible was probably from an animal 6 months to 2 years old. In the Early/Middle Iron Age contexts an animal between 3 and 4 years old was present. Middle Iron Age contexts contained three mandibles with the P_4 or its socket present, from animals greater than 2 years old (the more distal molars were absent or broken) and a loose deciduous P_4 in wear from an animal less than 2 years old.

Most of the bones were fused (Table 6.15) although, as suggested by the tooth eruption and wear, there was some kill-off of juveniles.

Pig

Pig was a minor component of the assemblage throughout. Although there was a slight increase in the Middle Iron Age levels the small sample size meant that the actual number of bones represented was not significant. However, all parts of the carcass were represented.

Ageing and sexing information was scarce. Two Middle Iron Age mandibles and a loose unworn P_4 from the Early/Middle Iron Age were from sub-adult animals (O'Connor 1988). Both fused and unfused bones occurred (Table 6.15), but there was no evidence for animals older than 2–2½ years. Three male canines were present, two from Early/Middle Iron Age contexts, and one from the Middle Iron Age.

Horse

Horse bones were present in consistently low numbers from the Early to Middle Iron Age. This is typical of most Iron Age sites in Wessex as at Danebury, for example, where horse remains contributed only 3% of the assemblage (Grant 1984a). Horse bones form a large proportion of the assemblage at very few Iron Age sites, such as Bury Hill, Hampshire (Hamilton 2000a).

Measurements of crown heights on six molars and premolars (Levine 1982) gave ages ranging from 7 years to more than 19 years, this last on an M_1/M_2 from the Early Iron Age. Although there was no evidence from the teeth of the presence of juvenile horses on site, an unfused epiphysis from a proximal humerus, which would have come from an animal less than 3–3½ years old, was recorded among the otherwise fused bones.

Dog

A small proportion of the bones were from dogs. In the Early Iron Age an adult, but probably not elderly, skull with virtually no tooth wear, and a single canine tooth was recovered from adjacent Early Iron Age context 38. Loose teeth and a partial tibia were recovered from Middle Iron Age contexts.

Wild species

The only wild, and almost certainly non-anthropogenic, mammal to occur was water vole (*Arvicola terrestris*), represented by a single right ulna in an Early Iron Age context.

Butchery

Both chop and knife marks were observed, and almost all occurred on cattle bones in the Early and Middle Iron Age. Those on the cattle skulls include fine cut marks on the frontals and parietals of three of the skulls which may indicate skinning, and a cut on the maxilla of one of these may have been made during muscle removal (filleting or cleaning). On another the

occiput appears to have been smashed to enlarge the foramen magnum and remove the brain. This skull had also been exposed to fire; a patch of charring was noted on the temporal. Horn cores on one of the skulls are missing and may have been purposefully broken off. Chop and saw marks were also noted on sheep bones in the Early Iron Age and a chopped horse bone came from a Middle Iron Age deposit.

Measurements

Measurable bones from any species occurred infrequently in this assemblage. Withers heights for cattle were calculated from two bones using Matolcsi's factors (von den Driesch and Boessneck 1974): a radius gave a height of 1074.6 mm, and a metacarpal gave a height of 1030.0 mm. Both of these were from the Early Iron Age and are typical of the small Iron Age cattle, although towards the smaller end of the range for southern England. Although small, the sheep were also within the range for contemporary animals from other sites in southern England (Table 6.16).

One Middle Iron Age pig humerus had a distal breadth (Bd) of 38.2 mm, comparable with the Danebury animals (Grant 1984a; 1991). Two distal humeri of horse could be measured and they also fall within the size range for horses in southern England in the period.

The measurements of the Early Iron Age dog skull are shown in Table 6.17. The calculated cephalic index is 54.5, the snout index 47.5, and the snout width index 45.7, and both the absolute dimensions and the indices conform to the range presented for Iron Age dogs by Harcourt (1974). The Middle Iron Age tibia has a depth of 39.1 mm which, on comparison with modern skeletons, indicates a medium to large dog.

Pathology

Dental anomalies comprised the majority of the pathological material. A cattle mandible with an M_3 lacking the distal lobe occurred in the Early Iron Age material. This anomaly often occurs in cattle from Iron Age and Romano-British sites (Hamilton 2000b; 2000c) and is common in urban centres as well as rural sites (Dobney *et al.* 1996). The paired Early Iron Age sheep mandibles were both unusual in that although the third molar had erupted and was in advanced wear, the deciduous fourth premolars were retained, with no sign of the adult P_4 in the crypt beneath. This retention of juvenile teeth can occur where permanent teeth are absent or fail to erupt (Baker and Brothwell 1980). The congenital absence of P_2 is often noted in both sheep and cattle material; however the absence of the fourth premolar appears to be very rare. A more common dental pathology is demonstrated by a sheep right mandible from the Early Iron Age which had an abscess below the P4. The dog skull with partially filled right M_2 and left canine alveoli implies premature loss of these teeth; the remaining teeth were unworn and indicate the animal was not particularly old.

Table 6.16 Warren Hill SP 049, measurements (mm)

Species	*Bone element*	*Measurement*	*Date*	*ABMAP*				*Warren Hill*
				Mean	*Min.*	*Max.*	*n*	
Cattle	Horn-core	length	LBA-EIA	176	176	176	1	81*
		least diam.	LBA-EIA	32	32	32	1	32.2*
		greatest diam.	LBA-EIA	47.5	47.5	47.5	1	48.9*
	Scapula	GLP	EIA	58.9	58.9	58.9	1	54.7, 58.3, 62.4
		BG	EIA	41.1	39.2	43.0	2	41.5, 42.8, 43.2, 43.2
		LG	EIA	49.0	47.6	50.4	2	46.3, 49.6, 50.4, 55.2
		SLC	EIA	44.7	42.3	45.7	4	42.8, 44.0, 44.6
	Humerus	Bd	EIA	70.1	64.7	80.3	4	64.1, 70.1
		BT	EIA	63.2	59.0	68.9	5	57.9, 60.4
		HT	EIA	–	–	–	–	36.4, 36.9
		HTC	EIA	–	–	–	–	26.0, 26.4
	Radius	Bd	EIA	55.3	54.8	55.7	2	61.0, 66.1
	Tibia	bD	EIA	59.4	59.4	59.4	1	48.8
			MIA	54.2	47.2	60.6	36	50.7
Sheep/ goat	Humerus	Bd	EIA	27.4	25.8	28.2	3	26
		BT	EIA	23.5	23.5	23.5	1	23.3
			MIA	24.9	22.4	27.9	14	22
Dog	Tibia	Bd	MIA	–	–	–	–	39.1

* = Early Iron Age

One of the cattle skulls had an enlarged foramen just below the nuchal line, with no evidence of other pathological alterations. This phenomenon has been noted at several other, mainly Romano-British or medieval, sites and several explanations have been proposed, including genetic traits, parasitic infection, and increased vascularisation caused by yoking (Dobney *et al.* 1996). The argument for the latter might be strengthened by their exclusive presence on cattle skulls at Salisbury Plain sites and those investigated by Dobney *et al.* (1996) The only other pathological specimen was a sheep right humerus with grooving on the articular surfaces of both medial and lateral trochleas, which may be an early manifestation of degenerative osteoarthritis.

Discussion

The implications of the presence of the more or less complete cattle skulls at the base of the ditch are discussed in more detail below. However, it should be noted here that, first, the skulls in context 43 appear to have been deposited in one event in a discrete cut in the basal ditch fill and, secondly, that other bones were present in this feature. In addition to a group of articulating forelimb bones, mentioned above, there were several apparently unassociated, often gnawed, bones from other domestic species, one of which was butchered, and all apparently ordinary domestic refuse.

Small sample sizes mean that there was not enough ageing information to discuss husbandry patterns for the four main domestic animals that formed almost the entirety of the assemblage, beyond noting that most cattle seem to have been mature at death, indicating use as traction animals, and that pigs were slaughtered at a young age for meat.

The greater proportion of cattle refuse compared to sheep is one of the notable features and is unusual in an Iron Age site on the chalk upland. However it does not necessarily reflect the proportions in which these animals were kept. It has been demonstrated at several sites (eg, Winnall Down (Maltby 1985), Owslebury (Maltby 1987a), Mingies Ditch (Wilson 1985)) that there were intrasite differences in the distribution of cattle and horse remains as opposed to those of sheep and pig. The former tended to be deposited more frequently in ditches and more peripheral areas of settlements, whereas the latter tended to be more common in pits and closer to the central areas of settlements.

Since all the bone in this assemblage was recovered from the enclosure ditch, it is possible that the predominance of cattle was the result of intra-site variation in disposal of different species, rather than of husbandry practices.

Table 6.17 All sites, dog skull measurements (mm) after von den Driesch (1976, 42–5)

Measure -ment-	*EIA Warren Hill (SP 049)*	*MIA Coombe Down (SP 009)*	*RB Chisenbury Warren (SP 072)*	*Late RB Beach's Barn (SP 026)*
context	*39*	*A27*	*B70**	*33 (skeleton)*
1	181.4	177	–	150.1
2	169.6	166	–	146.7
3	160.5		–	138.7
7	88.4	88.6	–	76.7
8	86.2	71	–	73.9
9	101.4	97	–	86.2
12	77.2	73	–	64.2
13	87.7	–	–	78
14	33.3	–	–	28.3
15	64.9	65	–	56.3
16	20.3	19.6	–	17.3
17	51.1	49.7	–	41
19	18.5	21	17.5	16
20#	*11.7*	*12.7*	*10.5*	*11.4*
21##	*6.7*	*7*	*7*	*6.6*
22	22.2	–	–	21.3
23	61.5	–	–	54.2
25	35.7	38.4	–	31.3
27	17.4	20.5	–	16.9
28	17.1	16.6	–	15.6
29	58.3	–	–	58.1
30	98.8	–	–	93.9
31	37.1	43.2	–	40.7
32	46.1	50.4	–	53.8
33	35.4	36.4	–	36.8
34	65.5	–	–	56.7
35	37.1	–	–	30.8
36	39.4	37.2	–	32.4
37	32.5	–	–	29.3
38	56.9	55.9	–	53.3
39	52.7	51.6	–	
40	46.2	43.9	–	37.2
HII	*102.3*	*111.3*	–	*84.9*

* some residual IA. # = length of M1 alveolus; ## = length of M2 alveolus; HII = Harcourt II (akrocranion-nasion distance)

Chisenbury Warren SP 072

Almost all of the animal bone material studied was from Early and Late Romano-British features, with a few that were Late Iron Age in date. However, rephasing showed that the proportion of residual early Roman ceramics in Late Romano-British deposits was fairly high and that the contents of most features

Table 6.18 Chisenbury Warren SP 072, number of identified animal bone specimens

Trench	Period	Horse	Cattle	Sheep/goat	Pig	Dog	Red	Roe	Fox	Hare	Rabbit	Water vole	Bank vole	Mole	Bird	Toad	SHS	LAR	Unid.	Total
A	ERB	7	5	6	–	1	1	–	–	–	–	–	–	–	–	–	15	16	68	119
	LRB	15	30	48	5	1	–	–	–	–	1	–	–	1	–	–	36	116	234	487
	Sub-total	*22*	*35*	*54*	*5*	*2*	*1*	–	–	–	*1*	–	–	*1*	–	–	*51*	*132*	*302*	*606*
	% Major species	*19*	*30*	*47*	*4*															
B	Romano-British	128	248	982*	84	9	–	3	5	5	34	8	–	1	8	3	807	495	1284	3122
	% Major species	*9*	*17*	*68*	*6*															
C	Romano-British	27	49	350	22	10	1	–	–	–	6	–	–	–	1	–	187	92	188	933
	% Major species	*6*	*11*	*78*	*5*															
D	Romano-British	14	35	308#	7	1	1	–	–	4	1	–	3	–	–	–	87	50	210	413
	% Major species	*4*	*10*	*85*	*2*															
Total	Whole site	191	367	1694@	118	22	3	3	5	9	42	8	3	2	9	3	1131	769	1984	6364
	% Major species	*8*	*15*	*71*	*5*															

* includes an associated group of 12 foot bones; # all from one individual; @ includes 297 sheep and 10 goat

containing animal bone could not be precisely dated. Trenches B and C, in the centre of the settlement, were the most badly affected, with 23–93% of animal bone from contexts containing residual material. Consequently, the assemblage has, for the most part, been treated as a single phase: 'Romano-British', and caution must be applied to discussion of changes between the early and late Romano-British period, since differences in animal exploitation may have been masked by mixing of material.

This was a relatively large assemblage of 6364 fragments and most of the bone was recovered from Trench B (Table 6.18). Bones of sheep or goat were the most frequently occurring of any species in each trench and in total, but the degree to which they dominated the assemblage varied between trenches. This may be related to intrasite differences in disposal of sheep or goat versus cattle (see above) since the trench with the lowest proportion of sheep or goat bone was Trench A, which contained a quarry and hence was presumably an area marginal to the settlement proper.

Table 6.19 confirms that a higher proportion of cattle bones were found in ditch contexts than in pits and contexts associated with the building platforms, where the highest proportion of sheep or goat bones were found. However, the difference was not as marked as at other sites (eg, Winnall Down; Maltby 1985), and although small sample size may have biased the results, it might be partly due to some mixing of deposits prior to deposition.

Taphonomy

Overall 39% of bone fragments were identifiable to species, although this proportion varied widely between the trenches, with the lowest proportion in Trench A (Table 6.20). However, loose teeth occurred at a relatively high frequency, and when excluded, the percentage of identified fragments drops to a very low 16%, being almost equal in Trenches A, B, and C, but much higher in Trench D. Loose teeth were least frequent in Trenches A and D, suggesting that the material in these trenches was better preserved,

Table 6.19 Chisenbury Warren SP 072, variation between feature type of the four main animal domesticates (%)

	Horse	*Cattle*	*Sheep/goat*	*Pig*	*NISP*
Ditch	8	20	64	8	75
Other	10	17	69	5	1676
Pit	5	16	70	9	335
Drier	6	12	73	9	33
Building platform	7	12	80	–	81
Grave	–	–	100	–	170
Total	8	15	71	5	2370

Table 6.20 Chisenbury Warren SP 072, taphonomy

Trench	*Period*	*Butchered %*	*Burnt %*	*Carnivore damaged %*		*Rodent gnawed (n)*	*Loose teeth (% of ident.)*		*% Ident.*	*Total bone*
A	ERB	5	–	4	5*	1	10	15*	17	119
	LRB	1	–	4	5*	1	33	11*	21	487
	sub-total	2	–	4	5*	2	29	12*	20	606
B	Romano-British	1	1	9	23*	1	52	13*	37	4104
C	Romano-British	2	<1	14	21*	3	57	17*	50	933
D	Romano-British	2	<1	6	8*	1	26	35*	52	721
Site total		1	1	9	12*	7	48	16*	39	6364

* = Percentage of total excluding loose teeth

especially in Trench D. The high proportion of loose teeth in Trenches B and C may be due to greater trampling associated with the main area of the settlement, causing a higher level of post-depositional destruction than in the other trenches. In general, evidence of carnivore damage was low, but it was also most frequently observed on bone from Trenches B and C. This, in addition to the higher proportion of residual ceramic in these areas, suggests that material here had been routinely left in the open for a considerable time before burial. Some reworking of material deposited in the central areas may also have contributed to the poor condition of bone. The presence of presumably intrusive rabbit bone and the site's proximity to a medieval rabbit warren indicate that the features had been subject to some bioturbation.

Both butchery marks and burning occurred at very low frequencies throughout the site, and rodent gnaw marks were also observed in very small quantities.

Table 6.21 Chisenbury Warren (SP 072), minimum number of elements (MNE) present for the major species

Element	*Horse*	*Cattle*	*Sheep/ goat*	*Pig*	*Total*
Horn core	–	1	3	–	4
Skull	3	2	6	1	12
Mandible	5	11	54	6	76
Atlas	1	3	1	–	5
Axis	–	–	3	–	3
Scapula	5	4	8	1	18
Humerus	–	11	24	3	38
Radius	4	7	52	–	63
Ulna	2	9	4	3	18
Pelvis	5	4	15	–	24
Sacrum	–	–	–	1	1
Femur	5	10	8	3	26
Tibia	4	8	57	5	74
Astragalus	2	4	2	1	9
Calcaneum	2	2	5	–	9
Carpal	3	6	5	–	14
Tarsal	3	1	2	1	7
Metacarpal	7	6	29	–	42
Metatarsal	7	14	53	1	75
Lateral metapodial	9	–	–	1	10
Phalanx 1	2	5	22	2	31
Phalanx 2	1	3	7	4	15
Phalanx 3	–	2	2	–	4
Total	71	114	362	33	578
% MNE	12	20	63	6	
MNI	6	11	39	4	60
% total MNI	10	18	65	7	

Cattle

Table 6.18 shows that in terms of absolute numbers of bones, cattle were secondary to sheep/goat. The MNE and MNI figures (Table 6.21) bear this out, although it appears that despite extensive fragmentation, cattle bones are not over-represented in NISP counts. This may be because the assemblage is so fragmented that most cattle bones are too small to be identified (40% of mammal bones are in the large mammal category, while only 19% of the cattle and sheep/goat bones are cattle).

The distribution of skeletal elements present shows that all parts of the carcass were represented. The robust elements such as the mandible and tibia appear to be better represented than fragile bones such as the skull.

The dental ageing data consisted of seven mandibles and 26 loose teeth, mostly deciduous fourth premolars (dp_4s); the greater fragility of young mandibles has probably led to post-depositional destruction of the bone and loss of these teeth. The large number of unworn dp_4s (Halstead stage A) indicates a relatively high death rate among neonatal animals in the assemblage (Table 6.22). Most of the others had advanced wear (Grant's (1982) stages C–E), which suggests they could have come from animals up to 3 years old. The majority of the mandibles and loose M_3s were from adult animals, including old and senile individuals.

The ageing evidence based on epiphyseal fusion was limited by small numbers. Table 6.23 shows that there is evidence of only one animal in its first year, and no other evidence for killing juveniles, with the

Table 6.22 Chisenbury Warren SP 072, cattle dental data

Stage	*Age (months)*	*Loose dp_4s*	*Mandible and loose M_3s*
A	0–1	9	1
>A	>1	7	–
B	1–8	–	–
C	8–18	–	2
D	18–30	–	–
E	30–36	–	1
F	young adult	–	2
G	adult	–	7
H	old adult	–	1
I	senile	–	1
Total		16	15

three unfused bones (one third of the total) from young adult animals.

The only information on the sex of the animals represented was one female pelvis. The overall pattern therefore, based largely on the dental evidence, is one of relatively high neonatal mortality, with some juvenile mortality, and many animals retained to adulthood and beyond. This can be interpreted as early slaughter or natural death, a later kill-off, probably for meat, then maintenance of herd animals for milk, breeding, and work.

Sheep and goat

Sheep or goat were consistently the best represented of all the species in all periods, whether as fragment counts, MNEs or MNIs. Of the total, 297 were identified as sheep and only nine as goat, and this predominance of sheep remains was partly due to a juvenile skeleton, positively identified as sheep. It was argued with respect to the Warren Hill (SP 049) and Beach's Barn (SP 026) assemblages that sheep and goat bones tend to be more prone to fragmentation than those of cattle, and bones of these smaller animals may be under-represented in Trenches A, B, and C, which have the lowest proportion of identified fragments.

The distribution of anatomical elements shows that all parts of the carcass were originally present and all can be related to survival and recovery potential of the different elements themselves. Three groups of associated bones were recognised. A distal left tibia, positively identified as sheep, with articulating astragalus and calcaneus, was found in a Late Iron Age ditch. A group of seven articulating hindfoot elements (metatarsal, navicular-cuboid, lateral cuneiform, a sesamoid, and first, second, and third phalanx) were recovered from the corn drier in Trench B, the metatarsal of which exhibited transverse cut marks on the ventral surface of the proximal end of the shaft, suggesting skinning or disarticulation.

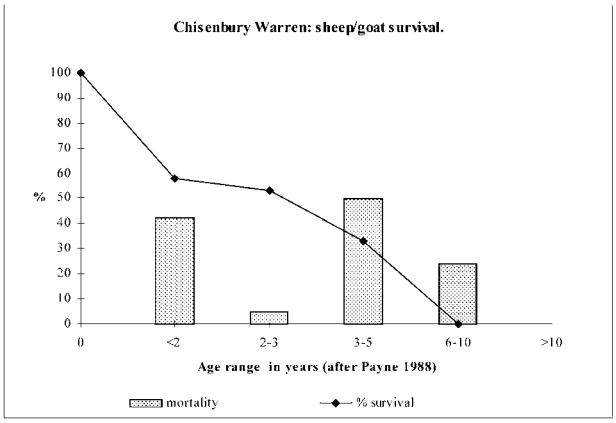

Figure 6.5 Chisenbury Warren SP 072, sheep/goat survival

The sheep skeleton mentioned above was largely complete and had obviously been deposited as an entire animal: the skull was present, as well as the atlas, axis, sacrum, caudal vertebrae, ribs, sternebrae, and all limbs, including several distal bones such as phalanges, carpals, tarsals, and even sesamoids. Notably absent were both scapulae, humeri, and pelves, and the right femur. There was no evidence of butchery or gnawing and, considering the preservation and recovery of smaller and more fragile elements, their absence is almost certainly due to later disturbance, possibly from ploughing. Both mandibles were present, and the M_2s were present but unworn and probably unerupted, although fragmentation of the bone made it difficult to be sure. They suggest an animal 6–12 months old (Payne 1973). Most of the early fusing bones were missing with the exception of the radii, of which the proximal ends were fused. Proximal first phalange epiphyses, which fuse slightly later at 13–16 months (Silver 1969), were all unfused. Therefore the dental and fusion evidence together suggest that the individual was 10–12 months in age. There was no obvious pathology on the bones that might have indicated contributory factors to the animal's death.

Of the remaining sheep and goat remains, only 31 mandibles or reconstructed tooth rows were present. Figure 6.5 shows a peak in deaths of animals younger than 2 years old, very few dying in the third year, and a substantial number surviving to and beyond 6 years. Since it does not distinguish between neonate mortality, deaths in the first year, and deaths in the second year, this technique gives a coarser-grained result for juveniles than is desirable for interpreting mortality profiles in terms of husbandry patterns. Only three definite unworn dp_4s were present, which suggests that very few of the animals in this group were neonatal. Of the worn teeth, 21 were at Grant's (1982) stage g or h, and this may indicate the

presence of older juveniles in the group. According to Grant's data these stages can occur over a wide age range, equivalent to Payne's stages B–D, although they appear to be most common in mandibles in the middle of this range (roughly, 8–18 months).

The fusion evidence (Table 6.23) also indicates the presence of very young animals under 10 months of age, as well as juveniles killed between 13 and 28 months, and a significant proportion of older juveniles. There were 13 sexed pelves, all from females with the exception of one possible male, indicating that milking and maintenance of the breeding stock for meat production were more important than wool production.

Pig

Pig bone occurred in low frequencies, irrespective of how it was quantified (Tables 6.18 and 6.21), and although the sample was small, the distribution of anatomical elements suggests that all parts of the carcass were deposited.

There was little ageing information from the pig remains. The tooth wear data consisted of three mandibles and two loose M_3s. The mandibles all had incomplete tooth rows, however the P_4 was present in all and was either unworn (n=2), or slightly worn (n=1), and these mandibles are likely to have come from animals in the immature or subadult age groups. The two loose teeth were both unworn, suggesting they came from subadult animals (O'Connor 1988). The epiphyseal fusion information was scanty (Table 6.23), but the peak in death at 1–2 years correlates well with the data from dental analysis. In contrast to the pattern for cattle or sheep, there were no fused bones from the later fusing group, and hence no evidence for the presence of animals older than 3–3½ years. This predominance of juvenile animals is a pattern expected from pig husbandry as pigs are reared primarily for their meat and, while living, provide few useful secondary products. The proportion of male and female was fairly equal with six male and five female canine teeth.

Horse

Horse occurred more frequently than pig in terms of both MNE and MNI and the distribution of anatomical elements suggests all body parts were represented (Table 6.21).

There were no complete mandibles, but it was possible to obtain broad age ranges from the measurements of crown heights on 33 loose teeth, of 5 to more than 19 years. In addition, there were four deciduous premolar teeth: an upper deciduous premolar with slight wear was aged to between 4 months and 3 years; a very worn lower dp_3 was aged at 2–4 years; and two completely unworn upper premolars were perhaps both from one animal which died around or up to 2 weeks after birth. The epiphyseal fusion data (Table 6.23) consisted almost entirely of fused bones, with the exception of an unfused metapodial distal epiphysis, from an animal less than 2 years old. The proportion of immature horse remains is lower than in the dental analysis, and this is probably related to the greater destruction of younger bones than older bone or teeth.

Although most of the data came from mature or old animals, the presence of deciduous teeth suggests that horses were born at the site. Four male canine teeth indicate the culling or natural death of some male horses.

Dog

Twenty-two dog bones were recovered, of which five had evidence of age. Two distal humeri were unfused, indicating at least one juvenile animal, as this fusion event occurs between 5 and 8 months of age (Sumner-Smith 1960). Relatively young animals were also indicated by two right mandibles with little wear on the teeth and a small left mandible with no evidence of wear on M_1, M_2 or P_4. In the same context as the latter were a fragment of left second metacarpal and another of a first phalanx, but it is not possible to say whether these originated from the same animal.

Birds

The nine bird bones were from six contexts in Trench B and five bones were identified to species. All were wing or leg long bones, probably as these are more likely to survive than the fragile head or body bones, and more likely to be recovered than the smaller bones. A humerus of a thrush could be identified to species: it closely matches the song thrushes in the comparative collection and falls within the size range for song thrush *Turdus merula* and outside the range for the other closely related Turdidae (Stewart 1992).

Although domestic fowl might be expected on a predominantly late Romano-British site, one bone only, an immature tarsometarsus, was found. The carpometacarpus from woodcock *Scolopax rusticola* is likely to be from a bird captured for consumption, as woodcock seems to have been the most popular game bird in the period; remains have been found on more sites of the period than any other wild bird other than the raven (Parker 1988). Written and archaeological records show that partridge *cf. Perdix perdix* and thrush were also consumed in Rome and the Empire. However, there is no positive evidence of butchery or burning on any of the bones to demonstrate conclusively whether or not the other bones are of anthropogenic origin. The jackdaw, *Corvus monedula*, is a commensal which may have entered the late Romano-British post-pit where it was found, following natural death around the site.

Table 6.23 Chisenbury Warren SP 072, fusion data

	Age (months)	*Unfused*	*Fused*	*Juvenile*	*Total*	*% survival*
Cattle	7–10	1	5		6	83
	12–18	–	14		14	100
	24–36	–	8		8	100
	36–48	3	5		8	63
	Total	4	32		36	
Sheep/goat	6–10	3	32	4	39	82
	13–16	1	4	–	5	80
	18–28	8	11	2	21	52
	30–42	3	2	2	7	29
	Total	15	49	8	72	
Pig	12	–	3		5	100
	24–36	4	2		6	33
	36–42	1	–		1	0
	Total	7	5		12	
Horse	9–12	–	8		8	100
	13–24	1	18		19	95
	36–42	–	6		6	100
	Total	1	32		33	

Table 6.24 Chisenbury Warren SP 072, butchery

	Chopped	*Cut*	*Both*	*Total*
Horse	3	2	–	5
Cattle	22	5	2	29
Sheep/goat	9	3	–	12
Dog	–	4	–	4
Roe deer	1	–	–	1
Small mammal	5	9	–	14
Large mammal	9	7	–	16
Unident.	3	2	–	5
Total	52	32	2	86

Other species

Wild species were noted only infrequently in the assemblage (Table 6.18), with the exception of rabbit (*Oryctolagus cuniculus*) which must have been a modern intrusive addition, or perhaps from the medieval warren. It was distinguished from hare (*Lepus* sp.), which also occurred, using size and palatal characteristics. Both red (*Cervus elaphus*) and roe deer (*Capreolus capreolus*) occurred, and other mammal species present were fox (*Vulpes vulpes*), water vole (*Arvicola terrestris*), bank vole (*Clethrionomys glareolus*), and mole (*Talpa europaea*). In addition three toad bones were present (*Bufo* sp.).

Butchery and bone modification

The distribution of butchery marks by species is shown in Table 6.24 for the whole Romano-British period. Overall chop marks occurred with a much greater frequency than cut marks, mainly on cattle bones including a butchered atlas in several fragments. As stated above, chopping tended to be the preferred 'Roman' method of butchery and this may indicate an increased cultural influence on this site, although, as previously stated, the mixing of deposits renders all conclusions of this nature tentative.

The presence of butchery marks on dog and horse bones is typical for the Iron Age (Grant 1991), when it is presumed that horses were butchered and eaten once their useful working lives were over. This appears to have been much less common on later Romano-British sites, but cut and chop marks were found on horse bones at Chisenbury Warren, and some dog bones also show evidence of butchery. Skinning was positively identified by parallel knife marks anteriorly on the shaft of a right ulna and a left radius, probably from the same dog, both of which had subsequently been gnawed by both dogs and rodents, indicating that at least some of the flesh was left on the skeleton. Cut marks on the distal anterior surface of a right tibia shaft and proximo-medial surface of a right humerus may also have been from skinning, but as skins are normally taken at the lower limb rather than the shoulder, careful disarticulation is more likely. The incisions on the proximal humerus below the caput are paralleled in a specimen from Late Iron Age/early Romano-British Twyford Down, here considered to be a consequence of disarticulation (Powell *et al.* 2000).

Measurements

Despite the large size of the assemblage, measurable bones were few due to fragmentation. Table 6.25 shows that the Chisenbury Warren cattle and sheep fall within, although generally at the smaller end, of the range of contemporary animals. The only pig measurement available for comparison, the lower third molar, seemed to show that the tooth was relatively long and narrow.

The size of dogs varied from well-built animals similar to modern labradors (a distal humerus) to small terrier-sized dogs with relatively short jaws (three mandibles in three contexts). Two other mandibles were different again; height and thickness measurements of one show it is relatively shallow in relation to its width; thus the medio-lateral thickness is similar to more heavily jawed modern animals such as labradors, but the dorso-ventral dimension is more suggestive of a gracile type. The other, from the same context, is similar in overall length and thickness, but even shallower, with a notable curvature upwards from the premolars to the prosthion, a feature which today characterises the modern boxer.

Table 6.25 Selected measurements from ABMAP and Chisenbury Warren SP 072 (mm)

Species	*Bone*	*Measurement*	*Date*	*ABMAP*				*Chisenbury Warren**
				Mean	*Minimum*	*Maximum*	*n*	
Cattle	*Humerus*	Bd	LRB	–	–	–	–	73.9
		BT	ERB	67.9	60.6	78.2	42	62.3
			LRB	70.9	50.6	86.1	24	66.0
		HT	ERB	–	–	–	–	35.2, 37.6
			LRB	44.2	37.5	55.5	6	40.4, 41.7
		HTC	ERB	–	–	–	–	25.7, 27.6
			LRB	32.2	25.1	43.8	6	27.3, 30.5
	Radius	Bd	LRB	69.4	57.2	82.1	10	62.2, 72.8
	Astragalus	GLl	LRB	63.9	53.9	77.2	93	60.1, 61.2
		GLm	LRB	57.5	49.7	66.1	94	55.0 55.9
		Bd	LRB	40.4	34.6	48.3	74	38.2, 38.3
Sheep/goat	*Scapula*	GLP	ERB	28.0	25.2	29.7	13	26.8
			LRB	30.1	25.8	34.0	21	27.4, 31.3
		BG	ERB	18.0	15.1	22.3	18	17.9
			LRB	18.9	16.2	21.4	24	17.6, 18.1
		LG	ERB	22.4	20.8	24.4	11	21.7
			LRB	23.9	20.9	25.3	12	22.1, 24.2
		SLC	ERB	16.8	13.8	21.2	18	14.8
			LRB	17.4	13.2	20.4	29	16.3, 19.7
	Humerus	Bd	ERB	27.1	24.8	29.5	30	24.0
			LRB	28.9	24.9	33.4	12	28.7
		BT	ERB	25.3	22.4	29.2	45	22.3, 24.5
			LRB	27.3	24.3	31.0	27	26.8, 27.3
		HT	ERB	–	–	–	–	15.0, 16.3
			LRB	19.2	19.2	19.2	1	16.8, 17.1, 18.0
		HTC	ERB	13.4	13.4	13.4	1	11.1, 11.7
			LRB	14.9	14.9	14.9	1	12.8, 13.2
	Radius	GL	LRB	148.2	147.0	150.0	3	131.6
		Bp	ERB	–	–	–	–	25.5
			LRB	–	–	–	–	25.9, 26.2, 27.5,
		BFp	ERB	25.5	22.7	27.8	30	23.5
			LRB	27.3	23.6	30.1	38	23.5, 23.7, 25.0,
		SD	LRB	14.3	12.4	15.5	6	13.0, 13.8, 15.1
		Bd	LRB	26.3	24.6	28.8	9	22.9, 27.8
		BFd	LRB	22.1	20.6	24.7	10	19.9, 23.5
	Tibia	Bd	LRB	25.2	20.1	29.8	99	17.0, 18.1, 18.9
		Dd	LRB	20.0	17.5	22.4	40	21.6, 22.1, 23.6
Pig	*M3*	L	RB	35.0	33.9	36.8	3	36.1
		Br	RB	18.3	15.7	20.9	2	15.7, 16.2
Dog	*Tibia*	Min shaft dia.	RB	–	–	–	–	10.4
	Humerus	Min shaft dia.	RB	–	–	–	–	13.3
		Bd	RB	–	–	–	–	32.0
		Dd	RB	–	–	–	–	25.1
Thrush	*Humerus*	GL	RB	–	–	–	–	27.6
		Bd	RB	–	–	–	–	6.6
Partridge	*Femur*	Bd	RB	–	–	–	–	8.8
Passeriformes	*Humerus*	GL	RB	–	–	–	–	24.9
Woodcock	*Carpo-metacarpus*	GL	RB	–	–	–	–	39.3

* The date given is that of the feature; the bone itself can only be dated as Romano-British

Table 6.26 Beach's Barn SP 026, number of identified animal bone specimens

	Horse	*Cattle*	*Sheep/ goat*	*Pig*	*Dog*	*Water vole*	*Frog/ toad*	*SHS*	*LAR*	*Unident.*	*Total*
NISP	5	60	47	6	178*	1	1	44	53	137	532
% main domesticates (NISP)	4	50	41	5							
NME	5	32	13	3							53
% main domesticates (MNE)	9	60	25	6							
MNI	1	6	2	2							11
% main domesticates (MNI)	9	55	18	18							

* skeleton

Pathology

Dental anomalies and oral pathologies were the most frequently occurring abnormalities at Chisenbury Warren. For cattle these included two M_3s with congenital absence of the third pillar, an M_3 with a hooked distal half (probably from an animal with a two-pillared M_3 in the matching mandible), and a mandible with congenital absence of the P_2. Likewise, a female pig mandible showed congenital absence of the P_1.

There were five sheep or goat mandibles exhibiting varying degrees of overcrowding (mainly from early Romano-British contexts). Two mandibles lacked the P_2, one had an M_3 with a reduced third pillar, and a loose dp_4 exhibited unusually heavy wear on the third pillar, which was 4.2 mm lower than the first and second pillars. One mandible had a layer of proliferative, disorganised bone below dp_4 on the buccal side resulting from infection, and a P_3 had a linear indentation on the lingual and mesial surfaces at the base of the crown, which probably indicates a phase of developmental disturbance caused by nutritional stress. Similarly, a horse M_3 exhibited a waisted appearance in the cervical region, particularly on the lingual side, which again may well have been due to nutritional or developmental stresses imposed during development.

There were two examples of non-oral pathology. A cattle horn-core exhibited a marked distortion and inhibition in growth, probably a result of accidental breakage in the juvenile horn or unsuccessful dehorning. A cut mark was visible at the base of the core, indicating that the horn casing had been removed for use. The other bone was a horse left astragalus with proliferation of bone and extension of the distal tuberosity. This is the site of attachment of the medial collateral ligament, and the condition is probably a result of inflammation following strain.

Discussion

The proportions of the main domestic species from this site were different to Warren Hill (SP 049) and more typical of other assemblages from chalk downs of this date. This could be the result of a larger, more representative, assemblage from a wider range of settlement features having been recovered here, compared with that from a single ditch (12) at Warren Hill.

However, species proportions also differ when only ditch features are compared at Chisenbury Warren and Warren Hill, so intrasite variation might not be the whole explanation. Cattle, as well as being less suited to downland pasture, require more water than do sheep (Grant 1984a); the far higher proportion of sheep or goat here may be related to the location of the site far from a natural water source. There were some circular depressions below the site that may have been wells which were not investigated.

The high percentage of young calves is similar to what has been seen in some Late Bronze Age assemblages such as Grimes Graves and Bishop Cannings Down, and may suggest that cattle dairying was carried out at the settlement (Serjeantson in press).

The associated bone groups, including a young sheep skeleton and two articulating sheep/goat hind limb parts, are discussed below.

Beach's Barn SP 026

The assemblage is not large, only 535 fragments in total (Table 6.26), although a high proportion (56%) was identifiable (Table 6.27). However, more than half of the identified bone belonged to a largely complete late Romano-British dog skeleton and if this is omitted the figure is much lower at 34%. The assemblage was almost entirely late Romano-British in date; the four early Romano-British bones (one cattle and three sheep or goat) were all loose maxillary teeth and are not further discussed.

Taphonomy

As can be seen from Table 6.27, there was very little evidence of either human or non-human modification to the bones. The frequency of loose teeth is broadly

Table 6.27 Beach's Barn SP 026, taphonomy

	Butchered %	*Burnt %*	*Carnivore damaged %*	*Rodent gnawed %*	*Loose teeth (% of ident.)*	*Ident. %*	*Total bone (n)*
LRB %*	1(1)	1(2)	2(3)	1(1)	16(39)	56(34)	531(354)

* figures in brackets exclude the dog skeleton

comparable at 39%. Gnawing by carnivores affected only a small proportion of the bones.

Cattle

Bones of cattle were the most frequently occurring in the identified material, by all methods of quantification (Table 6.26), although minimum numbers of individuals are probably unrepresentative because of the low numbers involved. All parts of the carcass were represented, with the mandible the most frequently occurring element. This is probably a result of differential preservation, as the mandible is dense and not particularly attractive to carnivores (Lyman 1994), so generally survives well (Stallibrass 1984).

The dental ageing data consisted of three loose teeth and three mandibles lacking teeth. The pattern of alveoli on the mandibles showed that the full adult dentition had erupted, and the animals were therefore older than 30 months. Two loose third molars could conceivably have come from these mandibles, and were from an adult animal (Halstead stage G) and an old adult (Halstead stage H). The third loose tooth was a deciduous fourth premolar in an early wear stage, probably from an animal of one to eight months in age (Halstead stage B).

Ageing data from epiphyseal fusion is poor: where the state of fusion could be determined it was complete with the exception of a distal radius splinter which falls into the late-fusing group (Table 6.27). When added to the dental data, there is still not enough information on age to discuss cattle husbandry beyond saying that all broad age groups appear to be represented.

One of the pelvic fragments belonged to a cow.

Sheep/goat

Five positive identifications were made of sheep (including three dp_4s) and none of goat, so this material will therefore be termed 'sheep' for reference. Sheep comprised 41% of the NISP of the main domestic animals, but only 25% of the MNE total, well outnumbered by cattle. The discrepancy is due to the substantially higher proportions of loose sheep teeth, caused by the greater fragility of sheep mandibles compared to those of cattle, and a similar pattern is described for Warren Hill (SP 049). Although the MNE is low, the distribution of anatomical elements suggests that all parts of the carcass were present, with no preferential dumping of particular body parts.

The dental ageing evidence consists of three loose dp_4s and two juvenile mandibles, one aged at one to two years (Payne stage D) and the other at two to three years (Payne stage E). One of the loose teeth was unworn and would have come from an animal less than 2 months in age (Payne stage A), the other two teeth were worn and from animals less than 2 years old. The state of fusion could only be determined on two bones (Table 6.28), and there was no evidence from either ageing source for mature animals.

Pig

Pig was poorly represented, and was the least common of the main domestic animals when MNE figures were calculated (Table 6.26). Only cranial material occurred, and although this represented at least two individuals, the sample is too small to infer a pattern.

Horse

Horse was also a minor component of the assemblage. Both cranial and post-cranial skeletal elements were present, but not the extremities.

Dog

Most of the skeleton of a mature male dog was recovered from late Romano-British context 33. The presence of the majority of phalanges, carpal, and tarsal bones suggests that recovery was good, although the distal caudal vertebrae, six first phalanges, and nine each of the second and third phalanges are missing. These extremities may have been easily detached from the skeleton prior to burial or have been lost during later disturbance of the context. However the other absent bones (including one lumbar vertebra, left radius, ulna and forepaw, and right femur and tibia) include those from joints

Table 6.28 Beach's Barn SP 026, fusion data

	Age (months)	*Unfused*	*Fused*	*Total*
Cattle	7–10	–	4	4
	12–18	–	6	6
	24–36	–	4	4
	36–48	1	2	3
	Total	1	16	17
Sheep/goat	6–10	–	1	1
	13–16	–	–	–
	18–28	–	–	–
	30–42	1	–	1
	Total	1	1	2

Table 6.29 Beach's Barn SP 026, dog skeleton, selected measurements

Measurement (mm)	*Limb bones*				*Metapodials*							*Axial*		
	Humerus	*Radius*	*Ulna*	*Femur*	*Mc2*	*Mc3*	*Mc4*	*Mc5*	*Mt2*	*Mt3*	*Mt4*	*Mt5*	*Atlas*	*Axis*	*Sacrum*
Greatest length	132.3	129	150.4	140.5	45.2	52.3	–	42.8	49.3	56.1	56.8	50.7	31.5	35.4	–
Proximal breadth	–	16.1	–	–	–	–	–	–	–	–	–	–	–	–	–
Proximal depth	35.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Minimum shaft diameter	10.1	11.3	–	11.6	6	7.4	8.4	9	4.6	8	5.7	7.8	–	–	–
Distal breadth	28.1	20.8	–	26.4	–	–	–	–	–	–	–	–	–	–	–
Distal depth	22.1	–	–	29.2	–	–	–	–	–	–	–	–	–	–	–
Greatest breadth	–	–	–	–	–	–	–	–	–	–	–	–	64.4	–	39.9
Greatest length body inc. dens	–	–	–	–	–	–	–	–	–	–	–	–	–	38.1	–
Breadth cranial articular face	–	–	–	–	–	–	–	–	–	–	–	–	34.2	24.7	24.7
Breadth caudal articular face	–	–	–	–	–	–	–	–	–	–	–	–	24.8	26.6	–
Height cranial articular face	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10.3
Length dorsal arch	–	–	–	–	–	–	–	–	–	–	–	–	13.3	–	–

that normally detach relatively late in the natural disarticulation sequence (Lyman 1994, 145). No knife or chop marks were found that could indicate disarticulation and, although animals can be butchered without marking the bone by a careful butcher, the presence of most bones in articulation suggests that the skeleton at least had been deposited whole. The low incidence of gnawing argues against the exposure of the skeleton prior to burial, which could have caused some of the more meaty bones to be scavenged and, in addition, most meat-bearing bones are still present. Later disturbance of the context is therefore the most likely explanation for the absence of some bones.

All elements were fused and the animal is therefore at least in its second year. Tooth wear is notoriously unreliable as an indicator of age in dogs because of the wide dietary range and the opportunity and/or tendency to chew. However, the pathological evidence (see below) is more useful in assessing the history of the dog, as the condition of the mouth is very poor and numerous incidences of exostoses and hyperostosis resulting from minor stresses on the fibrous insertions are present. These have been shown to correlate with the age of the animal, particularly in foxes and other canids (Clark 1994), suggesting that this was a mature, possibly elderly, dog.

Wild species

The only wild faunal material present was a right femur from a water vole (*Arvicola terrestris*), and a humerus from a frog or toad (*Rana*/*Bufo* sp.).

Measurements

Measurable bones from the main domesticates were too few to provide useful comparative data, but the measurement of the dog skeleton has produced some interesting results (Tables 6.29, 6.30, and 6.17). The height of the animal is similar to that of an average modern breed, such as a collie or labrador, at between 400 and 430 mm at the shoulder (Harcourt 1974; Clark 1995), with straight limb bones. The cephalic index, which describes the width of the skull relative to the length, is 62.6; cephalic indices exceeding 57 are as yet unknown before the Romano-British period. This broadening of the head is seen as part of the enormous variation that becomes apparent during this time, both in absolute size and in body and skull morphology. The snout index of the Beach's Barn dog is 49.2, at the upper end of the range calculated by Harcourt, as is the snout width index at 43.8. This animal therefore had a broad snout which was relatively long in proportion to its head (which itself is broad), and thus probably presented a stocky and square appearance of the head.

Table 6.30 All sites, dog mandible measurements (mm) after von den Driesch (1976, 60–1)

Measure-ment	*EIA*	*MIA*			*ERB*		*RB*		*LRB*
	Coombe Down South (SP 009)	*Coombe Down South (SP 009)*			*Chisenbury Warren (SP 072)*		*Chisenbury Warren (SP 072)*		*Beach's Barn (SP 026)*
	A64	*A78*	*A51*		*C52*		*B5**	*C66***	*33 (skeleton)*
1									113.2
2									112.4
3									108.1
4		111.8	106.2	127.9			86.6		99.3
5		106.5	99.8	121.7					95.7
7		79.0	70.9	82.0			62.3		68.0
8	60.8	75.6	66.2	78.2		69.6	61.8		64.4
9		70.7	61.2	73.8	61.6	65.7	57.8		60.6
10	32.1	39.3	33.3	39.0	35.3	35.2	31.8	32.6	31.4
11	30.5	37.2	35.5	40.7		38.2	32.8		36.4
12		32.6	30.4	35.6	29.1	33.3	29.2		31.9
14	19.4	24.6	20.1	24.1	22.3	22.0	20.4		18.7
15#	*9.3*	*10.1*	*9.3*	*9.6*	*8.4*	*9.7*	*8.9*	*8.9*	
16##	*4.2*	*5.1*	*5.0*	*5.8*	*5.0*	*4.6*	*3.6*	*4.0*	
17	10.2	12.8	10.3	13.6	11.5	11.3	9.8	9.9	10.3
18	44.4	51.7	48.7	58.2					42.1
19	19.8	22.7	21.3	26.2	20.2	20.4	18.8	20.1	19.8
20	16.7	19.6	16.7	22.4	14.8	16.5	15.6		16.3

* residual Iron Age and early Romano-British; ** 2nd–3rd century AD; # length of M2 alveolus; ## length of M3 alveolus

Butchery

Chop and knife marks were both present in equal numbers on a very small proportion (1%) of bones, all cattle or large mammal.

Pathology

The dog skeleton provides the only evidence for pathological conditions, but these are extensive. Arthropathic manifestations are visible in the vertebrae, phalanges, and skull. Exostoses around the margins of the centra affect the third and seventh cervical vertebrae, and are severe in the higher lumbar region (L1 to L5) and on an upper caudal vertebra, and sacralisation (fusion of the sacrum with the first caudal vertebra) has occurred. Periarticular exostosis was also noted on the proximal face of a second phalanx. There is a linear hyperostosis bilaterally running across the frontal and parietal bones, and also a small area of bony growth on the right parietal just caudal of the coronal suture. This is probably the ossification of tendnous tissue at the site of the insertion of *M. temporalis*, the muscle involved in the working of the jaws by raising the mandible.

Numerous dental deficiencies are accompanied by osteoporotic bone in both mandible and maxilla. It appears that the deterioration in oral health has occurred over a long period and the lesions are redolent of an elderly dog; they include five missing or broken teeth with filled or filling alveoli, a root abscess with tracking sinus and bone resorption, extreme wear and calculus build up.

Several traumatic pathological conditions were also noted. The left tibia has sustained a mid-shaft fracture, which was only partially reduced and although healing has taken place it has resulted in bowing and deformation of the shaft. There is also a healed rib fracture, and a partially healed fracture of an upper caudal vertebra where disjunction of the dorsal arch is accompanied by infection and destruction of the cranial face, with the infection spreading to the adjacent vertebra. There is a line of reactive bone across both nasal bones, just forward of the inciso-maxillary suture, and the right hand lesion has bony proliferation. These lesions are probably the result of a blow across the snout with a sharp instrument, and the condition of the lesions suggests they were sustained not long before death.

Apart from an unassignable first phalanx with infective lesions distally, medially, and laterally, all other evidence of infection is from the left hind limb and so may be associated with the major trauma sustained by the left tibia. The greater trochanter of the left femur is pitted and distorted, and the left calcaneum has a proliferation of reactive bone on the

distal extremity. All the left metacarpals are affected: the second has slight manifestations on the anterior surface, the third shows proliferation on the proximal anterior and posterior surfaces, and the fourth and fifth have a massive osteomyelitis proximally with destruction of the cortical bone. In addition, the fourth has a draining sinus on the posterior surface and pathological fracture. This dog was therefore suffering from infections which are probably subsequent to a broken hind limb, and which would certainly have rendered the animal very lame, and resulting septicaemia may well have been the cause of death.

Discussion
As discussed for Warren Hill (SP 049), cattle do not usually form such a high proportion of faunal assemblages from chalk upland sites. Such a small sample should not be taken as representative of the overall husbandry at this site, as another explanation may lie in intra-site variation in bone disposal. The corn drier was close to the edge of the settlement, and at other sites it has been shown that frequencies of cattle (and horse) bone in such marginal areas tend to be greater than in more central areas (Wilson 1985).

Comparison with the material recovered from different late Romano-British oven/drier contexts at Chisenbury Warren (Table 6.19) did not show similar proportions of species, but reflected the overall dominance of sheep at that site, as did all other feature types, to a greater or lesser degree. The Chisenbury Warren drier may not be directly comparable, as it was not at the margin of the settlement, but the terrace on which it was located did go out of use in the 3rd or 4th centuries. Unfortunately there is not enough information to enable a firm conclusion to be drawn.

Coombe Down South SP 009

Animal bone was considered from a variety of features, mostly pits, ditches, and hollows, dated from the Early Iron Age to the late Romano-British period. Over 2800 fragments were studied, of which 45% were identified to species with an additional 25% classified into size category. Table 6.31 shows that the majority of the animal bone came from Trench A with the other three trenches making smaller contributions, but this discrepancy is at least in part related to the different size of the trenches.

Taphonomy
Table 6.32 shows that very few of the bones had been burnt but 11% had visible evidence of butchery. Non-human modifications were also frequently observed with 8% of the bone showing signs of carnivore damage. The percentage of loose teeth as a proportion of the identified bone varies both through time and across the site. However if only the larger sample sizes are considered (those over 50 fragments), it is clear that the earlier deposits generally contain a low proportion of loose teeth and a much higher proportion of identified fragments, when compared to the later phases. This strongly suggests that the earlier deposits were being heavily reworked and this effect is particularly noticeable in trench A, which has the longest sequence of occupation. While human activity may account for much of this, it is important to note the presence of rabbit bones in Iron Age and Romano-British features, and some bioturbation must be attributed to these animals, which have been present in the area since the medieval period.

Therefore the assemblage has been affected by pre- and post-depositional destruction including butchery, carnivore activity and reworking, and only a portion of the bones originally deposited are likely to have survived.

Cattle
Throughout the Iron Age cattle are the second most frequently represented species, by fragment counts, after sheep and goat. The proportion increases over time and cattle bones are almost as common as sheep/goat in the Romano-British periods. This high incidence of cattle bones in the later phases was investigated with regard to fragmentation; the bones of larger species break into more (recognisable) pieces than those of smaller species so may be over-represented. This appears to be the case for Late Iron Age–early Romano-British material, where cattle bones are far more numerous in NISP counts than in MNE counts. However, when MNE or MNI calculations are applied to the Romano-British material, the proportions of cattle actually exceed those of sheep/goat (Figs 6.6 and 6.7), and the apparent increase in cattle is therefore accepted as genuine for the Romano-British periods.

All parts of the skeleton are represented throughout all periods (Table 6.33), which suggests that the entire carcass was present on site. There is, however, a bias towards those elements, or parts of elements, which are most dense and will therefore survive best, such as the mandible and proximal metatarsals. Some of the least dense elements, such as the sacrum, are entirely absent, as are several of the smaller elements (eg, second and third phalanges) which may be lost when bone waste is subject to carnivore disturbance, although these are also the bones most likely to be overlooked during excavation. This bias is in evidence in all species and periods, but is least marked in the Early Iron Age material,

Table 6.31 Coombe Down South SP 009, number of identified animal bone specimens (NISP)

Trench	*Period*	*Horse*	*Cattle*	*Sheep/ goat*	*Pig*	*Dog*	*Red deer*	*Roe deer*	*Fox*	*Rabbit*	*Bank vole*	*Water vole*	*Wood-mouse*	*Bird*	*Amphib. Indet*	*Toad*	*Frog*	*SHS*	*LAR*	*Unid*	*Total*
A	EIA	14	126	233	45	2	1	-	-	-	-	-	-	1	2	-	-	296	84	237	1041
	EIA–MIA	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
	MIA	17	117	122	19	5	-	1	-	-	-	-	-	8	-	-	18	85	44	168	604
	MIA–LIA	2	4	2	4	-	-	-	-	-	-	-	-	-	-	-	-	16	3	3	34
	LIA– ERB	9	76	9	29	2	1	-	-	-	-	-	-	-	-	-	-	34	22	219	401
	LRB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	Sub-total	*42*	*323*	*370*	*97*	*9*	*2*	*1*	-	-	-	-	-	*9*	*2*	-	*18*	*431*	*153*	*628*	*2085*
	% Major species	*6*	*43*	*40*	*12*																
B	MIA	1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	8
	ERB	4	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
	LRB	7	47	39	9	1	1	-	-	3	2	-	-	1	-	-	3	20	44	131	308
	Sub-total	*12*	*53*	*42*	*9*	*1*	*1*	-	-	*3*	*2*	-	-	*1*	-	-	*3*	*22*	*46*	*131*	*326*
	% Major species	*10*	*46*	*36*	*8*																
C	MIA	6	22	19	3	34	-	-	1	-	-	-	-	-	-	2	-	15	18	29	149
	MIA–LIA	6	4	7	1	-	-	-	-	1	-	1	-	-	7	21	7	2	6	10	73
	LIA– ERB	5	11	21	7	-	-	-	-	-	-	-	-	1	-	-	-	11	8	28	92
	ERB	-	5	12	1	-	-	-	-	1	-	-	-	-	-	-	-	8	5	11	43
	LRB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	4	6
	Sub-total	*17*	*42*	*59*	*12*	*34*	-	-	*1*	*2*	-	*1*	-	*1*	*7*	*23*	*8*	*37*	*37*	*82*	*363*
	% Major species	*13*	*32*	*45*	*9*																
D	LIA–ERB	-	13	11	1	-	-	-	-	-	-	-	-	-	-	-	8	3	-	3	39
	ERB	6	8	15	3	-	-	-	-	-	-	-	1	-	-	-	19	5	-	17	74
	Sub-total	*6*	*21*	*26*	*4*	-	-	-	-	-	-	-	*1*	-	-	-	*27*	*8*	-	*20*	*113*
	% Major species	*11*	*37*	*46*	*7*																
Total	Whole site	77	439	497	122	44	3	1	1	5	2	1	1	11	9	23	56	498	236	861	2887
	% Major species	*7*	*42*	*40*	*11*																

Table 6.32 Coombe Down South SP 009, taphonomy

Trench	*Period*	*Butchered %*	*Burnt %*	*Carnivore damaged %*	*Rodent gnawed %*	*Loose teeth (% of ident.)*	*Ident. %*	*Total bone (n)*
A	EIA	10	<1	6	–	17	41	1041
	EIA–MIA	–	–	75	–	25	100	4
	MIA	15	1	12	<1	18	51	604
	MIA–LIA	15	–	9	–	42	35	34
	LIA–ERB	13	–	9	<1	34	31	401
	LRB	–	–	–	–	–	0	1
B	MIA	–	–	13	–	50	50	8
	ERB	30	–	30	–	30	100	10
	LRB	6	–	6	–	32	37	308
C	MIA	11	–	8	–	–	58	149
	MIA–LIA	–	11	14	–	5	75	73
	LIA–ERB	10	1	13	–	30	49	92
	ERB	2	2	23	–	32	44	43
	LRB	–	–	–	–	–	17	6
D	LIA–ERB	13	–	8	–	44	85	39
	ERB	18	–	9	–	33	70	74
Site total		11	1	9	<1	26	45	2887

testifying to the better preservation of bone in this phase.

Only one articulated group was identified, a humerus and radius from Late Iron Age/early Romano-British levels. However, an associated bone group of four very fragmented and incomplete cattle skulls was found in an Early Iron Age pit. One had a convex frontal profile (Grigson 1976), the frontal profile of two can be described as a slight boss and the other had a flat or very slightly convex frontal profile. Head and hind limb bones of several other species were also recovered from this feature, and are discussed below.

In the Early Iron Age, calves 3 months or younger in age are represented by two loose fourth deciduous premolars (dp_4) which are virtually unworn, and no very old animals are in evidence. The fusion data (Table 6.34) indicates that some animals were killed in the first year and a half of life but the majority died in their third year. The pattern from the Middle Iron Age levels is similar but no very young calves were seen; the youngest is represented by a dp_4 at Grant stage g, from an individual of between one and eight months, and again there are no very old animals represented. During the transitional stage between the Late Iron Age and early Romano-British periods one very young animal is represented by an unworn dp_4, and the fusion data show some animals killed between 10 and 18 months, and the majority dead by the age of 4 years.

The data for the early Romano-British period are very sparse with evidence from only two bones and no evidence from the teeth. The late Romano-British period is slightly better represented and one individual can be placed in Halstead's 'adult' category on tooth wear, but there is no evidence of any cattle surviving past the adult stage (older than 36 months) as defined by Halstead (1985). The fusion data suggest that in both Romano-British periods no very young animals were present, but that more than half of the animals represented did not live to maturity.

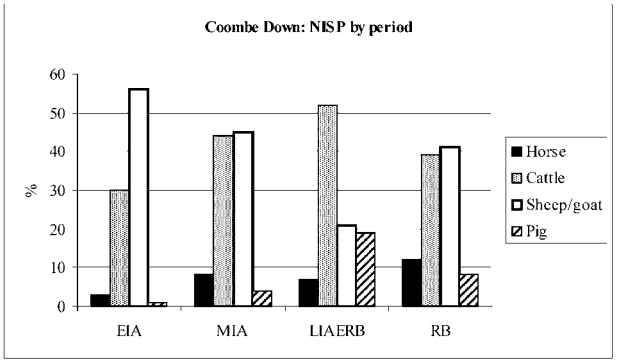

Figure 6.6 Coombe Down South SP 009, NISP by period

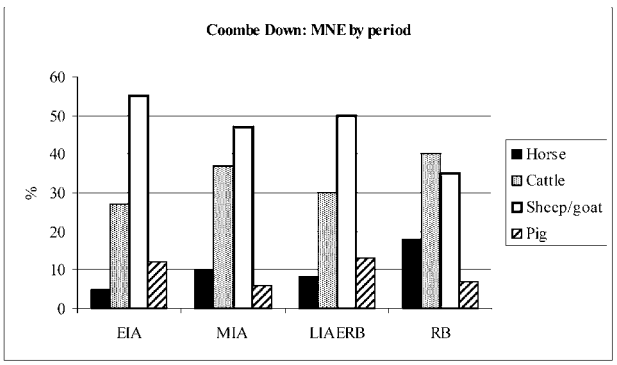

Figure 6.7 Coombe Down South SP 009, MNE by period

Table 6.33 Coombe Down South SP 009, minimum number of elements (MNE) present for the major species

Bone element	*Early Iron Age*				*Middle Iron Age*				*Late Iron Age/Early Roman*				*Early Roman*				*Late Roman*				*Total*
	Horse	*Cattle*	*Sheep/ goat*	*Pig*	*Horse*	*Cattle*	*Sheep/ goat*	*Pig*	*Horse*	*Cattle*	*Sheep/ goat*	*Pig*	*Horse*	*Cattle*	*Sheep/ goat*	*Pig*	*Horse*	*Cattle*	*Sheep/ goat*	*Pig*	
Horn-core		4	2			–	1			–	–			–	–			–	–	–	7
Skull	–	6	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	8
Mandible	1	4	10	3	1	7	10	1	2	4	7	3	1	2	1	2	–	2	1	1	63
Atlas	–	–	3	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	4
Scapula	1	4	9	4	1	5	8	2	1	3	2	1	2	1	–	–	1	1	–	–	46
Humerus	–	2	12	6	–	2	7	3	1	2	3	2	–	3	1	–	1	1	4	1	51
Radius	–	4	12	1	3	1	8	–	1	4	4	1	–	–	2	–	1	3	3	–	48
Ulna	–	3	9	1	–	3	1	–	1	3	4	2	–	–	–	–	1	2	–	–	30
Pelvis	2	3	4	2	2	4	2	–	–	2	3	–	–	1	1	–	–	1	1	–	28
Femur	1	6	8	2	1	3	3	–	–	3	2	2	1	1	1	1	1	2	1	–	39
Tibia	1	3	12	2	2	10	12	–	1	–	5	1	1	–	1	–	–	2	3	–	56
Astragalus	1	1	4	1	–	2	2	–	–	1	1	–	–	–	–	–	–	–	–	–	13
Calcaneus	1	2	4	–	1	4	2	1	–	5	3	1	1	1	–	–	–	2	–	–	28
Tarsal	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Metacarpal	–	5	5	–	1	6	6	2	1	1	3	–	–	–	1	–	–	–	1	–	32
Metatarsal	–	3	8	–	2	8	7	–	1	4	12	–	1	1	–	–	–	3	3	–	53
Lateral metapodial	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2
Phalanx 1	–	2	3	–	–	–	–	–	–	–	5	1	1	–	–	–	–	–	–	–	12
Phalanx 3	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Total	9	53	107	24	14	55	69	9	9	33	54	14	8	10	8	3	5	19	17	2	522

Table 6.34 Coombe Down South SP 009, cattle fusion data

Age	*EIA*		*MIA*		*M–LIA*		*LIA–ERB*		*ERB*		*LRB*	
(months)	*% fused*	*n*	*% fused*	*n*	*% fused*	*n*	*% fused*	*n*	*% fused*	*n*	*% fused*	*n*
7–10	–	7	17	12	–	–	–	–	~	~	–	1
12–18	25	8	–	2	–	2	–	–	–	1	25	4
24–36	–	3	–	17	–	1	–	–	–	–	–	–
36–48	–	16	–	15	–	1	–	7	–	1	–	11

It appears that the pattern of age at death of the cattle was similar throughout all periods at Coombe Down. A small proportion of calves was seen, predominantly from Iron Age material, but these may have been natural deaths rather than deliberate slaughter. Most individuals were killed at a more mature stage with an apparent peak between 2 and 4 years, with no very old individuals in evidence, suggesting that the herd was mainly exploited for meat.

Sheep and goat

Of the 617 sheep and goat bones identified from Coombe Down, 129 were identified as sheep and only three were positively identified as goat, all from Early Iron Age levels. It follows that the majority of indeterminate sheep/goat bones are almost certainly from sheep, which is the term that will be applied to describe this portion of the assemblage.

Throughout most periods, and especially the Early Iron Age, sheep are numerically the most significant species by fragment count. Those periods where sheep are second in number to cattle are normally also those periods with the smaller sample sizes and MNE counts show these to be unrepresentative. However in the Romano-British period the proportion of sheep drops even in MNE counts, becoming less numerous than cattle. It has already been suggested that greater fragmentation of the cattle bones during the later periods may depress the relative proportion of smaller species, although any bias should be minimised by using MNE counts.

All parts of the skeleton are present on the site throughout all periods, suggesting that the entire carcass reached the site, although as with the cattle bones there is a bias towards those bones which are dense and will therefore survive well (Brain 1981). Some parts were deposited while articulated, and several groups of associated bones were recovered from Early Iron Age deposit (A37), a working hollow. One group consists of the bones from a right front foot (all carpals, metacarpals, and phalanges), and the second group, which may belong to the same animal, was a right hind limb (astragalus, calcaneus, navicular cuboid, metatarsal, and phalanges). The third consists of an articulated humerus and radius and a left astragalus and calcaneus.

The fusion evidence shows a relatively consistent pattern throughout the Early Iron Age to Late Iron Age–early Romano-British period (Table 6.35). The majority of animals appear to have been killed after 16 months, with a small proportion slaughtered at each subsequent age stage and between a quarter to two-fifths surviving to 42 months. Mortality in the first 6–10 months of life varies from 18% to 38%, perhaps not more than would be expected from natural causes (Payne 1973).

The Romano-British material was inconsistent, due to small sample size, but indicates that a higher proportion of sheep appear to have died before the age of 10 months in the later periods. The greater fragility of juvenile skeletons might lead to their under-representation here and it is likely that the percentage of juveniles killed was higher, especially in the later, more disturbed contexts.

The Iron Age tooth wear evidence was combined to give a large enough data set, but there was insufficient from the Romano-British material. Analysis indicates that during the Iron Age 60% of the sheep were slaughtered by the age of 2 years, which correlates well with the pattern of slaughter indicated by bone fusion, but in addition some very old animals are represented.

Very few elements could be ascribed to sex, one male and one female atlas from the Middle Iron Age,

Table 6.35 Coombe Down South SP 009, sheep/goat fusion data

Age	*EIA*		*MIA*		*M–LIA*		*LIA–ERB*		*ERB*		*LRB*	
(months)	*% fused*	*n*	*% fused*	*n*	*% fused*	*n*	*% fused*	*n*	*% fused*	*n*	*% fused*	*n*
6–10	62	29	82	11	25	4	67	6	67	3	50	4
13–16	86	22	100	2	–	–	100	4	–	1	–	–
18–28	50	20	60	5	–	–	38	8	–	1	–	1
30–42	24	37	42	19	67	3	24	17	67	3	–	2

and two female pelves from Late Iron Age/early Romano-British levels.

Pig

Pig was a relatively minor component of the animal bone assemblage ranging from 5% to 19% of the fragment count for the major domesticates. MNE counts reduce the range to 6–13% but follow the same pattern. Following a drop from around 10% in the Early Iron Age to 5% in the Middle Iron Age, pig seems to have become slightly more numerous in the Late Iron Age, again dropping in number in the Romano-British period.

The age data are sparse for this species, but a variety of ages are present, with a bias towards younger individuals. Pigs are generally slaughtered for meat rather than their small range of secondary products, and are therefore often killed earlier than the other major domesticates. As bones from juvenile and sub-adult individuals are more fragile than those of mature individuals the number of fragments from pig is likely to be under represented.

Bone element representation analysis was not possible as the number of bones is too low, but rapid qualitative assessment suggests that bone from all major areas of the carcass was present in all periods, indicating entire carcasses or live animals on site.

Of the canine teeth that could be sexed, two were male (Early Iron Age and late Romano-British), and one female (Middle Iron Age).

Horse

Horse is the fourth most numerous species by fragments except in periods where the sample size is very small, where horse may be over-represented through fragmentation. Both NISP and MNE counts from the largest samples indicate that horse, like cattle, became more numerous in the Romano-British period, and was least common in the Early Iron Age, the inverse of the pattern for sheep.

Some articulated and associated bones were identified. A horse skull associated with the Early Iron Age group of cattle skulls described above was estimated from its incisors to be from an animal between 5 and 11½ years and the crown heights gave a more precise age of 9 or 10 years. An articulated calcaneus and astragalus were recovered from Middle Iron Age/Early Iron Age levels. Late Iron Age and early Romano-British deposits yielded a group of bones which may represent one skull (a left and right mandible and a left maxilla). An articulated femur and tibia and, in another area of the site, an articulated calcaneus and astragalus were dated as early Romano-British. A partial forelimb consisting of the humerus, radius and ulna was recovered from the late Romano-British period.

The age of the horses at Coombe Down can be estimated in a number of ways. Several cheek teeth could be measured and thus assigned to an approximate age following Levine (1982). A first or second molar from the Early Iron Age was from an animal aged less than 1 year old. Two similar molars from the Middle Iron Age levels were from animals aged less than 1 year and 7 years old. A third molar from Middle Iron Age/Late Iron Age levels came from an individual aged approximately 18 months.

The system devised by Levine gives a minimum and maximum age and it is more likely that the horses represented by the teeth at Coombe Down were from the younger end of the scale as the wear on the surface was not particularly heavy. Such a high proportion of young horses is unusual. However, all long bones with fusion evidence surviving (34) were fused, indicating a minimum of two horses over the age of 3 years.

Dog

Remains of several different individuals were recovered from Iron Age and Romano-British contexts. Three mandibles from three different adult dogs, an adult partial skull, and the partial skeleton of a neonate pup were recovered from Middle Iron Age deposits. The pup bones from context C38 consist mainly of upper limb bones, scapula, and pelvis. The less robust and the smaller elements are missing and this is probably due to differential survival rather than the circumstances of deposition.

Two elements, a right mandible and left radius, perhaps from the same animal, were recovered from Late Iron Age/early Romano-British context A64. The teeth show some wear, and the P_2 is missing with the alveolus filled. The only evidence for dog in the late Romano-British period was a fused distal femur, indicating an animal over 18 months old.

Birds

Three single bones and a part skeleton were recovered. All the individual bones were from the wing and only one measurement was possible, due to breakage.

A galliform carpometacarpus was recovered from an Early Iron Age context. It closely matches that of small domestic fowl. As domestic fowl would be rare at this period, it was checked and the native galliforms (*Lagopus* spp, *Perdix*, *Lyrurus*) excluded. As the context is the upper layer of a working hollow which also includes a single fragment of late Roman pottery, a possible explanation for its presence is that it entered the hollow during the Romano-British occupation of the site. However, domestic fowl have been recovered from secure Early Iron Age contexts in other southern British sites, although they are normally 'special deposits' of partial or whole articulated skeletons (Hamilton 2000d).

Part of the skeleton of an immature pigeon (*Columba* sp) was recovered from a Middle Iron Age pit. The bird could not be identified more closely than to family. The bones found are a scapula, both coracoids, humeri, and ulnae and a carpometacarpus. The degree of immaturity suggests it was not fully fledged at death. Records of pigeon are rare, but known from some Iron Age sites, such as Nettlebank Copse, Hampshire (Hamilton 2000c). While finds of articulated bird remains have been described as having a possible ritual function (see below), it is equally possible that this was a fledgling that had died of natural causes and simply been disposed of in a convenient pit.

Two unidentified passerine bones were also recovered: an ulna from deposits of early Romano-British date (context E29) and a distal humerus from the Romano-British period (context B4), both with a small amount of Iron Age residual ceramics. Passerine bones, especially corvid, are common finds on Iron Age sites (Hill 1995), and are often found as articulated 'special deposits' (Grant 1984a, 540).

Wild species

Only four fragments of deer were recovered, three of red (*Cervus elaphus*) and one of roe (*Capreolus capreolus*). One red deer tibia was recovered from Early Iron Age levels, a scapula from Late Iron Age/early Romano-British deposits and an eroded piece of antler from a late Romano-British context. Roe deer is represented by a maxilla from Middle Iron Age levels. The femur of a fox (*Vulpes vulpes*) was recovered from a Middle Iron Age deposit. Six rabbit bones (*Oryctolagus cuniculus*) were identified, and as at the other sites, are probably intrusive.

Water vole (*Arvicola terrestris*) and bank vole (*Clethrionomys glareolus*) were identified, but both were from deposits that contained some residual material. A single woodmouse (*Apodemus* sp.) bone came from an early Romano-British ditch. Both frog (*Rana temporaria*) and toad (*Bufo* sp.) were identified, with frog bones from secure contexts (pits and fossil turf line) in all four trenches.

Butchery

Chop marks (N=275) are more common than cut marks (N=16) in all phases and on the bones of all species, although there is some evidence for variation related to carcass size. Over 90% of butchery marks on the larger animals were chops, but this proportion was lower (under 80%) on the smaller animals (sheep and pig). Of the 12 cut marks, 11 were from bones in Iron Age deposits. This corresponds well with current understanding of Iron Age butchery techniques, characterised by a high proportion of careful knife cuts. Chopping became more common in the Romano-British period (Grant 1987; Maltby 1989; Knight 2003), and this is reflected in the higher proportion of chop marks on bones from Romano-British contexts at Coombe Down South. However the proportion of chop marks is very high throughout and, to an extent, may be a result of differential survival favouring the heavier blows.

Decapitation of pig and horse in the Middle Iron Age is suggested by chop and cut marks, and many of the chop marks throughout all periods suggest that the bones were broken up to remove the marrow. A few bones have been chopped through the epiphyses which suggests disarticulation, with a smaller proportion having been disarticulated with a sharp knife. The horn cores of one of the cattle skulls had been chopped off, and another had been partially burnt in the parietal region, with cracking on the frontal bone, consistent with heating.

The only cut marks in the Late Iron Age–early Romano-British and Romano-British periods were found on dog bones. Both dog bone elements in Late Iron Age/early Romano-British context A64 exhibit knife marks; the radius has a single cut mark on the medial edge, mid-shaft, and the mandible has a series of at least ten fine cuts across the ventral edge below M_1 and M_2, and a further group across the ventral medial surface at P_2 and P_3. Taken together, this pattern strongly suggests the removal of the skin.

Measurements

Although a total of 158 bones were complete enough to yield at least one measurement there were no particularly large groups from any one period. Selected measurements of cattle and sheep bones show that the bones from Coombe Down South seem to be towards the smaller end of the ranges for contemporary sites in southern England (Table 6.36).

Measurements of the dog bones were numerous (Tables 6.17, 6.30 and 6.35), and sufficient measurements were obtained from a skull in Middle Iron Age context A27 to calculate the snout and snout width indices at 40.1 and 52.4 respectively. Both indices are outside the range given by Harcourt for Iron Age dogs, and the contributing factor to this is the viscerocranium length – the length of the face from the convergence of the frontonasal and internasal sutures. This dimension is smaller in the Coombe Down specimen at 71 mm than in other Iron Age dogs reported by Harcourt where the minimum is 82 mm. The effect is to produce a skull with a relatively broader, shorter muzzle, which is the type of general morphology now seen in such modern breeds as the rottweiller. The Coombe Down dog is, however, more of the stature of the larger terriers.

In another Middle Iron Age context (A51) were two left mandibles from two very different types of dog. The smaller reflects a compact and fairly gracile jaw, and its dimensions and morphology strongly

Table 6.36 Selected measurements from ABMAP and Coombe Down South SP 009 (mm)

Species	*Bone element*	*Measurement*	*Period*	*ABMAP*				*Coombe Down*
				Mean	*Minimum*	*Maximum*	*n*	
Cattle	*Scapula*	BG	EIA	41.1	39.2	43.0	2	50.5, 44.8
			MIA	43.1	36.7	51.5	33	42.7
			LIA/ERB	40.8	34.0	45.0	13	38.5
		GLP	EIA	58.9	58.9	58.9	1	65.0, 69.0
			MIA	60.6	53.5	70.0	29	61.4
			LIA/ERB	59.3	47.0	65.0	9	56.5
		LG	EIA	49.0	47.6	50.4	2	56.7, 59.0
			MIA	50.4	44.3	57.8	30	48.4
			LIA/ERB	50.0	47.2	54.1	9	45.4
		SLC	EIA	44.7	42.3	45.7	4	50.0, 51.6
			MIA	43.9	35.7	56.0	23	44.90
			LIA/ERB	43.6	35.2	49.9	12	45.3
	Radius	Bp	EIA	65.5	65.5	65.5	1	72.0
			LIA/ERB	70.4	61.8	80.9	19	68.2, 70.5
		BFp	EIA	60.4	60.4	60.4	1	67.3
			LIA/ERB	65.0	57.7	73.3	16	63.1, 63.5
		SD	EIA	32.2	31.1	33.2	2	35.8
	Tibia	Bd	EIA	59.4	59.4	59.4	1	45.9
			MIA	54.2	47.2	60.6	36	50.0, 54.0, 57.9
	Metacarpal	GL	MIA	174.1	158.2	184.0	12	175.1, 175.6
		Bp	MIA	51.6	45.5	65.0	31	48.6, 55.90
		SD	MIA	29.8	26.1	34.5	14	29.9, 30.4
		Dd	MIA	26.7	26.7	26.7	1	27.3, 31.3, 27.0
		Bd	MIA	50	45	55	12	46.6. 46.9, 51.4
	Metatarsal	GL	EIA	191.6	191.6	191.6	1	250.0, 202.10
			MIA	197.9	184.5	212.1	4	189.7, 196.7, 178.6
		Bp	EIA	44.2	44.2	44.2	1	42.8,43.5
			MIA	43.6	39.5	49.0	20	37.5, 39.8, 37.5
		SD	EIA	24.9	23.6	25.5	3	23.4, 24.4
			MIA	23.4	22.4	24.5	4	21.6, 23.3, 26.2
		Bd	EIA	44.8	44.8	44.8	1	42.1
			MIA	44.9	41.5	47.8	6	40.0, 47.2, 48.3
	Astragalus	GLl	MIA	58.2	55.0	63.5	27	57.4, 57.8
		GLm	MIA	52.4	43.5	56.0	25	52.0, 52.0
Sheep /goat	*Scapula*	BG	MIA	17.3	14.7	19.6	15	17.4, 18.5, 19.7
		GLP	MIA	27.6	24.6	30.0	13	26.4, 27.5, 27.5
		LG	MIA	21.8	20.2	23.5	15	16.5, 19.0, 20.6
		SLC	MIA	15.8	13.1	18.3	17	15.1, 15.5, 17.3
	Humerus	Bd	EIA	27.4	25.8	28.2	3	24.0, 25.0
			MIA	26.1	22.8	29.7	19	26.2
			M/LIA	26.4	26.3	26.4	2	27.8
		BT	EIA	23.5	23.5	23.5	1	22.8, 23.6
			MIA	24.9	22.4	27.9	15	24.5
			M/LIA	24.6	23.6	25.6	4	27.5
	Radius	Bp	MIA	25.6	23.7	28.2	27	24.4, 29.8, 26.5
	Tibia	Bd	EIA	22.5	22.5	22.5	1	22.4
			MIA	22.5	20.8	23.8	26	21.4, 21.9
			LIA/ERB	22.5	20.2	25.2	9	21.9, 22.1
Dog	*Radius*	GL	LIA/ERB	–	–	–	–	134.2
		Bp	LIA/ERB	–	–	–	–	15.5
		Min shaft dia.	LIA/ERB	–	–	–	–	10.5
		Bd	LIA/ERB	–	–	–	–	21.7
	Femur	Min shaft dia.	LRB	–	–	–	–	14.9
		Bd	LRB	–	–	–	–	32.0
		Dd	LRB	–	–	–	–	33.7
Passerine	*Ulna*	GL	ERB	–	–	–	–	33.6

resemble a modern Jack Russell terrier. The larger is from an animal with jaws the length of a modern Alsatian, but with a robusticity only seen in wolves and an English bull terrier. A mandible from context A78 conforms strongly in size, morphology and tooth measurements to that of a modern labrador.

In Late Iron Age/early Romano-British context A64, a mandible is similar in size to a Jack Russell type terrier, but the short cheektooth row and tooth size are more consistent with smaller modern terriers such as the Cairn (Table 6.30). In the same context the radius is of a dog standing approximately 455 mm at the shoulder with slender legs (the mid-shaft index, at 7.8, is similar to that of greyhounds). If both the radius and the mandible are from the same animal, it would be taller and more slender than a terrier type (the mid-shaft indices of our comparative Jack Russells are just under 11.0).

The distal part of a right femur in a Late Iron Age deposit suggests a robust dog, again of comparable dimensions to a modern labrador.

Pathology

All recorded pathological modifications were on cattle bones, and most related to work stress and old age, with some indications of trauma, the latter particularly in the Middle Iron Age. However, the incidence of pathology overall was not concentrated in any one period, but was instead loosely related to the size of the assemblage, with three examples in the early Iron Age, two in the Middle Iron Age, and one each in the early and late Romano-British periods.

In the Early Iron Age, lesions on a cattle left radius and ulna are likely to be the result of a minor inflammation following sprain. The proximal articular surface of the radius has a hole at the site of the synovial fossa and the associated ulna has an area of proliferative reactive bone just distal of the lateral tuberosity matched by slight hyperostosis on the corresponding site on the radius.

A cattle left metatarsal with manifestations of subchondral incompetence (a circumferential groove around the anterior margin of the proximo-medial articular surface) are undoubtedly the result of joint stress, but it is not yet possible to identify the aetiology. Age related conditions on a cattle left radius indicate an elderly animal, comprising hyperostosis of the distal ulna and full fusion to the radius shaft.

A Middle Iron Age cattle right metacarpal has swelling of the distal extremity laterally, and accentuation of the channel leading from the foramen to the intertrochlear notch. The most likely cause of this lesion is traumatic, such as a blow to the lower limb, and subsequent strain upon the muscle attachments. Trauma has also affected a cattle lumbar vertebra in which the neural spine had been fractured and subsequently healed with the extremity of the spine displaced at right angles caudally.

Periarticular exostosis on the dorsal margin of the cranial face of a cattle atlas from early Romano-British context D6 is probably an indication of old age, and has no other associated arthropathic manifestations.

A gross arthropathic condition in a late Romano-British bovid affected the caudal face of the last lumbar vertebra and the cranial face of the sacrum. The subchondral bone in both elements has been lost and a large bone intrusion extends from the body of the sacrum into the centrum. Spondylosis is visible on the left side with a periarticular bone spur extending forward from the sacrum, and there is advanced exostosis and extension to both elements on the left. This is probably a long standing result of herniated intervertebral disc where the disc has been forced into the centra and has ossified. With the progressive loss of the cartilage, compensatory bone growth has occurred which has further distorted the articulation. The final disappearance of the disc will initiate the loss of the dense layer of subchondral bone, finally producing the pitted and eroded surface of the bone of the vertebral body seen in this specimen. The condition must have affected the condition and gait of the animal considerably, probably causing it to appear sway-backed and skewed to the left. It is interesting, however, that the cranial face of the affected lumbar vertebra exhibits no arthropathic manifestations which might be expected as compensatory effects of such stress.

Discussion

The assemblage from Coombe Down South appears mainly domestic in nature. The number of bones from wild animals is negligible and the context of deposition is primarily domestic. Exceptions might include pit fill 51 in Trench A, which contains mostly skulls and associated hind limbs of domestic species, including four cattle skulls, a horse cranium, pig frontal, sheep and dog mandibles, horse femur and metatarsal, cattle pelvis, tibia, and femora and sheep tibia. This may be a parallel for a feature at Warren Hill (SP 049). The absence of any elements from the forelimbs of these species and the concentration of skulls and bone from the head suggests deliberate selection of the parts of the animals deposited within the pit. Associated sheep, horse, dog, and bird bones that might also have been deliberately selected for disposal were found in several time periods at Coombe Down South. It is easy to imagine that some parts, such as the articulated horse astragalus and calcaneus, could have been from routine discard of butchery waste, but selection has been seen at other sites from Salisbury Plain, and is more fully discussed below.

The rest of the animal bone assemblage from Coombe Down South reflects a mixed economy with a great deal of continuity throughout the occupation periods. The predominance of sheep during the early periods is not uncommon for sites on the chalk uplands. The increase in the number of cattle during the Romano-British period is not unusual in town sites but is less well documented in rural settlements. The very young, or foetal, individuals recovered suggest that animals of most species may have been bred on site. The presence of all parts of the carcass supports this argument as it is clear that whole animals and not joints of meat were incorporated into the site debris.

No clear husbandry pattern emerges from looking at the age profiles. It seems that the cattle at Coombe Down South were exploited for their milk and meat, with little evidence of the older animals that would have been used for traction. In the Iron Age sheep appear to have been exploited for meat and wool, with a proportion culled for meat. This proportion may have increased in the Romano-British period, and milk production may also have become more important. The pigs were possibly the only species bred entirely for meat and this species is normally slaughtered before maturity. The butchery marks suggest that horses were also used for meat, perhaps with some culling of younger individuals, which is unusual, and dog, horse and cattle skins were utilised.

Synthesis

The four sites analysed here differ in some fundamental ways, any or all of which might have led to differences in the animal bone assemblages. In terms of location, Coombe Down South, Beach's Barn, and Chisenbury Warren are all situated in fairly close proximity in the Western Study Area, whereas Warren Hill is in the east, almost 4 km away. While the elevation of the sites is very similar at 450–500 m OD, Warren Hill is considerably closer to a river than the others, in particular Coombe Down South. Warren Hill is also the only site not occupied in the Romano-British period, while Beach's Barn and Chisenbury Warren show little or no evidence of occupation in the Iron Age. The long period of occupation and relatively high proportion of Roman fineware ceramics at Coombe Down South indicate its different, perhaps higher, status. In addition, the assemblages from Warren Hill and Beach's Barn were mainly recovered from particular features on the periphery of the sites and, as such, cannot be assumed to be representative.

Comparative rural sites in the area are few, with the closest at Amesbury (Egerton 1996; Powell 2000) and Shrewton (Hamilton-Dyer 1996). Both are predominantly Romano-British in date, so sites of Iron Age and Romano-British date from further afield in southern Britain are also referred to here. Known Romano-British towns are at some distance – over 40 km – and probably outside the range that a small-scale trade network would operate at. However they offer some useful comparative data and suitable assemblages have been used from Silchester (Maltby 1984a; Hamilton-Dyer 1997) and Dorchester-on-Thames, Oxfordshire (Grant 1978).

Also of importance, although not geographically close enough to provide direct comparison, are the Danebury Environs sites. They are similar in date but varied in type and size, with large bone assemblages, which Hamilton (2000e) used to identify and explain differences in species proportions and husbandry patterns over time and between sites. The potential for similar analysis is limited by the smaller size of the Salisbury Plain assemblages and the disturbed nature of the largest assemblage, that from Chisenbury Warren.

Iron Age husbandry

At Iron Age sites on the chalk downland sheep are usually the most common species represented. This is the case at Balksbury (Maltby nd), Danebury (Grant 1984a; 1991), Old Down Farm (Maltby 1981a), Chilbolton Down (Maltby 1984b), Cowdery's Down (1982), Brighton Hill South (Maltby 1987b), and Winnall Down (Maltby 1981b; 1985). Coombe Down South follows this typical pattern; both by fragment counts and MNE sheep are the most frequently occurring species. Conversely, Warren Hill has the reverse pattern with the bones of cattle dominating the assemblage. As discussed above, the context of deposition at Warren Hill is different from that at Coombe Down and it has been suggested that this favoured the survival of cattle bones and hence the enhanced representation of cattle above sheep.

Grant argued for Danebury that the predominance of sheep on chalk sites was because of an environment better suited to the species. Grassland on chalk is generally poor and water sources more widely spaced than in other areas. Sheep have lower water requirements and can survive on poorer quality feed than cattle (Grant 1984a; 1984b). This pattern held true for the Danebury Environs sites, where Hamilton (2000e) states that in the Early Iron Age, sites further from a natural water source have a lower proportion of cattle. It might be, therefore, that the higher proportion of cattle seen at Warren Hill is in fact a true reflection of the animals kept in this area, which is the closest of all the Salisbury Plain Project sites to a river.

By the Middle Iron Age, a higher percentage of sheep/goat bones are found at Warren Hill, comparable with that from Coombe Down South. This suggests either that animal husbandry had

changed or that the pattern of deposition or preservation had altered. Hamilton points out that her observed pattern of a greater proportion of cattle on sites closer to water sources became less clear by the Late Iron Age. Bias from feature type was less of a concern for these more fully excavated sites and, while it is possible that animal husbandry at Warren Hill had indeed changed to favour sheep/goat in the Middle Iron Age, no conclusions can be drawn from this small sample.

On many Iron Age sites (Danebury, Balksbury, Old Down Farm, etc) the sheep were killed at either less than 1 year or at a mature stage. Maltby (1981a) suggests that the young deaths were caused by inefficiency and were natural deaths as the animals would have been small and the meat yield low, he also asserts that only the animals needed for breeding purposes would have been kept alive. This pattern, he suggests, indicates that, although sheep were kept in large numbers, their exploitation was at the level of only basic subsistence. Grant argues the same point for the sheep remains from Danebury (1984). Hamilton (2000e: 69) has suggested, however, that where evidence for new-born animals is scarce at two of the Environs sites, lambing was simply taking place elsewhere. A large proportion of young animals therefore does not necessarily reflect a high natural mortality, but could indicate seasonal movement of flocks.

At Coombe Down South, some bones from new-born animals were seen and there is evidence of individuals killed, or dying, at less than 1 year old. The tooth wear shows that more than 60% are likely to have died by the age of 2 years (although this is a very coarse pattern and does not indicate the proportion which died in their first year) and that there was a substantial proportion of animals surviving well into maturity. Therefore the evidence from Coombe Down South, to some extent, does seem to mirror the exploitation pattern suggested by Maltby and Grant. The ageing evidence from Warren Hill is insufficient to say more than that both juveniles and mature animals were present.

The age at death of cattle on sites of a similar period in southern England seems to vary. At the Iron Age site of Old Down Farm, neonate, young calves, and mature animals were all represented, whereas at Winnall Down the cattle were mostly mature. Grant (1984b) points out that at sites on the lowland gravels, bones from very young animals were rare but juveniles were well represented. In contrast, the sites on the chalk uplands tended to have relatively more young animals, few juveniles and sub-adults, and a large percentage of animals kept into maturity or even old age. Coombe Down South and Warren Hill produced ageing evidence for animals in all these broad categories, with slightly more killed at a suitable age for meat at the former. At Coombe Down South the percentage of neonatal and young calves is high, but these are absent from Warren Hill.

Pig bones occur in small numbers on all types of Iron Age sites, and this is the case at Coombe Down South and Warren Hill. As pigs do not provide many of the secondary products provided by other domestic mammals, such as milk or wool, they are exploited primarily for meat and thus are slaughtered at a comparatively early age. The bones of juvenile animals do not survive as well as those of mature beasts and the low numbers of pig may be due, at least in part, to this taphonomic bias.

Horse is usually the least frequently represented of the four main domestic species by any quantification method. No very young individuals were seen at either site, but at Coombe Down South three molars came from animals younger than 2 years. Very young animals are rare at Iron Age sites leading Harcourt (1979) to propose that adult horses were rounded up and trained rather than bred on site, and that 3 years of age is the optimum for capture and training. The younger individuals recovered from Salisbury Plain suggest a different picture, perhaps one more similar to that at Rooksdown, Basingstoke, where a high proportion of young horses led Powell and Clark (n.d.) to suggest breeding on-site or nearby.

A significant finding in the group of dogs is the size and morphological variation visible in the Middle Iron Age material from Coombe Down South. It is clear that at least three animals here are far from being 'plain dog'; the short, broad muzzle has appeared, as has the gracile jaw, but there also exists a highly robust type. Maltby (1981c) noted that at Winnall and Balksbury, and also at Gussage All Saints, the sites produced relatively large numbers of bones of neonatal pups. Neonate material was noted from only one of the Salisbury Plain sites, and this represented a single individual; we cannot therefore apply Maltby's suggestion that on Iron Age sites we may often be seeing control measures applied to the dog population.

The rarity of bones of wild birds in the Iron Age settlements is entirely typical for sites in southern Britain of the period (Maltby 1994a). Although sieving may have increased the numbers of bird bones recovered, there is little evidence that birds were captured for consumption on inland sites, and there is often uncertainty about whether or not the bones had found their way into the deposits through human agency. The presence of a domestic fowl bone in an Early Iron Age deposit and a Middle Iron Age partial immature pigeon skeleton at Coombe Down South are very unusual. While these species are not unparalleled on southern British Iron Age sites, they may have been of significance, as unusual species are often found as 'special deposits' in the Iron Age (Hill

1995), which the pigeon skeleton, if not the fowl bone (which is not securely dated), resemble.

Romano-British husbandry

Material from the late Romano-British period is better represented than the much smaller early Romano-British samples, and most bone from Chisenbury Warren could not be assigned to the early or later period, making meaningful comparison between the two periods impossible.

Many assemblages from rural settlements (for example Groundwell Farm (Coy 1982), Bishopstone, (Gebbels 1977), Micheldever Wood (Coy 1987), Butterfield Down, Amesbury (Egerton 1996), and Shrewton (Hamilton-Dyer 1996)) show continuity in species composition throughout the Iron Age and Romano-British periods. Some sites, such as New Covert, Amesbury (Powell 2000), show an increase in the proportion of cattle in relation to sheep, which has been linked with a greater degree of Roman influence (King 1991). Urban and military sites in the early Romano-British period also have a greater proportion of cattle bones (Maltby 1994b).

The high proportion of sheep at Chisenbury Warren also resembles the pattern noted in the Early and Middle Iron Age levels at Coombe Down South. However, in the later Romano-British period Coombe Down South has slightly more cattle than sheep by all methods of quantification. Beach's Barn also has a high proportion of cattle, although the small size of this assemblage might make it unrepresentative of the whole site.

According to King (1991) there is a general move towards an increased use of cattle and pigs with a concomitant decrease in sheep throughout the Romano-British period. Even in areas best suited to sheep an increase in the number of cattle and pig bones retrieved has been observed. At the Salisbury Plain sites, proportions of pig bones are low in all phases, although at Coombe Down South it is notable that the proportion is lowest in the late Romano-British phase, contradicting King's theory. However, this may be related to the generally young age at death of pigs, leading to their fragile bones being more readily destroyed, and this is especially valid at Coombe Down South where the later phases tend to have worse bone preservation.

King also notes that by the late Romano-British period the cattle and sheep age profiles, from both rural and urban sites, show increased exploitation of adults. He links this to a growing focus on milk and wool. However, if we accept Maltby and Grant's suggestion for the Iron Age period that a high number of young individuals demonstrates poor husbandry then this change in pattern could also imply higher standards in husbandry techniques.

The assemblages from Beach's Barn and Coombe Down South more readily fit into the later Romano-British type described by King on the species present whereas the Chisenbury Warren group does not. The possibility that the Beach's Barn group may be biased towards cattle bones due to the depositional context has already been discussed. However, the bone bearing contexts at Chisenbury Warren and Coombe Down South are similar in type, comprising a range of settlement features, and the variation in species composition cannot simply be ascribed to intra-site variation.

It is difficult to compare the age structure of the animal groups from these sites as there is very little evidence from Coombe Down South or Beach's Barn. At both, prime meat animals are represented, as well as young animals that suggest breeding nearby. At Chisenbury Warren the cattle mortality pattern best resembled that described for Iron Age chalk downland sites, with a proportion surviving into old age, and the sheep mortality resembled the Iron Age pattern at Coombe Down South, with a large proportion killed by two years, but some older animals also represented. The exploitation of cattle and sheep at Romano-British Chisenbury Warren seems therefore to show continuity with the Iron Age pattern of exploitation in this area, while the opposite is true for Romano-British Coombe Down South.

The differences between Chisenbury Warren and Coombe Down are notable since they were contemporary sites only 2 km apart. Their proximity suggests that any possible environmental constraints (such as distance from the nearest water source) may have had less effect on the livestock kept than social or cultural factors. Coombe Down South may have been a dominant site in the area in the Iron Age, and this role may have continued into the Romano-British period. The change in animal husbandry, therefore, might be consistent with increasing 'Romanisation', possibly because the inhabitants of Coombe Down South were more influential or powerful than their neighbours.

In his study of bird bones from Roman Britain, Parker (1988) noted that the cumulative finds 'emphasize the Romanization of eating habits in the province'. However, most of the sites Parker discussed were urban. At these rural settlements on Salisbury Plain, more typical of rural Romano-British sites, there is little evidence for rearing domestic fowl or consumption of wild birds, although there is the unproven possibility that the thrush and partridge bones were the remains of consumption, and might therefore indicate Romanised eating habits.

Another possible change in animal exploitation is embodied by the late Romano-British dog skeleton from Beach's Barn. It appears to be significantly older

than the other dogs whose ageable remains have been recovered, and its state of health and general condition point to a notable maturity and the ability to survive, at least for a time, major trauma and subsequent serious infection. A close human-animal relationship, whereby the injured dog was cared for by an owner or other interested individual, is the most likely explanation.

However, similar close relationships between dogs and humans are not in evidence from other Romano-British sites. Maltby has discussed patterns of butchery in later prehistoric dog bones from Owslebury (Maltby 1987a), Balksbury (Maltby nd), and Winnall Down (Maltby 1981b), and points out that at Owslebury dogs continued to be eaten occasionally even in the late Romano-British period. Wilson has drawn attention to the obvious consumption of dog evident in the material from Ashville Trading Estate (1978), and skinning marks have also been noted on dog bones from the ditch at Brighton Hill South (Maltby 1987b). The group from Chisenbury Warren and Coombe Down South conforms with these previous findings, both in the likely skinning marks and the disarticulation method. Evidence for disarticulation or skinning of dogs comes from the late Iron Age/early Romano-British periods at Coombe Down South and Chisenbury Warren.

In the butchery evidence in general a greater emphasis on chopping rather than knife disarticulation is seen in the Romano-British period (Grant 1987), a pattern that is also more typical of urban than rural Romano-British sites (Maltby 1989). At Chisenbury Warren, despite poor preservation of bone perhaps producing a bias in favour of the deeper and less easily obscured chop marks, the typical 'native' pattern of a higher proportion of knife cuts is in evidence. Conversely, at Coombe Down South, chop marks are more common throughout all phases of occupation, although some change is suggested by the higher proportion of cut marks in the Iron Age (11%), dropping to 6% in the late Romano-British contexts. Maltby (1989) suggests that the Romano-British method of roughly chopping through joints and bones and using a heavy implement to roughly fillet meat from the bone resulted from specialised military butchery techniques, where speed and not precision was required. Again this suggests that Coombe Down South was under different influences, and by this period, perhaps had close contacts with Roman or 'Romanised' individuals.

The nearby sites of Butterfield Down (Egerton 1996) and New Covert (Powell 2000) both contain deposits with unusually high proportions of foot bones, interpreted at both sites as butchery waste. In the Romano-British period, such deposits are normally found on consumer sites such as Silchester and other large Romano-British towns, together with a high proportion of prime meat animals (adult and sub-adult individuals) (Maltby 1994b). The producer sites, therefore, would have a correspondingly low proportion of animals of this age group; at Coombe Down South, Chisenbury Warren, and Beach's Barn there was no evidence of such a pattern. The deposit of skulls at Coombe Down South could be taken as evidence of a large scale butchering of animals, but the deposit differs from those at Amesbury since it contains low numbers of foot bones. The significance of this deposit is unclear and is further discussed below.

Animal size is thought to have increased in the Romano-British period as breeds were introduced and/or improved (Noddle 1984). However the animals on Salisbury Plain appear to have remained small in size, and with one exception either do not show an appreciable increase or are actually smaller than their Iron Age predecessors. Sexual dimorphism was not explored due to the small numbers of measureable bones, but probably accounts for the anomalies in the data. The Romano-British sheep/goat and cattle at Silchester and Dorchester were also generally small and slender (Hamilton-Dyer 1996; Grant 1978), so the Salisbury Plain animals are not unusually small for the region.

Deposition practice

Post-depositional destruction has affected material from all of the sites, but has been especially damaging at Chisenbury Warren. Loose teeth formed 33–48% of the assemblages, with the highest proportion at Chisenbury Warren and the lowest at Coombe Down South and Warren Hill. In keeping with this pattern, the highest percentage of identified fragments was found at Coombe Down South, with a range for all the sites of 34–45%. Thus it appears that preservation was (marginally) better at Coombe Down South and worst at Chisenbury Warren, corresponding well with the observed levels of residual ceramics and presence of intrusive animal bones such as rabbit.

Despite the strong biases in species and bone element caused by the differential destruction of bones, there is evidence from each of the sites of a degree of selection in some of the deposits, relating to the elements and/or species deposited, which in some cases may have a non-economic significance. Examples are found from all periods and include groups of particular bone elements deposited together, articulated parts and whole skeletons. The latter include companion animals and unusual species of birds as well as domestic animals that have apparently not been utilised for food. The articulated parts have also not been routinely utilised for food and include partial cattle, sheep and horse limbs.

Grant (1984a, 538) categorised whole or partial articulated skeletons, complete or almost complete skulls and horse mandibles, and articulated limbs as

'special deposits'. She distinguished ordinary butchery waste from cranial special deposits on the basis of the amount of the skull surviving and the absence of butchery evidence, and defined them as 'including skulls that had clearly been deposited whole and skulls where a substantial amount had survived, any damage having probably or possibly occurred post-deposition'. In addition she noted for Danebury that the incidence of special skull deposits from particular species did not reflect the percentage contribution of that species to the total bone sample.

Wait (1985) said that the primary characteristic of a special deposit was that '…they are animals, or parts of animals, which were not exploited – for meat, sinew, skin, bone etc – in the normal manner'. Another of his criteria for special deposits is that they only occur in pits, not the ditches containing much of the 'general faunal record', and that these pits tend to be located near houses and paddocks.

Hill (1995) used the less loaded term 'ABG'; associated or articulated bone group. Building on Grant's definition, he stated that the less frequently a species is represented in an assemblage, the more likely it is to occur in part of an articulated group (1995, 59). He was also more inclusive in his definition of special deposits, stating that butchery marks may occur on bones from special deposits but that they will tend to differ from those found on the rest of the assemblage.

Both Warren Hill and Coombe Down South yielded similar deposits of skulls. At Warren Hill four largely complete cattle skulls had been deposited in a shallow cut into the basal fill of the Early Iron Age enclosure ditch (SP 049, Ditch 12) and a similar deposit was noted from a pit dated to the Middle Iron Age at Coombe Down South. One major difference is the inclusion of a horse skull and evidence that sheep, pig, and dog heads may also have been present in the Coombe Down South group whereas the Warren Hill group comprised cattle skulls with parts of the post-cranial skeleton of horse, cattle and sheep.

The skulls at Warren Hill suggests that the heads were not simply removed and deposited but that the skin, meat, horn, and, in one case, brain had been removed. The evidence is less clear for Coombe Down South but at least one horn had been chopped off and one skull showed evidence of modification by heat, as did two of the Warren Hill skulls. This pattern of utilisation before discard fits with that described by Wilson (1978) at Ashville but is contrary to the definitions of 'special deposits' offered by Wait and Grant. As butchery on cattle skulls from other deposits is scarce, it is difficult to assess whether this pattern of butchery was unusual, and therefore whether Hill's 'associated bone group' definition could be applied. Analysis of the Iron Age Battlesbury Bowl assemblage has indicated that here some cattle skulls were indeed butchered in an unusual manner; they were skinned, carefully cleaned of flesh and the brain removed (Hambleton and Maltby 2004). Loss of teeth indicated that they remained above ground for some time prior to deposition, which was interpreted as possible evidence for display, the skulls only being deposited after this function has been fulfilled. The 'specialness' of these deposits therefore relates to their role before deposition and not, or not only, to the act of deposition.

The two groups from Warren Hill and Coombe Down South differ from much of the rest of the assemblage at these sites as they would seem to have been deposited in one event. The completeness of the skulls from Coombe Down South is in contrast to the rest of the skull material found at that site, although this is less relevant for the material from Warren Hill where most of the bone from the basal layer of the ditch is in good condition.

At Warren Hill and Coombe Down South cattle are the most frequently occurring species, both in the total assemblage and as skulls or associated groups of bone, and therefore the inverse relationship described by Hill is not sustained. It is, though, worth noting that bones from unusual animals were prominent in the associated groups; naturally hornless animals were included in the Warren Hill deposit, together with animals with high frontal bosses. Hamilton (2000e) notes that skulls from cattle with unusual characteristics, such as particularly high frontal crests or naturally hornless animals, were selected as special deposits at Iron Age Suddern Farm, Hampshire. Grant (1978) also notes a deposit of a cattle skull with an unusually high frontal profile at Romano-British Dorchester, and two cleaned hornless cattle skulls were found together in a pit at Battlesbury Bowl, and are regarded by Hambleton and Maltby (2004) as having 'special significance'.

Included in the skull deposits from Warren Hill and Coombe Down South are articulated limb bones and, again, some of these show evidence of butchery. If we apply the definitions of Wait and Grant strictly, then these two groups should be regarded as non-special deposits and considered as probable butchery waste. However the apparent absence of further disarticulation, which must have affected the non-articulated bones, suggests that this was a different butchery method, in line with Hill's interpretation of ABGs.

The possibility of taphonomic processes accounting for these deposits should be mentioned. Maltby (1985) and Wilson (1985) have considered intrasite variation and the relationship between feature type and location and the species deposited therein, and concluded that features such as ditches, particularly those on the edge of a settlement, will tend to contain a greater proportion of fragments from larger species. Maltby links poorer preservation in ditches with a bias towards the more robust bones

of species such as horse and cattle, while Wilson suggests that human or animal agency prior to burial results in differential disposal of larger animals (periphery) compared with smaller animals (centre).

As the assemblages from Beach's Barn and Warren Hill are dominated by cattle bones, it has already been proposed that this may be due to the context of deposition (marginal and ditch fills respectively), rather than husbandry patterns. This may account for preferential survival of cattle and horse bones at Warren Hill, although skulls would not be expected to survive well as they are not particularly robust elements. At Coombe Down South the cattle skulls are from a pit, where survival is thought to be better, and smaller species are more likely to be well-represented, so this group is also not easily accounted for. In both cases, therefore, the bias towards heads seems to be real.

Hambleton and Maltby (2004) suggest that in some areas in the Iron Age such deposits may represent the disposal of objects that had served a purpose above ground for some time after the animal had died and the skull been exposed. The similarity in processing patterns of the Battlesbury Bowl and Warren Hill skulls, at least, could indicate the special nature of the contents of these deposits, if not the act of deposition itself.

Deposits of partial or complete skeletons have been found at Coombe Down South (pigeon), Chisenbury Warren (sheep), and Beach's Barn (dog). Similar deposits have been recognised in the area from Shrewton (a dog, a calf; and five piglets, possibly from more than one litter), Butterfield Down (a pup and a crow), and New Covert (a horse and a sheep and goat buried together). Explanations for this type of burial have ranged from the disposal of diseased or unwanted carcasses (Maltby 1985) to propitiatory offerings (Cunliffe 1992), while Fulford (2001) believes that they represent a definite ritual activity that provides evidence for continuity from the Iron Age to the Romano-British period. Certainly there is evidence for unusual species (the pigeon) and special treatment (the elderly, sick dog), which do fit well with the definitions presented and argue for the special nature of at least some of these burials.

Conclusions

This study of the material from the Salisbury Plain Survey has added substantially to our knowledge of animal exploitation in this area throughout the Iron Age and Romano-British periods. The bone assemblages from all four sites discussed in this report are dominated by the remains of the four main domesticates, horse, cattle, sheep or goat, and pig. Wild mammals formed only a minor component, with red deer and roe deer hunted by the inhabitants and possibly the hare and fox exploited in the same manner. However, the microfauna and some of the bird bones will have had a non-anthropogenic origin.

The nature of the four sites differs. Warren Hill is an Iron Age enclosure, Beach's Barn, a Roman corn drier, and Coombe Down South and Chisenbury Warren are both multi-period settlements. The different natures of the former two sites (essentially small assemblages from excavations of single features) do not allow for direct comparison but help to form a complete picture of husbandry within the study area.

The initial, striking, difference between the assemblages within the project is the greater number of cattle fragments recovered, compared with sheep, from the two smaller sites. There is also a similar, if less marked, difference between Coombe Down South and Chisenbury Warren. While context of deposition probably has some bearing on the differences, the possibility that cattle were especially numerous at Warren Hill, like other Iron Age sites such as New Buildings, Hampshire (Hamilton 2000b), cannot be dismissed using the present evidence.

The small number of bones in each phase and species that could be aged effectively precluded detailed analysis of occupation with regard to seasonal use. At all sites a range of ages was encountered, but fragmentation of mandibles meant that our understanding of kill patterns was not precise enough to determine whether flocks were moved seasonally. However, the smaller number of neonatal deaths in the Romano-British periods at Coombe Down South might indicate improvements in animal husbandry rather than lambing taking place elsewhere.

Associated bone groups were found on all sites from a range of periods, and included whole and partial skeletons, articulated limbs and groups of skulls. The exact nature of these deposits is unclear, but most have characteristics consistent with interpretations offered by Hill (1995) and Grant (1984a) of non-functional deposits, or perhaps deposits of non-functional items, which are common on both Iron Age and Romano-British sites in southern Britain.

Despite a high proportion of pottery finewares and longer period of occupation at Coombe Down South, there is little direct evidence from the animal bone for higher status. However, the young age of horses might indicate a specialised function, although not as well defined as that from, for example, Bury Hill. In addition, the deposition of unusual species, such as pigeon and domestic fowl, could indicate non-local contacts in the Iron Age. Evidence from butchery marks and a change in species proportions suggests that Coombe Down South became more 'Romanised' than the other sites, in particular Chisenbury Warren,

which is better characterised as 'native', despite the very close proximity of the two settlements.

In terms of continuity, a number of features of Iron Age practice seem to have persisted into the Roman period at these sites, including the butchery and consumption of dogs and horses and the deposition of skulls of cattle and other animals, and part skeletons.

Table 6.37 Coombe Down South SP 009, coprolites

Trench	*Context*	*Period*	*Dimensions (mm)*	*Description*	*Interpretation*
C	106	EIA	*c.* 45 x 24	Subrounded, cylindrical, many frags bone >18 mm, small chalk pieces	Canid stool
	42	LRB	68x<39	Large, suboviod/surounded cylindrical mass & frags, small bone frags <7 mm	Canid stool
	15	LRB	*c.* 28x14	Bipartite, oviod	?Canid stool
	95	LRB	*c.* 25/30 diam.	2 subrounded frags, vescicular matrix, many angular bone frags <12mm	Canid stool
C	30	LIA/ERB	*c.* 50x40	Amorphous, light grey, calcareous, vesicular mass, small frags dark greenish-brown angular bone, poss. pottery	Canid excreta or vomit
	30	LIA/ERB		Amorphous, light grey mass, large frags <24 mm) dark greenish-brown angular bone	Canid excreta or vomit

Coprolites

by Michael J. Allen

Six coprolitic masses were recovered from Coombe Down South (SP 009) (Table 6.37). They were from ditches, the 'midden', and other general 'occupation layers'. All were characterised by their very light yellowish colour and highly calcareous matrix. All pieces were typically coprolitic in nature (see Allen 1993; 2002), and three were recognisable stools. The matrix was distinctly vesicular with a number of fine macropores like the Romano-British dog coprolites from Greyhound Yard, Dorchester (Allen 1993) and distinctly less dense than those of sheep/goat from Alington Avenue, Dorchester (Allen 2003). All contained angular fragments of animal bone from animals larger than rodents. These are all typical dog-splintered fragments. All six pieces were either recognisable stools, or amorphous coprolitic masses representing diarrhoea or more likely vomit. The presence of dog in Early Iron Age to late Romano-British contexts is also seen in the gnawing of the animal bone.

Discussion: the Later Prehistoric and Early Historic Farmed Landscape

by Michael J. Allen

It is relatively unusual to have environmental evidence of land snails and soils (lynchets) to accompany economic evidence of charred plant remains, charcoal, and animal bones from a later prehistoric and early historic landscape project. We know that the downland was a broadly open, cleared, and farmed landscape by this time (see for instance Entwistle's work on the Salisbury Plain area; Entwistle 1994). The greater challenge is to attempt to define the changing nature of land use within that open downland; that is to differentiate between rough pasture, grazed pasture, trampled occupied land, and arable. The latter is often particularly difficult as there are no good analogues for prehistoric arable habitats. Further, during the Iron Age–Romano-British periods we might also expect to see changes in arable framing practices – apart from crop husbandry practices perhaps also changes from arding to ploughing.

On the wider scale changes in the composition of the crops, their processing, and in the herds may also reflect changing economies and communities; so too might the relative composition of arable versus animal husbandry and, indeed, changes or increases in land uptake for farming. With these ambitious objectives in mind we can examine the data presented above in an attempt to provide some indication of social and economic changes within the farming societies who lived on and worked the Plain.

The Nature of the Downland

By the onset of the Iron Age the downland already existed as a largely open landscape, with long tussocky grasses, shrubs of hawthorn and patches of brambles, interspersed with arable fields, grazed downland, and small settlement farmsteads. These were small woods and copses, but large closed-canopy ancient forests no longer existed. Modification of the landscape in terms of increases in broken ground (tillage) and of short-dry grassland (pasture) can be seen from a range of environmental data.

Arable farming

Iron Age cultivation was predominantly of spelt wheat with barley, grown on the local thin, light calcareous soils. There is no evidence of exploitation of clay-rich soils associated with patches of clay with flints, nor of the valleys. Crops were processed and consumed locally. In contrast, during the Romano-British period, a greater emphasis was placed on barley rather than spelt and the occurrence, albeit minimal from our evidence, of bread wheat is encountered. Although most crops were still on the thin chalky soils, there is evidence of cultivation of damp clays in the valleys off the chalk. An expansion in tilled fields on the chalklands can also be suggested. Although the significant increase in numbers of grain and chaff in the Romano-British period is in part due to processing and drying of grain on site, it does indicate greater quantities of grain being cultivated. We may take this to indicate an increase in cultivated land and this is suggested by both the charred plant and the land snail evidence.

The expansion of agriculture onto the clay, which is more tenacious, and the increase in land under cultivation may be economic decisions, but it may also be coupled with improved technology. Metal tipped ards, greater draught capability (yokes and harnesses) and the possible introduction of the mould board plough may all contribute to this expansion.

Ard versus plough
Before the introduction of the mould-board plough the simple ard, such as the Donnerupland ard-type, merely created a shallow furrow and bed for the seed. Once hand sown, the soil was scuffed back to cover, protect, and bury the seed (Reynolds pers. comm.). The surrounding soil, and soil at depth, was not disturbed; thus oxen-drawn ards are little more than traction-pulled digging sticks. As a consequence the soil surface in much of the field remains hard, unbroken and, if not thoroughly weeded, often with a light vegetation cover. In contrast the mould-board plough turns the sod in creating a furrow, creating a loose tilth, and effectively reducing the numbers of living plants (weeds). It is more effective creating a deeper furrow bringing up more nutrient-rich soil from lower in the profile, breaking any surface crusts enabling greater rain absorption and penetration. In theory, at the macroscopic scale, these two environments should be slightly but subtly different and may be reflected in, for instance, the land snail assemblages. Whether this can be detected in this study is in part immaterial. It is perhaps more important that if such changes can be detected that they are defined, and looked for in future research.

Pasture versus arable
While there seems to be an increase in cultivated land in the Romano-British period, changes in the relative level of animal husbandry and stock on the downs remains difficult to assess. Nevertheless, it is important to examine any changing emphasis between crops and livestock as well as determining increase in either or both.

Livestock
Iron Age livestock were largely flocks of sheep for meat on the higher downland with cattle for meat and dairy, though some may have been for traction. Levels of pig are low, but the presence of woodland pannage, as indicated by the charcoals and snails was limited. Horse were present. By the end of the Romano-British period cattle were the dominant herd while sheep flocks declined and there is little evidence of their use other than for meat. Overall changes in livestock composition cannot readily be interpreted in simple deterministic terms. In fact quite the reverse; sheep which have lower watering requirement and can tolerate poorer pasture might be expected to be more common as farming expanded into the heart of the downland. As the opposite occurs, as is the regional trend at least, this must represent wider economic and social decision making.

This economy suggests one of provision for the communities living on and around the downs with little of the economy based on secondary products and craft industries (wool, textiles, etc) which may have been traded and marketed.

Conclusions

Although this limited project has not been able to answer many of the questions about the detailed nature and changes in the farming economy, it has prompted enquiry in this direction. More importantly it has provoked detailed questioning of the nature of the downland farming economy, landscape and land-use economy in periods when the nature of the physical landscape is often overlooked or assumed just to be 'open'.

7. Synthesis: Iron Age and Romano-British Societies of Salisbury Plain

Iron Age

The principal objective of the project was to determine the age of a sample of the 60 undated enclosures believed to be of Iron Age date within the study area. In the event it was only possible to examine one-third, eight of the 23 identified within the two sample areas (Fig. 3.1). However, in addition to the strategy of sampling enclosure ditches by small-scale excavation, that of surface collection from fieldwalking in the two sample areas produced complementary results. The approach to the enclosures was to sample sections of the enclosure ditches. The trenches were deliberately sited close to the perceived entrances in order to maximise the potential for recovering datable material and all sites did produce sequences of datable ceramic assemblages. While the evidence from the primary silts of the ditches only indicates a *terminus ante quem* for their initial excavation, the evidence from the eight tested by excavation points to their creation during the Early–Middle Iron Age. However, the presence of Late Bronze Age pottery from a primary context in a pit associated with one of the Coombe Down North enclosures (SP 014B, Fig. 3.8) indicates that occupation there probably commenced prior to enclosure.

Otherwise occupation earlier than the cutting of the ditches can only be inferred from the residual presence of material in their fills. With the exception of the occasional sherd of Neolithic and Beaker pottery at Coombe Down North (SP 014A) and Everleigh (SP 023), this was otherwise of Late Bronze Age date. Such material was present at all the enclosures except Warren Hill (SP 049). In part this accounts for the impressive figure of 17% of all the prehistoric sherds recovered through both excavation and surface collection proving to be of Late Bronze Age plain ware.

Except where excavation, as at Coombe Down North (SP 014B), produced evidence of a cut feature with Late Bronze Age pottery, it is difficult to interpret the small quantities of material recovered residually from excavation or surface collection in relation to permanent settlement or other activities in the landscape. However, concentrations of sherds of this date recovered by surface collection at three sites would seem to indicate settlement. West of the Bourne a concentration of 91 sherds indicates the probability of a settlement at The Pennings to the east of Sidbury Hill, while larger concentrations of 276 and 627 sherds were located to the east of the river on the Bourne ridge from, respectively, east of the Tidworth lynchets and alongside Shipton Plantation, where RCHM(E) has plotted an enclosure, presumably of Iron Age date, from aerial photography (McOmish *et al.* 2002, fig. 3.30; Fig. 7.1). Possibly associated with this focus of activity are lesser concentrations of material (20–30 sherds) to the north at Furze Hill and to the south at Snoddington Down. Other collections of around 20 sherds at Shoddesden Grange to the east of the Bourne and, west of the Bourne, between Chisenbury Warren and Coombe Down, and from Everleigh Down and Hazleberry Plantation, suggest the presence of nearby settlements. These results can be seen in the context of the discoveries of the Linear Ditches Project and the RCHM(E) survey (Bradley *et al.* 1994; McOmish *et al.* 2002). The importance of surface collection as a means for understanding Late Bronze Age settlement and other activity on the chalk cannot be underestimated.

Against this background of widespread activity and settlement the emergence of enclosure can be traced. Through the ceramic evidence and a series of radiocarbon dates from Warren Hill (SP 049), it has been argued that the earliest enclosures were, perhaps, the smallest, ie, those at Coombe Down North (SP 014B) and Everleigh (SP 023) dating from the 7th–6th centuries BC. Enclosures at Coombe Down South (SP 009), Widdington Farm (SP 105), and Warren Hill appear to be a little later, dating between the 7th and 5th centuries BC.

These were followed by the Middle Iron Age enclosures at Chisenbury Field Barn and Coombe Down (SP 042A, SP 014A, SP 009B, SP 009C) of 4th–3rd century date. In the case of the latter, the smaller enclosure at Coombe Down North (SP 014B) is replaced by the larger (SP 014A). Only at Everleigh is there no evidence of occupation beyond the Middle Iron Age. Although we cannot discount interruptions in occupation, there otherwise appears to be a large measure of continuity through to the end of the Iron Age. Then, with the exception of Coombe Down South (SP 009), all of these enclosures appear to have been abandoned.

To this picture we can now add the evidence of the one, perhaps two banjo enclosures from Beach's Barn which originated in the Middle–later Iron Age and probably continued into the 1st century AD (Wessex Archaeology 2006).

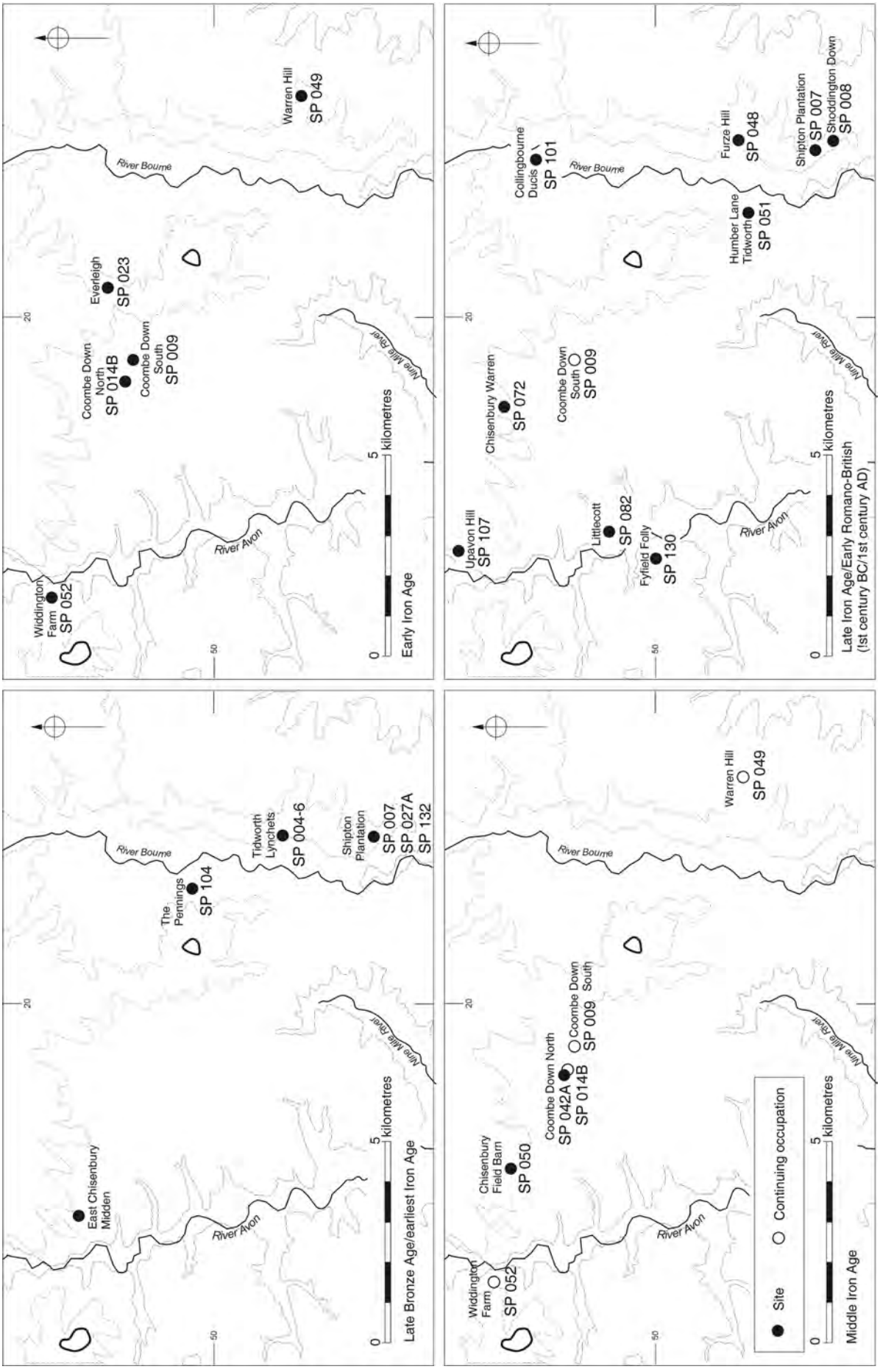

Figure 7.1 Settlement trends as indicated by prehistoric pottery concentrations

Distinctive evidence of Late Iron Age occupation from the 1st century BC/1st century AD has been traced through surface collection on the Bourne ridge at Snoddington Down, Shipton Plantation, Bedlam Plantation, and Furze Hill. Here, too, there may be some measure of continuity from as early as the Late Bronze Age from Shipton Plantation, as noted above, and from the Middle Iron Age at Snoddington Down. To the west of the Bourne, only at Chisenbury Warren is there a possibility of a new, but apparently unenclosed, foundation at the end of the Iron Age in the 1st century BC/1st century AD. As with the interpretation of the presence of the earlier, Late Bronze Age plain ware in relation to occupation or other activities, there are similar uncertainties in the interpretation of the presence of abraded sherds of Romano-British pottery in the uppermost silts of our enclosure ditches. However, given the overall background scatter of this material across the landscape (cf Gaffney and Tingle 1989), these assemblages are seen as evidence of cultivation, rather than settlement, the material being introduced through manuring.

There is, then, a large measure of discontinuity at the end of the Iron Age on the Higher Plain (Fig. 7.1). This is particularly noticeable at Coombe Down where only one focus of settlement remains. That change appears even more marked if we extrapolate from surface collection and the excavated sample which suggests that all four or five foci of enclosure on Longstreet and Coombe Down within an area of little more than 1 km square are of Iron Age date (Fig. 7.2). It is interesting to note that the latest and distinctive, bivallate phase of enclosure at Coombe Down finds parallels to the south and east at, respectively, Boscombe Down West, Wiltshire and Suddern Farm, Hampshire (Richardson 1951; Cunliffe and Poole 2000). The rich material and biological assemblages from the latter indicate the high status nature of this class of site (below). Within about a kilometre of the bivallate enclosure at Coombe Down is the banjo (or banjos) at Beach's Barn which also shows continuity into the Romano-British period. This type of site also provides a link with the banjo enclosures of the Hampshire chalk to the east (Barrett *et al.* 1991, fig. 6.6; Cunliffe 2005, 244–7). Unlike the other enclosures of Iron Age date in the study area, these two sites are exceptional in showing continuity through the Romano-British period. Otherwise, the pattern of Late Iron Age abandonments that can be observed on the Higher Plain also find parallels to the east on the north Hampshire chalk (Cunliffe 2000).

Although work in the two river valleys was limited by the amount of land available for field survey, there are some pointers to suggest that the changes evident on the Higher Plain at the end of the Iron Age are matched by developments in the valleys. Recent excavation and survey work at Netheravon has succeeded in defining a univallate, polygonal enclosure of about 8 ha. The fills of the enclosure ditch contained pottery of Middle and Late Iron Age date. Subsequently a Roman villa was developed in the northern half of the enclosure (Graham and Newman 1993; McKinley 1999; McOmish *et al.* 2002, 82–5, fig. 3.31). Surface collection to the north at Fifield Folly on the west side of the valley and at Littlecott to the east produced small quantities of Middle and Late Iron Age pottery among assemblages otherwise dominated by Romano-British material (Fig. 2.1). At the north end of the Avon valley a similar record was obtained from Upavon Hill. Equally, in the Bourne Valley, a small quantity of Middle and Late Iron Age pottery along with Romano-British material was recovered from a site at Tidworth (SP 051), while at Collingbourne Ducis (101) early Roman pottery was associated with a site recognised from soil marks of possible Middle–Late Iron Age date.

Thus it might be postulated that there may be some connection involving the substantial re-organisation of the landscape in the Late Iron Age between the abandonment of the Iron Age enclosures on the Higher Plain and the origin of nucleated, Romano-British settlement, as at Chisenbury Warren, while, at the same time on the valley-side and valley-bottom, we witness the emergence of settlement in the Middle and Late Iron Age, which also subsequently develops into the Romano-British period (see above, Chapter 4).

The project's contribution towards understanding the nature of the association of our settlements with the larger landscape and its exploitation is confined to the evidence derived from the Higher Plain. On the one hand, from Coombe Down South and Warren Hill, the animal bone assemblages from pits and ditch sequences point to the role of husbandry involving cattle and sheep, while the charred plant remains include cereals, particularly spelt wheat and barley, and their associated processing debris. On the other, beyond the settlements themselves, the evidence from lynchet excavations is consistent with the working of field systems, if not, in some cases, their origination, in the Iron Age. At Tidworth (SP 004–006) in the Eastern Sample Area it is suggested that a prolonged period of cultivation led to the levelling of the bank associated with a Late Bronze Age Linear Ditch by the 1st century AD.

In the Western Sample Area most of the lynchet sections at Chisenbury Warren and Weather Hill (SP 136–42) produced Iron Age pottery, but usually alongside Roman pottery. Even if the latter points to more intensive cultivation in the Romano-British period, it is difficult to account for the Iron Age material unless it was introduced through manuring

associated with cultivation. However, the presence of small quantities of Iron Age pottery and the absence of Romano-British material in the basal layers beneath lynchets adjacent to Chisenbury Warren (SP 063–066) points more clearly to their origin in the Middle–Late Iron Age. That cultivation may not have been very intensive is indicated by the molluscan evidence from Coombe Down and the field system at Tidworth. This indicates predominantly open landscapes with evidence of short grass, consistent with the grazing of pasture. Overall, however, the combination of the various strands of evidence, including both the biological evidence and the physical enclosure of settlement, support the conclusion reached by Bradley, *et al.*, that the Iron Age witnessed an increase in both cereal cultivation and animal husbandry (1994, 120–1).

The evidence of animal husbandry in the Iron Age is derived from two sites, Coombe Down South and Warren Hill (Chapter 6). While the bone assemblages in general compare well with other contemporary groups from the chalkland as well as other environments in southern England the assemblage from the enclosure ditch at Warren Hill above and to the east of Bourne is unusual in its high representation of cattle, particularly in Early and Early–Middle Iron Age contexts. Coombe Down, however, where sheep dominate the Iron Age assemblage, is more typical of chalkland sites. The difference between our two sites may in part reflect the nature of the contexts and the derivation of the assemblages: at Warren Hill from the enclosure ditch close to the entrance, and at Coombe Down from contexts within the enclosures. Particularly noticeable about the Warren Hill deposits is the incidence of cattle skulls and groups of associated bones, typical of special deposits found elsewhere on sites of this period, and, in this case, perhaps marking a particular significance associated with the enclosure ditch. Coombe Down, too, produced a group of fragmented and incomplete cattle skulls from a Middle Iron Age pit, in this case associated with an elderly horse. The presence of calves and lambs would indicate that these animals were reared at both settlements. Pig is also present in small quantities.

If animal and crop husbandry were the main activities of settlements on the Higher Plain, there is also limited evidence for textile manufacture, in the form of fired clay spindle-whorls and loomweights, and bone weaving combs, from surface collection and settlement excavation. Ironworking is attested from Iron Age contexts at Coombe Down, but metal (ferrous or non-ferrous) artefacts of Iron Age date are otherwise very rare. Reliance continued to be placed on flint which was used for crude hammers and choppers as well as scrapers, burins, or piercers.

The ceramics represent the best source of evidence for examining the wider relations, and possible social affiliations, of our settlements. Francis Raymond suggests that in the Late Bronze Age to Early Iron Age the Bourne ridge may have formed a territorial boundary. She observes that, for the most part, pottery of this period is a close parallel for the large assemblage from the East Chisenbury midden as well as assemblages from the Vale of Pewsey, notably from Potterne. While settlements to the east on the Hampshire chalk also share a high proportion of non-local pottery, in the case of Coombe Down, Everleigh, and Warren Hill that is significantly represented by limestone tempered wares – fabrics which are almost non-existent to the east, and which probably originate from beyond the chalk, to the north or west of Salisbury Plain. However, and in addition to this element, Warren Hill also retains a distinctiveness in relation to sites to the west between the Avon and the Bourne in the abundance of glauconitic, sandy fabrics. It is this element of the pottery, however, which links it to the north Hampshire sites to the east. In terms of its possible source, and contrasting with the limestone tempered wares, an origin to the south-west in the Nadder Valley has been postulated. Similarly an origin near Salisbury has been suggested for the scratch-cordoned bowls present in small numbers at our sites to the west of the Bourne.

That the Bourne ridge continued to serve as a boundary into the Middle Iron Age is suggested by the continuing distinctiveness of the Warren Hill assemblage from those to the west. Settlements west of the Bourne produced predominantly sandy, or glauconitic sandy wares, typical of the Wiltshire, Yarnbury-Highfield style, at the expense of the limestone-tempered wares. At Warren Hill, however, almost a third of the pottery of this date is of flint-tempered fabrics which dominate the north Hampshire settlements and characterise the St Catherine's Hill-Worthy Down style. Yet the high tenor of sand-tempered wares from the site recalls the assemblages of some of the north Hampshire settlements to the east, at Houghton Down, Suddern Farm, and Old Down Farm, but not at Danebury, Bury Hill, and Nettlebank. Increasing differentiation between the settlements of Salisbury Plain and those to the east of the Bourne ridge is emphasised by the dominance of flint-tempered wares on Hampshire settlements from the late 3rd century BC.

Although the Bourne ridge may have served as some kind of a boundary from early in the first millennium BC, ceramics, such as All Cannings Cross-style pottery and scratched-cordoned bowls, continued to circulate across Wiltshire into Hampshire (Cunliffe 2000, 172–4, figs 4.24, 4.25). By the later Iron Age the complementary – almost

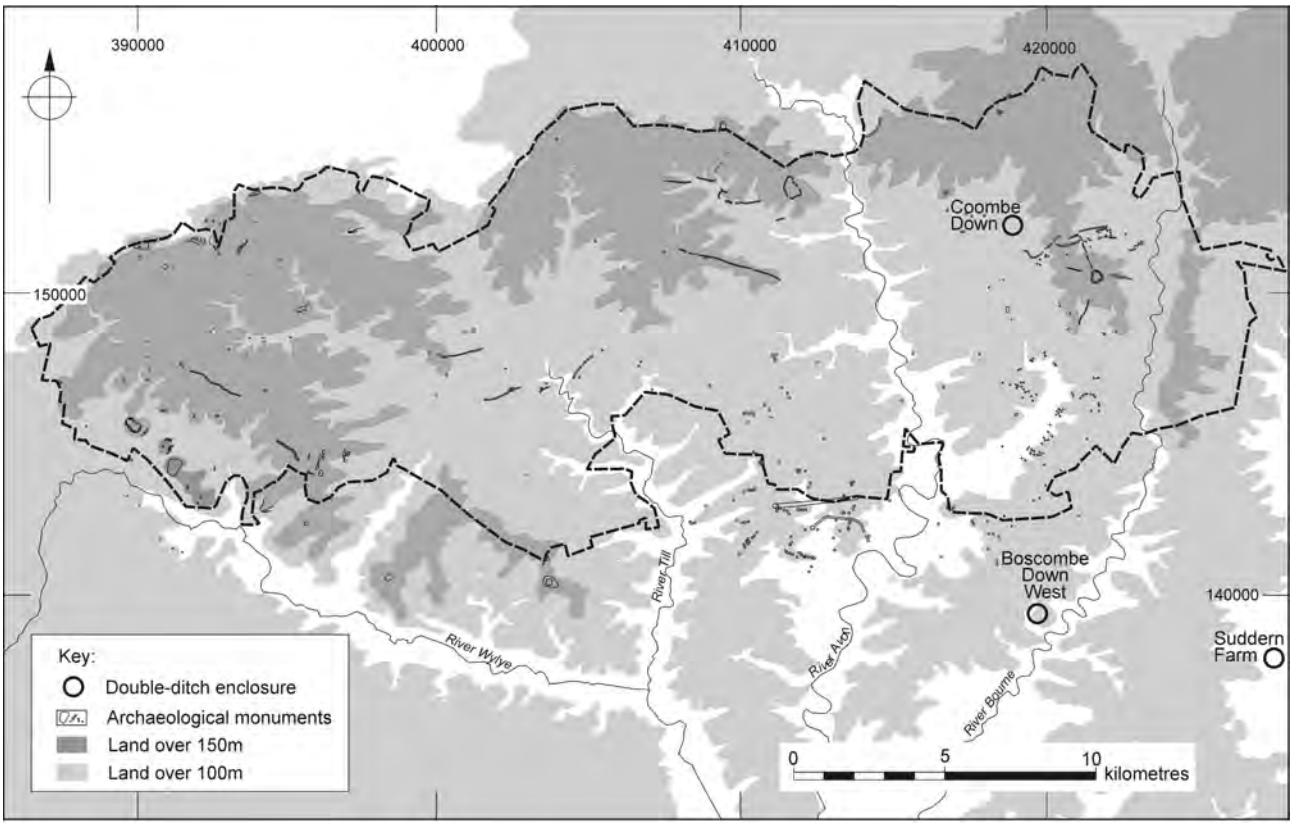

Figure 7.2 Late Iron Age double-ditched enclosures

mutually exclusive – distributions of the saucepan pots of the Yarnbury-Highfield style and the St Catherine's Hill-Worthy Down type suggest greater awareness of territoriality and the Bourne ridge as a more significant boundary (Cunliffe 2000, 177–81; figs 4.29, 4.30). However, the facts that the Warren Hill assemblage looks both to east and west and the distinctive bivallate enclosures of Coombe Down, Boscombe Down, and Suddern Farm range across a landscape from the Avon to the Test alert us to the permeability or transitory nature of possible territorial divisions. This is reinforced by the discovery of the single or paired banjo enclosure at Beach's Barn at the north-western limits of the distribution of this type of enclosure (Barrett *et al.* 1991, fig. 6.6). It is tempting to associate both these distinctive enclosures, the banjo at Beach's Barn and the bivallate enclosure at Coombe Down with incoming colonists from the east.

Romano-British

During the later Iron Age we have noted a complementary process of settlement change. On the Higher Plain settlements characterised by enclosure were abandoned, the bivallate enclosure at Coombe Down South (SP009) being an exception. At the same time in the river valleys, particularly evident in the Avon valley, we identify settlements whose material culture from surface collection is predominantly of Romano-British date but where there is a tenor of Middle or Late Iron Age pottery. Our understanding of the dating of these changes is weak, largely because of uncertainties about the chronology of the pottery, especially in respect of the introduction of wheel-thrown and sandy wares and the longevity of certain fabrics which span the Late Iron Age–early Roman transition of the 1st century BC–1st century AD. In our present state of knowledge we do not know what would represent a 'typical' assemblage of, say, the mid-1st century BC and how different it might be from one of the mid-1st century AD. This difficulty is highlighted by the apparent discrepancy between the earliest radiocarbon dates from stratigraphically early contexts at Chisenbury Warren and the perceived date of the earliest pottery which is attributed to the latest 1st century BC and 1st century AD.

The results of the survey appear to confirm that the settlement pattern which had emerged by the 1st century AD remained stable throughout the Romano-British period. The continuity evidenced by the two sites on the Higher Plain at Coombe Down and Chisenbury Warren where substantial excavations were made is matched by the chronology of the

material from surface collections. This is also now the case at Beach's Barn where surface collection supplemented a small excavation which revealed a corn drier with evidence of 4th century use. This in turn has been complemented by the *Time Team* investigation of 2000 which provided evidence of continuous occupation through the Romano-British period and a small villa, perhaps of 3rd–4th century date, close to the site of one, or two banjo enclosures of Middle–Late Iron Age date (Wessex Archaeology 2006). Only on the ridge immediately east of the Bourne does it appear that settlement of the later Iron Age continuing into the early Romano-British period was abandoned in favour of spatially compact settlements, probably villas, which lie at the western edge of a group of villas clustering around Andover and the intersection of the major Roman roads at East Anton (?*Leucomagus*).

A third element of the landscape, which accompanies the nucleation of settlement on the Higher Plain and the development of individual, more compact settlements, probably, villas in the Avon Valley and east of the Bourne towards Andover, is the development of the field systems of the Higher Plain (Fig. 4.24). Our evidence derives from three sources: surface collections, pottery assemblages from the upper fills of Iron Age enclosure ditches and from the evaluation of field systems by excavation. Manuring is argued as the explanation for the presence of the small assemblages of pottery recovered from these various contexts, though the size of the early Romano-British assemblage from the upper fills of the enclosure ditch at Everleigh is more indicative of nearby settlement. The field systems at Chisenbury Warren, Tidworth, and Weather Hill, which have been examined by excavation, show that substantial lynchet formation took place in the Romano-British period. Only near Chisenbury Warren, as we have seen in Chapter 3, is there evidence of an Iron Age origin, although in its fullest form the field system is of Romano-British date. Collectively, the evidence indicates widespread and intensive cultivation of the Higher Plain and valley sides throughout the Romano-British period. This recalls the patterns of evidence both further to the north on the north Wiltshire Downs at Fyfield and Overton (Fowler 2000), and to the east on the chalk of the Berkshire Downs, from the Maddle Farm survey and an associated evaluation of a field system by excavation (Ford *et al.* 1988; Gaffney and Tingle 1989).

Within this broad framework where major dislocation at the end of the Iron Age is followed by continuity of settlement and cultivation through the Romano-British period, the examination of individual settlements and field systems reveals significant local variation. Although, at one level, Coombe Down is the only settlement on the Higher Plain between the Avon and the Bourne which has so far revealed evidence of continuous settlement from the early Iron Age through to the early Anglo-Saxon period, the sample excavations revealed evidence of a possible break in occupation at the end of the Iron Age. There was significant change to the layout of the settlement through the cutting of new boundary ditches across the site in the early Romano-British period on different orientations to the earlier arrangements. Equally, the examination of Chisenbury Warren also revealed widespread evidence of major change within the settlement, both between features of Iron Age and early Romano-British date, and between the earlier and the later Romano-British period. Like at Coombe Down, the excavations were not sufficiently extensive for us to be confident of breaks in occupation across the settlement as a whole, but it is reasonable to extrapolate from the results of the excavation that the plan of the earthworks reveals more of the later Roman arrangement than the early Roman. Nevertheless further excavation would be required to establish whether and how many of the hut platforms were occupied simultaneously.

That the picture of settlement continuities and discontinuities to be revealed by more extensive fieldwork and excavation in the future is likely to prove more complex is further indicated by the excavations on the field systems. These variously reveal phases of cultivation and, as at Coombe Down and Weather Hill, distinct episodes of standstill which separate early from late Roman pottery assemblages. How far it might be possible to separate patterns attributable to the very local management of fields, such as the introduction of periods of fallow, from those reflecting the larger, settlement histories is hard to assess. In the case of the marked, standstill horizons separating early from late Roman pottery assemblages at Weather Hill and on Coombe Down, there is, as yet, no correlative evidence from the settlement at Coombe Down. However, at Chisenbury Warren there is evidence for some discontinuity in the form of a major re-ordering of the settlement in the later Romano-British period.

A major contribution of the surface collection has been not only to provide evidence of site chronology through the ceramics and the extent of cultivation, but of the surface area of activities associated with individual settlements. Here a clear contrast emerges between the valley-side or lower-lying settlements and those on the Higher Plain. Where surface area could be defined, as with Kimpton Gorse and Shoddesden Grange to the east of the Bourne, or along the valley sides of the Avon valley at Fifield Folly, Enford Farm, Littlecott, or Upavon Hill, it appears not to exceed about 4 ha and most sites fall within the range of 1.5–4 ha. Nevertheless, there are exceptions, as at Enford Farm and Shoddesden Grange, where the

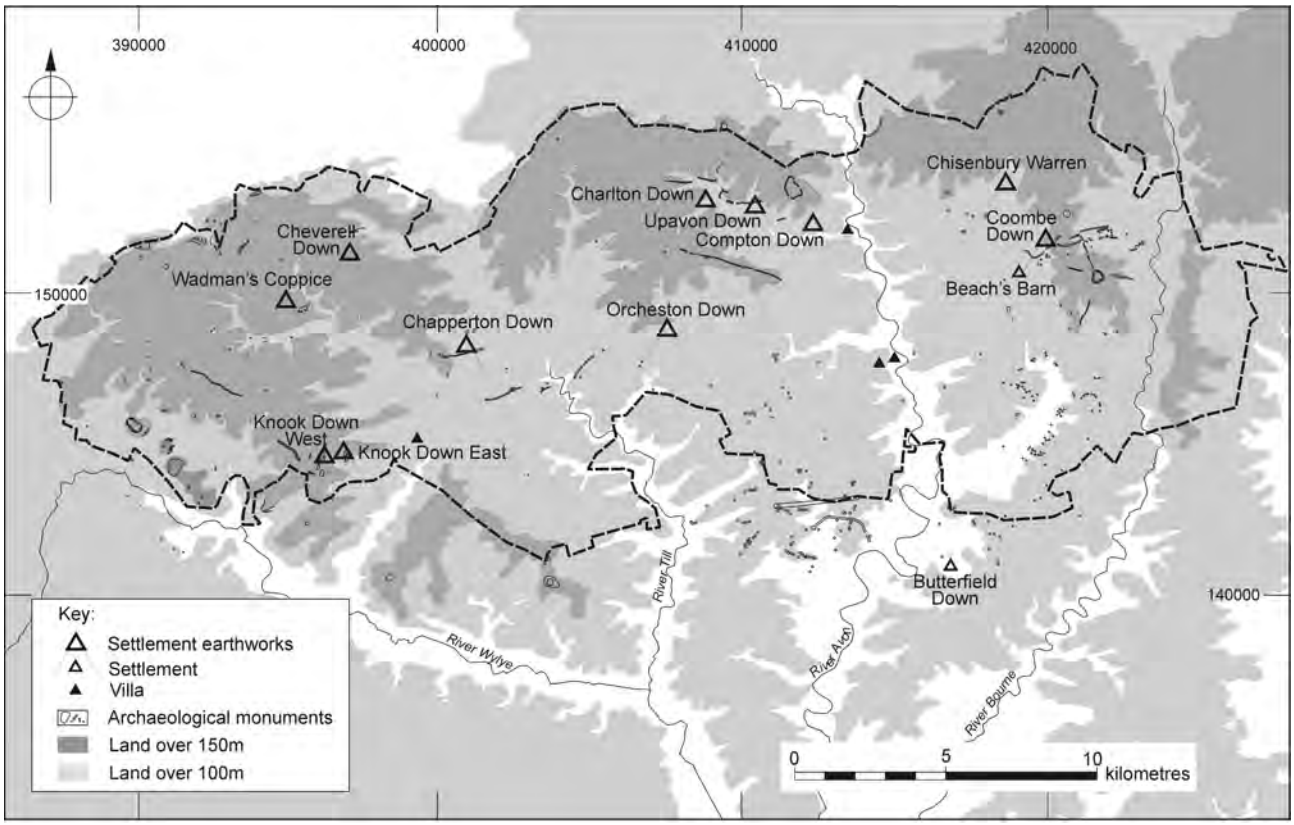

Figure 7.3 Romano-British sites in the SPTA

scatters were tightly defined, extending over only 0.25 and 0.5 ha respectively. Such a picture is in sharp contrast to that from the Higher Plain where, both within our study area and the larger plain west of the Avon, the pattern is of the larger, nucleated settlement, which, as in the case of Charlton Down west of the Avon, may spread as earthworks, rather than as ploughsoil scatters of material culture, over some 25 ha in area (McOmish *et al.* 2002, 89–94). Within our study area, between the Avon and the Bourne, the settlements as exemplified by Coombe Down and Chisenbury Warren are on the smaller size, extending as earthworks over, respectively, 4 and 5 ha. Smaller sites, such as are evident in the river valleys, were not identified on the Higher Plain within our study areas.

As for the nature of the settlements it is tempting to make clear, social distinctions between the larger and smaller (Fig. 7.3). The former can be associated with the Higher Plain and the compact and linear settlements which, on the basis of their surviving earthworks, are interpreted as 'villages' (McOmish *et al.* 2002, 88–100), or low status settlements. The latter, typical of the valley sides and valley bottoms, for instance of the Avon valley, and of the landscape around East Anton, are generally interpreted as 'villas' (*ibid.*, 104–6), or higher status sites. While the former may be seen as evidence of nucleated or communal settlement with little or no social differentiation, the latter are to be associated with private ownership, both of house and, normally, an associated estate, and personal aggrandisement, typically reflected in the character of the main residence, usually of masonry construction. As we have seen in Chapter 2, both quantity and variety of material culture, particularly ceramics and building materials, are helpful in characterising sites and assessing their status. The presence and quantity of non-local stone, particularly in the form of roofing tiles, is a particularly helpful indicator in this study. On the basis of these criteria, and particularly on the presence of limestone roofing-tile, the 'smaller' sites of Kimpton Gorse (east of the Bourne), Littlecott, Upavon, and Fyfield (Avon valley) stand apart from other sites where intensive collection was undertaken. Without further investigation by geophysical survey and excavation to advance our understanding of these sites it is not possible to be conclusive in our interpretation. We cannot go much further than to comment, for example, that the small site at Enford Farm with hypocaust tile and decorated wall-plaster might well be a villa with heated rooms or bath-house, while the location at the site of Littlecott, prominently situated overlooking the river valley, would be consistent with that of a temple. The finds assemblage does not contradict this interpretation. The spatial extent,

range and character of the finds from the smaller, 'high status' sites, including the presence of stone roofing-tiles, is reminiscent of the material collected from the Maddle Farm (Berkshire Downs) site where aerial photography and surface soil-marks indicated the remains of a villa-type building and associated courtyard (Gaffney and Tingle 1989, 96–111).

In making comparisons with sites on the Higher Plain we are compromised by their survival as earthworks and the lack of material collected by systematic, surface collection. In particular, we have, of course, no data from our two, excavated settlements of Chisenbury Warren and Coombe Down. However, both surface collection and limited excavation at Beach's Barn, about 1 km to the south of Coombe Down, have produced assemblages more consistent with those of the valleys. Both in the quantity and density of pottery at <38 sherds per hectare, and in the number and density of stone tile fragments, this settlement compares with sites in the Avon valley and east of the Bourne ridge, notably Fifield Folly to the west and Kimpton Gorse to the east (and the Maddle Farm villa on the Berkshire Downs to the east (Gaffney and Tingle 1989)). This impression is reinforced by the results of the *Time Team* investigation which provided evidence of a small villa on the site (Wessex Archaeology 2006). From Coombe Down we note that the total quantity of ceramic building material recovered from the four excavation trenches was 5.2 kg, while from Chisenbury it amounted to 6.5 kg, in each case little more than the equivalent of a single *tegula*. These assemblages were differentially distributed across the four trenches at each site and consisting of generally small fragments, including pieces of box-flue tiles. Whether any of this material was actually used for roofing or hypocaust systems at either of these sites is a moot point. Its relative abundance and condition suggest that it may simply have served as rubble, imported to the sites, already fragmented, to be used for general building purposes, along with other materials like chalk and flint. The same may well be true of the stone roofing-tiles which were very rare at both Coombe Down (two pieces) and rare at Chisenbury Warren (12 pieces in total). Although we do not know how either Chisenbury Warren or Coombe Down might be represented as surface collections from ploughed soil, it is hard to see how the small quantities from excavation would convert into the surface collections recorded at Beach's Barn or elsewhere. Indeed, the quantity of stone tile (six) from the small excavation at Beach's Barn is half that from all four trenches at Chisenbury Warren (and to that collection has now been added the stone tiles recovered by the *Time Team* investigation; Wessex Archaeology 2006). It is also worth noting that, unlike the neighbouring 'villa' at Maddle Farm, the Knighton Bushes 'native' settlement on the Berkshire Downs produced neither stone nor ceramic roofing material from the ploughsoil (Gaffney and Tingle 1989).

Although the excavated sample at both Chisenbury Warren and Coombe Down was not sufficiently large to be informative of the plan and layout either of individual buildings or the settlement as a whole through the Romano-British period, the nature of the finds assemblages other than of building materials was such as to suggest the possibility of a difference in nature and status. Among the assemblage of material culture the greatest differentiation occurred in the pottery. For example, the proportion of the pottery assemblage as a whole represented by the late Roman colour-coated wares and mortaria from the New Forest and Oxfordshire industries was much greater at Coombe Down (combined total = 13%) than at Chisenbury Warren (combined total = 3%). The higher figure from Coombe Down compares well with that for the percentage of these fine wares at Beach's Barn which amounts to 11% (Wessex Archaeology 2006, 16).

Otherwise, the total collections of non-ferrous, metal artefacts from both sites were small in number with fewer than five items from each site, but Coombe Down did produce a complete and well preserved copper alloy bowl of late Romano-British date. As noted above, these are very rare as settlement finds, generally otherwise recorded only from hoards or from burials. In addition both sites produced almost equal numbers of the low value, late Roman, copper alloy coinage (Coombe Down (13); Chisenbury Warren (15). Other artefacts were rare, too. There were less than five items of ironwork (other than cleats and nails) from each site. In the case of glass, there were only four fragments from Coombe Down and seven from Chisenbury Warren. With the exception of one possible piece of window glass from Chisenbury, all the other fragments were of vessels. However, the latter did include a piece of a possibly imported, late Roman table-ware vessel.

As a simple measure of comparison of the relative abundance of finds at each of our two excavated sites, we may calculate the ratio of finds per square metre of excavated area. We shall assume that for both sites the depth of Romano-British stratigraphy was broadly comparable, ie topsoil plus some negative features. This gives a ratio of copper alloy finds (other than coins) of about one per 100 m^2 at Chisenbury Warren (1:111) compared with about one per 50 m^2 at Coombe Down (1:50). That the incidence of such finds at Coombe Down is roughly double that at Chisenbury is supported by the evidence of the coins (1:37 at CW; 1:19 at CD).

There is some interesting differentiation among the assemblages of stone artefacts, which very largely

comprise querns, rubstones, and whetstones. Whereas the Coombe Down assemblage is almost exclusively of Upper Greensand from the Vale of Pewsey, that from Chisenbury Warren includes a significant number of querns of Quartz Conglomerate from the more distant Forest of Dean, although the majority derive from the same, more local source as at Coombe Down. If the latter site was of higher status, it might have been expected that the more costly material (as measured in terms of distance from outcrop) would have been represented there. The interpretations of these assemblages will be further explored below.

While no differentiation can be seen between our sites in terms of their assemblages of charred cereal and other plant remains, there is variation among the faunal assemblages. Among the domesticates, the proportion of cattle is significantly higher at Coombe Down than at Chisenbury Warren where sheep/goat otherwise predominate. This is also the case at Beach's Barn, though the total assemblage from that site is small. Equally pig is better represented at Coombe Down and Beach's Barn than at Chisenbury Warren. Butchery of both horse and dog is noted at Chisenbury Warren as opposed to knife cuts probably representing the skinning of dog for which there is evidence at both Coombe Down and Chisenbury Warren. From these strands of evidence it is possible to argue that Beach's Barn and Coombe Down were of a higher status than Chisenbury Warren. Indeed, there are some indications, reinforced by the discoveries of the *Time Team* investigation in 2000 (Wessex Archaeology 2006), that Beach's Barn may have been of a slightly higher status than neighbouring Coombe Down. The linear arrangement of the late Romano-British hut platforms serves to characterise Chisenbury Warren as a nucleated, 'village' settlement with no evidence of internal differentiation, as evidenced, for example, by size of the hut platforms, and its plan is comparable to several others on the Higher Plain. While there is insufficient knowledge to define the plan of Coombe Down and understand its character with any confidence, trial excavation and geophysical survey strongly suggest a villa at Beach's Barn. Tentatively, each might represent the settlement of a single, extended family (and their dependent workforce), thus contrasting with the communal character of Chisenbury Warren and its analogues.

The economy of our settlements on the Higher Plain between the Avon and the Bourne was emphatically based on agriculture with evidence from both the settlements and the surrounding field systems for the cultivation of cereals. The fact that the development of the lynchets took place entirely during the Romano-British period is an indication of the intensity of cultivation. All three settlements investigated by excavation have produced evidence for the processing of wheat, particularly spelt wheat, and of barley. A single instance of bread wheat is certainly recorded at Chisenbury Warren, as emmer wheat is, similarly, at Coombe Down in a Late Iron Age/early Romano-British context. It is notable that corn drying ovens were discovered from the sample excavations at two of the three settlements and, as Stevens has observed, their presence implies a level of cereal production beyond that necessary to meet the requirements of the household.

Stock-raising was also an important part of the life of the settlements and the age structure of cattle and sheep/goat suggests that they were being raised close by, if not at each of the sites. Indirect evidence of the importance of stock-raising comes from the surface of the fields where the sherds are interpreted as evidence of manuring, the sherds being incorporated with animal and other waste derived from the settlements. This would suggest that, along with sheep, cattle were important, though whether for dairying or for meat, is hard to determine (cf Gaffney and Tingle 1989, 224–38; Tingle 1991, 62–66). In comparison with the Maddle Farm and Vale of the White Horse surveys, the percentage of hectares fieldwalked which produced pottery was much higher – 96% compared with, respectively, 56% and 42%. Nevertheless the densities of pottery were very variable across the fieldwalked landscape, ranging in the Western Sample Area from 0.5 to 29.3 sherds per hectare, with a mean of 6.2 sherds. The latter figure is even higher than that recorded from the equivalent, chalkland, Maddle Farm Survey which produced a density of 4.34 sherds per hectare, itself significantly greater than the average density from the low-lying Vale of the White Horse at 1.66. While there were particular concentrations focused on certain settlements, concentrations of 6–16 sherds per hectare were widespread in both Western and Eastern Sample Areas and on the Higher Plain as well as on the valley slopes of the Avon and the Bourne. Though Tingle argues that we should not simply extrapolate a greater intensity of grazing and manuring from the higher rate of sherd loss from the chalk, but take account of local factors, such as the potentially greater impact of subsequent cultivation in the Vale on pottery assemblages compared with on the chalk, it could well be inferred that the intensity of grazing and manuring was greater on the chalk than in the low-lying Vale (Tingle 1991, 60). In the case of the Salisbury Plain Training Area, it would seem that there was intensive cultivation and stock-rearing over an extensive area across the chalk throughout the Romano-British period.

In terms of the surviving faunal remains, sheep/goat is very clearly the dominant species at Chisenbury Warren, while cattle are relatively more numerous at Beach's Barn and Coombe Down. Although the data are sparse, the evidence of the age

profile of pig also suggests that it was raised at both Chisenbury Warren and Coombe Down. The same is true of horse, the other major domesticate, which was certainly raised at both sites, though, in the case of Coombe Down, the incidence of young animals may suggest that they were bred for sale or exchange. In the case of cattle and sheep, the presence of older animals suggests that they were kept for their meat (particularly at Coombe Down), as well as for milk and, in the case of cattle, for traction. Apart from the possibility of horse-breeding at Coombe Down, there is no positive evidence from the age profiles of the surviving skeletal remains to suggest that the other domesticates were raised for the market. However, it is difficult to explain the extensive and intensive nature of the manuring scatters across our study area unless animals were being reared for the market. There is a notable scarcity of young adults and juveniles, particularly from Chisenbury Warren, and one explanation may be that the animals of that age had indeed been raised for their meat, but had become archaeologically invisible locally because they had left the site for disposal and slaughter elsewhere.

In comparison with the Iron Age there are several contrasts to be drawn. On the one hand the physical development of the field systems points to a much greater intensification of cultivation and cereal-growing in the Romano-British period, and this has a correlate in the form of the corn drying ovens evidenced at Beach's Barn and Chisenbury Warren, as well as elsewhere on the Higher Plain (McOmish *et al.* 2002, 104). On the other, there is a large measure of continuity of Iron Age practice in terms of the types of cereals cultivated and of the animal husbandry practised, particularly as represented at Chisenbury Warren. However, the relative increase in cattle husbandry over the Romano-British period evidenced at Coombe Down and Beach's Barn is more consistent with trends observed elsewhere across later Roman Britain.

The only other productive activity evidenced at our sites is iron-smithing and, possibly, iron-making, suggested by the presence of significant quantities of broken slag basins, concentrated at the northern end of the settlement at Chisenbury Warren, with smaller quantities of slag basins at Coombe Down and, through surface collection, at Snoddington Down. Presumably marcasite ores, local to the chalk, were being exploited and it is possible that iron-smithing and some iron-making supplemented subsistence agriculture as a source of income. The quantity of slag from the small test pits at Chisenbury is particularly striking.

On a negative note, and despite the age profile of sheep pointing to the presence of mature animals, perhaps kept for milk and wool, there is no evidence from either of our settlement excavations, or from the wider survey, for spinning or weaving. This contrasts with the positive evidence for textile manufacture in the form of loomweights, spindle-whorls, and weaving combs of Iron Age date from the study area.

A reasonable inference to be drawn from the corn drying ovens at Beach's Barn and Chisenbury Warren is that grain-processing was for more than just consumption by the settlement in question. That our settlements investigated by excavation certainly engaged in a wider network of markets and exchange mechanisms is implicit in the variety of material culture, none of which is very local in origin. Even among the ceramics the closest known source, accounting for just over a quarter of the total assemblage from the three excavated sites, is associated with early Roman Savernake production, originating some 20 km to the north. Imported wares are very rare, accounting for less than 1% of sherds on any of our sites. Late Roman regional wares, particularly southern British table-ware and mortaria from the New Forest and Oxfordshire kilns, as well as kitchen ware from Poole Harbour (BB1) are better represented, but with ratios which, in the case of New Forest and Oxfordshire wares at Chisenbury Warren, are significantly less than at either urban or villa sites, as or more remote from the kilns (cf Allen and Fulford 1996, particularly figs 1 and 8 for BB1 and fig. 14 for New Forest and Oxfordshire wares). With the assemblages from Beach's Barn and Coombe Down, however, the ratios of all three wares are more in line with the regional pattern.

We have commented above on the absolute poverty of the assemblages of glass and metalwork, both non-ferrous and ferrous. Nevertheless, there are paradoxes in the supply of other materials, notably of stone. Whereas, it might have been expected that more local sources of clay might have been exploited to provide ceramic roofing materials, we find that stone roofing-tiles are imported from either the Vale of Wardour, some 30 km to the south-west, or from the Vale of Pewsey (10–15 km). We have noted that these tiles were used differentially across our study area and with an absolute rarity at both Chisenbury Warren and Coombe Down. Although our assemblages of plant remains provide no corroborative evidence, both these sites might have relied on locally supplied thatch from the neighbouring river valleys. More surprising, perhaps, is the incidence of querns and millstone fragments of Quartz Conglomerate, more probably from the Forest of Dean than the Bristol or Mendip region. Like the stone tiles, differentially distributed across our sites, yet with a notable incidence at Chisenbury Warren, these have travelled some distance, in this case 80 km from source.

The presence of a few later Roman copper alloy coins at each of our sites might suggest that the

material-culture assemblages were acquired through monetary exchanges and this may, indeed, have been the case. However, our settlements, particularly those on the Higher Plain are relatively remote from population centres, of which the nearest are the ill-understood, 'small towns' of *Sorviodunum* (Old Sarum) to the south, *Leucomagus* (East Anton), to the east and *Cunetio* (Mildenhall), to the north. The closest, larger towns are the *civitas* capitals of *Venta Belgarum* (Winchester) at 40 km and *Calleva Atrebatum* (Silchester) at about 50 km distance (Fig. 7.4). Each of the 'smaller' towns is about a day's journey, some 20 km from a 'central' point of our combined study areas and the surviving settlement evidence indicates varying densities of villa estates close to each. Around *Leucomagus*, in particular, there is a conspicuous cluster of villas. We have noted above how the settlement pattern on the eastern boundary of our study area seems to respond to the development of that centre with villas replacing native settlement on the Bourne ridge. At the periphery of the possible, market-catchment areas of the 'small' towns, our settlements of the Higher Plain were competing against many, better-placed villas and their estates, including those in the valleys of the Avon and the Bourne.

We cannot estimate agricultural productivity accurately, because there are too many unknowns, but the dry, calcareous soils indicated by the molluscan evidence were unlikely to have produced large yields. The scarcity and lack of diversity of classic types of Romano-British building material like painted plaster and window glass as well as portable material culture (other than pottery) on the settlements of the Higher Plain are further corroboration of weak engagement in the market and, therefore, probably, of comparatively poor agricultural productivity. In the case of Chisenbury Warren, however, the loss of produce to the estate owner may be a further explanation of both the material poverty of the site and the character and composition of the faunal assemblage, particularly in relation to age of death.

A significant reason for the survival of so much evidence of Romano-British settlement and field systems across the Higher Plain is the lack of cultivation in subsequent periods (McOmish *et al.* 2002, 12–13, fig. 1.10). There are traces of medieval ridge-and-furrow on the Higher Plain, particularly on Thornham, Charlton, and Knook Downs west of the Avon, which are dated to the 13th or early 14th century (*ibid.*, 114–5). A 1773 map of Wiltshire indicates only seven farmsteads and five field barns across the entire military training area (*ibid.*, 117). Thereafter, however, there was a short-lived period of recolonisation and renewed cultivation of the Higher Plain with a more than three-fold increase in farms and sevenfold increase in barns recorded by the late 19th century. However, the agricultural depression of the third quarter of the 19th century led to abandonment, providing the context for the purchase of land by the military for training grounds (*ibid.*, 117–21).

So, if cultivation of the Higher Plain was the exception over the last two millennia, what conditions encouraged this form of exploitation in the Romano-British period? In the first place we might allow for the possibility of a slightly different climatic regime which might have made conditions for cereal cultivation more attractive at that time. However, we might otherwise conclude from the post-Roman evidence that cultivation of the Higher Plain was only contemplated at times of increased population and/or higher cereal prices, as for example, during the Napoleonic wars. For the Romano-British period, there is general agreement that in Britain populations were higher than in the later prehistoric periods, but not as high as in the 13th/early 14th century, and very much less than in the late 18th and 19th centuries (cf Millett 1990, 181–6). The highest figure that Millett calculates for the urban population of Roman Britain as a whole is only about 290,000 (*ibid.*, 183) and our settlements are not close to any large centre of population. Population size and the urban market are unlikely to have created the context for this intensive cultivation of the marginal landscapes of the Higher Plain. However, just as the wider European scene – the Napoleonic wars, for example – affected grain prices in the early 19th century, so there was a wider, Roman imperial context which may have provided the conditions which made the cultivation of the Higher Plain attractive. First, there was the supply of the Roman army within Britain throughout the Romano-British period, but particularly in the period of high troop numbers extending up to the campaigning of Severus at the beginning of the 3rd century. Although, like the urban number, the total was not great, such that Millett calculates the combined military and urban population only represented perhaps about 10% of the total population of Britain (*ibid.*, 185–6), we do not know how much allowance was made for wastage. Second, there was demand for British grain from outside Britain, both in the Late Iron Age, as Strabo records (*Geography* IV, 5.2), and in the 4th century when Britain exported grain to relieve famine in Germany (Fulford 1989, 196–7). Although we cannot securely attach any numbers to the volume of grain required by the state at different periods, we have to assume that, as it was under Julian in the mid-4th century, it was not insubstantial.

One piece of corroborative evidence for there being a non-market mechanism for bringing wealth to the countryside is the larger distribution of villas across southern Britain which shows little clustering around the towns, particularly the larger, admin-

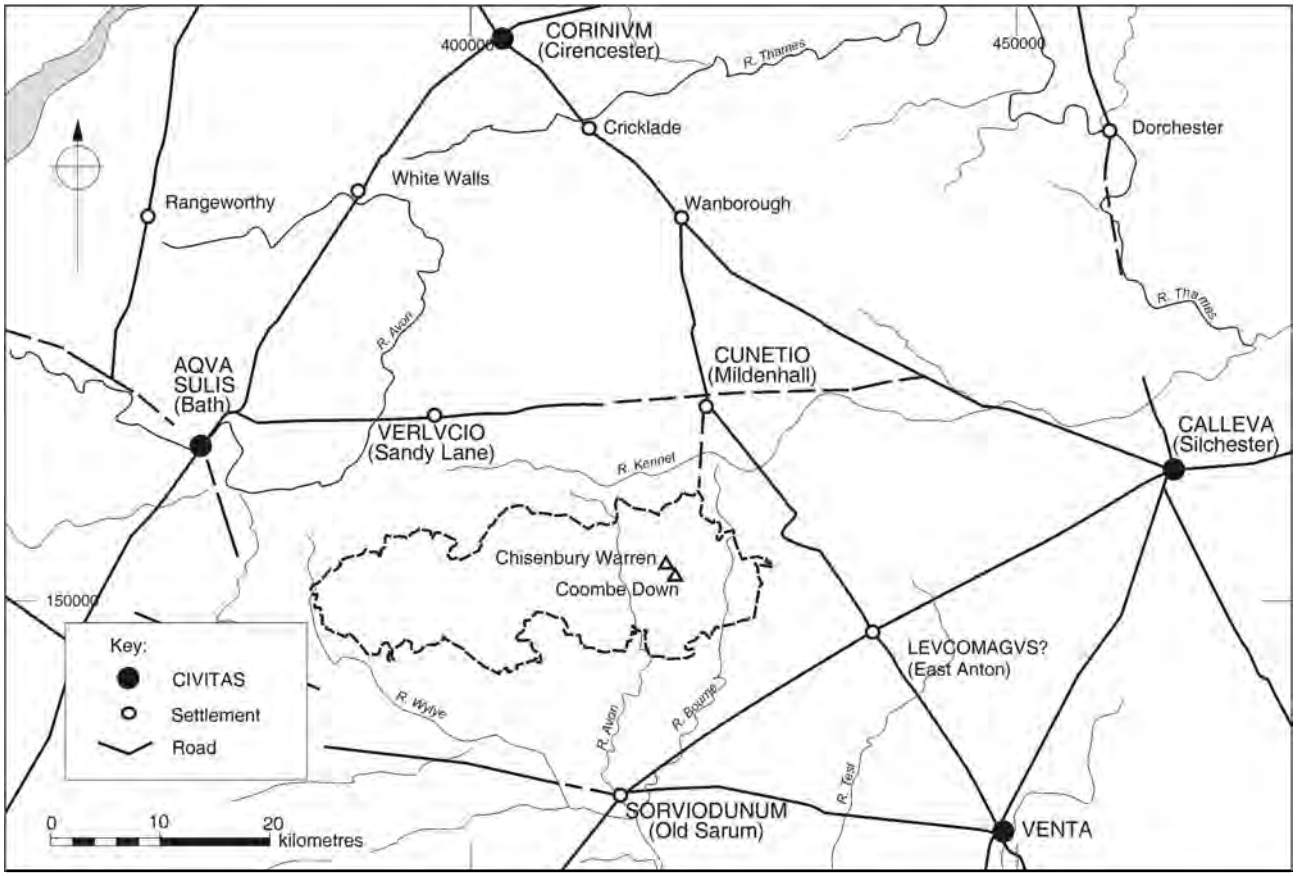

Figure 7.4 Coombe Down and Chisenbury Warren in relation to Romano-British towns and roads

istrative centres. Either this means that demand from these towns was such that close proximity and cost of transport were not important factors in the choice of location or, that produce was, in fact, not directed towards them, because reliance could be placed on purchase by the state (cf Hodder and Millett 1980; Millett 1990, 186–97; Fulford 2003, 20–2; 2004, 323–4). If the cost of transporting grain (or other supplies) fell on the state (through taxation) and not on the individual landowner, the only pressure would have been to minimise the distance to a collection point. This may be the explanation for the clustering of villas around relatively small centres of population, such as certain small towns. Settlement and cereal cultivation of marginal areas such as the dry, calcareous soils of the Higher Plain could become viable in an economy where there was an alternative outlet for grain sale other than local centres of population.

If the above provides an economic explanation for the long-term survival of settlement through the Romano-British period, we should not overlook the possibility of other, social factors which led to the development of settlement across the Higher Plain. We have observed that the process of nucleation originates at the end of the pre-Roman Iron Age at a time when individual enclosures were being abandoned. That process of settlement shift appears to have continued into the Romano-British period as exemplified in our study area by the eventual abandonment of settlement on the Bourne ridge. In fact there is plenty of evidence for settlement abandonment across southern Britain in the 1st and 2nd centuries AD, arguably in the context of the development of villa estates (Fulford 1992). While some of the displaced may have been absorbed locally in new accommodation at the centre of the new estates, others may have been compelled to move further afield to more marginal land, such as the uplands of Salisbury Plain. The Fenland is another, marginal landscape which reveals evidence of settlement expansion in the early Romano-British period which is difficult to account for in terms of natural population growth locally (Hall and Coles 1994; Phillips 1970; Potter 1989). As with the villages of the Higher Plain, development of settlement on the Fenland, with all its implications for the drainage of marshland, may arguably be attributable in part to the arrival of incomers, displaced from their original farms.

To summarise: the possibility of inward migration to the Higher Plain offers an alternative explanation to natural population growth to account for the development of so many nucleated settlements,

including extraordinary concentrations, such as the almost contiguous villages on Charlton, Upavon, and Compton Downs in the Central Training Area, immediately west of the Avon (McOmish *et al.* 2002, fig. 4.21). Equally, the non-market outlet in the form of state purchase from villa estates of cereals offers an alternative to marketing to local populations to account for the continued existence of our settlements in their relatively harsh environment.

To what extent were the nucleated settlements of the Higher Plain independent? On the basis of the apparent absence of villas, speculation in the past about the nature of the settlement pattern of Salisbury Plain has invoked the possibility of an imperial estate (above, Chapter 1). While that can reasonably be set aside both on the grounds that there is no supporting documentary evidence and that there is evidence both for villas in the river valleys and, in our study area, for some differentiation in settlement status on the Higher Plain, the possibility of tenurial relationships between villa and village remains (cf McOmish *et al.* 2002, 106–7). Without documentary evidence, defining patterns of land ownership from archaeological sources alone is extremely difficult, but there are some anomalies in the material culture record derived from this study which are, perhaps, worth exploring further in this regard.

We have concluded that there is an argument for some differentiation in status between the three sites on the Higher Plain which we have investigated through limited excavation. Of the three, the poorest in material-culture terms is the linear village of Chisenbury Warren. There are two aspects, however, which deserve further comment. The first is the presence of significant numbers of querns and millstone fragments of Quartz Conglomerate derived from the relatively remote source of the Forest of Dean. This material has not been found among the large stone assemblage at Coombe Down (and only three, possible fragments from the *Time Team* investigation of Beach's Barn, but none from ours (Wessex Archaeology 2006, 18)). Equally, though the numbers are small, the stone roofing-tiles at Chisenbury Warren derive from the more distant, Vale of Wardour source, as opposed to the Vale of Pewsey which was the source of the Coombe Down tiles. One explanation for this difference might be that, whereas Coombe Down was an independent farm, which did engage with local markets, Chisenbury Warren engaged with a wider network, simply by virtue of its tied relationship with an estate centre or villa in the Avon valley. The villa engaged with the larger market, which included supplying the state, and thereby acquired the resources to access more exotic materials. Indeed some of these, such as the querns, may have formed part of the payment. Such commodities were then mediated through the villa to the dependent village. Indeed it is possible that some of the larger fragments arrived in just that state, as discards from the villa's mill(s). This is a similar explanation to that offered for the presence of a numbered quern found at Charlton Down (McOmish *et al.* 2002, 107). That there was a link with the cultivation of the lower-lying ground, presumably of the Avon valley, is indicated by the presence at Chisenbury Warren of the weed seeds of stinking mayweed which is typical of the cultivation of heavier, clay soils. It would appear from this evidence that the village was harvesting and processing grain from lower down the valley, perhaps from land closer to the villa. One might question why the village developed where it did on the Higher Plain if it was free to choose between locations, the assumption being that it was not located on better land because it was not free to do so. Clearer evidence of the nature of the relationship between village and villa will no doubt emerge over time, but such evidence as we do have now certainly supports the idea that nucleated settlements on the Higher Plain like Chisenbury Warren formed part of larger, villa-owned estates.

We have commented on the material poverty of Chisenbury Warren, relative to Coombe Down and, in the light of the preceding discussion, we can reasonably attribute some of this to the loss of output to the estate owner in the form of rent in kind. Otherwise we have to envisage a reluctance to engage with the market to convert agricultural produce into Roman material culture. Yet there are other indicators of the poverty and harshness of daily life on the Higher Plain, which may in part derive from the status of the settlements as much as from their location. A conspicuous feature of the animal and bird bone is the lack of diversity. Apart from the major domesticates, among which cattle, notably at Chisenbury Warren, and pig otherwise form a minor component, the domestic fowl is only certainly attested by one bone. Wild animals, such as deer, and birds are also extremely rare. There is evidence for the butchery of dog and horse, otherwise less common practices on Romano-British sites, at Chisenbury Warren. Only at Beach's Barn, which we infer to have been of higher status, is there evidence for the burial of a complete dog skeleton with no evidence of cut or chop marks.

That survival of domestic animals to maturity may have been difficult is indicated at Chisenbury Warren by the relatively high death rate among neonate cattle and the peak in death of sheep and goat at less than 10 months and, more generally, 2 years of age. This is also reflected in the young age at death of the dogs and horses from this site. While the evidence does not allow us to distinguish between natural causes of death and deliberate slaughter, the former may be the more likely explanation of the observed pattern.

Much the same picture is evident at Coombe Down where no cattle older than 36 months are recorded and, albeit from a small sample, the mortality of sheep/goat before the age of 10 months appears to be proportionately high for both in the Romano-British assemblage, and relatively higher than in the preceding, Iron Age periods. Among the horse bone from this site there was also a greater incidence of those from young animals. Although sample sizes are small, the size of both sheep and cattle from both Coombe Down and Chisenbury Warren is at the smaller end of the range for contemporary animals. Some of the pathology indicates developmental disturbance caused by nutritional stress of sheep and horse at Chisenbury Warren and there was extensive evidence of infection and injury of the late Romano-British dog from Beach's Barn.

Nutritional stress may be seen in the Late Iron Age/early Romano-British, subadult, human skeleton from Widdington Farm which, like the adult bone from the Middle Iron Age pit at Coombe Down, had evidence of hypoplasia in its tooth enamel. The remains of human neonates, however, from both Chisenbury Warren, with at least four individuals from each of the two trenches, B and C, and Coombe Down is consistent with the evidence from other Romano-British rural sites and cannot be related to any particular circumstances of the Higher Plain. However, the incidence of burial from the minimum estimate of eight discovered in the two trenches at Chisenbury Warren represents a ratio of one neonate per 37.5m^2. If we extrapolate from this ratio only to the core area of the settlement represented by hut platforms, some 230 by 60 m (cf. Fig. 4.4), the total potentially amounts to some 368 infants. As a sample of that settlement core, our two trenches only amount to about 2.2% of the area. A larger sample, however, would be desirable to assess with confidence whether the incidence recorded so far was representative.

A key factor in the survival of our settlements was access to water, crucial to the survival of both animal and human populations. Earthwork survey in the central training area has identified the sites of probable ponds of probable Romano-British date, some contained by substantial dams, as at Charlton Down (McOmish *et al.* 2002, 87–106, figs 4.6, 4.11, 4.16, & 4.18). A possible pond can be seen on the survey plan of Chisenbury Warren opposite the core area of the settlement (Fig. 4.4) and there is evidence for a large dam at the western edge of the settlement at Coombe Down. It has been suggested that this might be the site of the spring pond or Combesdeane Well mentioned in AD 934 and 1591 (McOmish *et al.* 2002, 100, fig. 4.2). Excavation to test these hypotheses at both of the sites reported here and elsewhere as postulated by McOmish *et al.* (2002) would be highly desirable. Although frogs and toads can travel 1–2 km from the wet contexts which are essential to their breeding, toad is present at Chisenbury Warren and frog and toad are recorded at Coombe Down (and frog or toad from Beach's Barn). Since neither settlement is closer than about 4–5 km from the floodplain of either the Avon or the Bourne, nearer sources of wet ground or water are implied.

Both of our settlements appear to have had the essential resources for their survival and, in the case of Coombe Down, that is attested into the 5th–7th centuries. The evidence indicates that neither was at all rich in material culture although Coombe Down was relatively more affluent than Chisenbury Warren. A possibly different population, and higher status of the Coombe Down settlement is further indicated by the evidence for the greater abundance of cattle in relation to sheep and, by implication, of beef consumption. It is important now to consider how our settlements compare with others of similar type. While there are two possible parallels on the chalk for the Coombe Down settlement, we have to look further afield for an extensively excavated example of a nucleated village comparable to Chisenbury Warren.

Suddern Farm, Hampshire, with its bivallate enclosure of Iron Age date, was excavated by Cunliffe in the 1990s (Cunliffe and Poole 2000). A ploughed-out site, it lies on the chalk some 9 km west of the River Test and about 18 km east of Coombe Down. Although the resemblance between the sites is most clear in the plan of their Iron Age enclosures, both have evidence of occupation through the Romano-British and into the Anglo-Saxon periods. Continuity of occupation from Iron Age to the end of the Romano-British period is also evidenced at and around the similar, bivallate enclosure at Boscombe Down West, Wiltshire (Richardson 1951), where settlement evidence was recorded rapidly in the context of major construction works at the RAF station in 1948–9.

The nature of the Romano-British occupation at Suddern Farm cannot easily be characterised, nor is it clear whether it was continuous throughout the Romano-British period. A large area excavation of some 1200 m^2 and a smaller trench (200 m^2) across the enclosure ditches produced evidence of hollows, pits, a 3rd–4th century corn drying oven and a possible rectangular timber building. Of the wares in common between the two sites BB1 at Suddern Farm accounts for only 4% of the assemblage while the ratio of New Forest and Oxfordshire colour-coated wares (and sigillata) is about 7%. The character and quantities of the finds assemblages are similar to Coombe Down. The incidence, calculated per square metre of excavated area, of copper alloy coins recovered from the excavation (and not the collection recovered by a local metal detector from the vicinity of Suddern Farm), with a ratio of 1:56, is similar to

Chisenbury Warren, but higher (ie, lower incidence) than that at Coombe Down. While that for the iron objects of Romano-British date at 1:108 is similar to the ratio at Chisenbury Warren, the incidence of other finds of copper alloy at 1:200 is much lower than even that for Chisenbury Warren. These differences may, in part, reflect the fact that the topsoil was removed by machine. Although scanned by metal detector only the full list of coins, of which 22 (88%) were, in fact, recovered from the topsoil, is reported (King 2000, 115). In the case of other finds, only one topsoil find of copper alloy and none of ironwork was reported. This suggests that there is very probably an under-recovery and reporting of metalwork finds from Suddern Farm.

As at Coombe Down, the querns are almost exclusively of local, Upper or Lower Greensand rocks, with no examples of Quartz Conglomerate from the Forest of Dean, even though the latter continues to be well represented in site assemblages as far east as Silchester (Shaffrey 2003). Both ceramic building material and stone roofing slates were found in small quantities at Suddern Farm and, as at Coombe Down, the assemblages were interpreted as having been brought to the site for re-use (Cunliffe and Poole 2000, 123, 142). However, the assemblage of stone tiles is significantly greater (with an incidence of 1:10) than at Coombe Down (1:125), suggesting to the authors the possibility of a nearby villa (*ibid.*, 202). Similarities can be seen in the faunal assemblages, which are dominated by sheep over cattle and pig, with a rarity of wild animals and of bird, including, particularly, domesticated fowl. By the NIF and epiphyses-only method of calculation it appears that, as at Coombe Down, cattle increase in relation to sheep in the Romano-British period, but this is contradicted by the estimate based on MNI. However, the age at death profiles at both sites for the Romano-British period support the interpretation that meat production was relatively more important (Hamilton 2000). In conclusion the authors speculate whether the incidence of the stone roofing tiles might indicate the presence of a nearby villa, but, in terms of the other evidence from the excavation are of the opinion that 'There is little to indicate a status above peasant level…' (Cunliffe and Poole 2000, 202). We might also suggest that, notwithstanding the poverty of the site and with some closer similarities with Chisenbury Warren than with Coombe Down (but for which there may be an explanation in the different methods of recovery), Suddern Farm's status was nevertheless perhaps different (with a possible, close association with a villa) from that of the nucleated, compact and linear settlements of the Higher Plain.

In respect of Boscombe Down West, despite the lack of published faunal remains and reliable quantitative data among the finds' assemblages, there are parallels in the range and abundance of the metalwork, both non-ferrous and ferrous, recovered from that site and those from Coombe Down and Suddern Farm (Richardson 1951).

Other useful, comparative data from the chalk of southern Britain are limited. As part of the Maddle Farm project, further to the east again in Berkshire, limited excavation was undertaken of both the villa at Maddle Farm itself and the ploughed out, Knighton Bushes settlement, some 750 m to the north-west, following surface collection and geophysics (Gaffney and Tingle 1989). At 2.5 ha the surface area of Knighton Bushes is similar to that of Coombe Down. The Berkshire sites lie close to three small towns: about 10 km from *Durocornovium* (Wanborough), 16 km from *Cunetio* (Mildenhall) and 20 km from *Spinis* (Speen). As with our sites, the excavated areas of the non-villa settlement (MF1, MF3) were too small (150 m^2 and 400 m^2) to allow much insight into its plan and changes through time, but the chronology spans the 1st to the 4th centuries AD, and there is also some evidence for continuity into the Anglo-Saxon period. Although the pottery was not characterised and quantified in a similar way to the Salisbury Plain and Suddern Farm assemblages, it is possible to make useful comparisons on the basis of the coins, the other copper alloy artefacts and the iron objects (other than nails and cleats). Again, assuming an approximately comparable volume of soil between all our chalkland sites, the ratio of finds per square metre of the combined excavated areas of MF1 and MF3 at Knighton Bushes is 1:21 in respect of the coins, 1:42 for the other objects of copper alloy and 1:45 for the iron objects. These are all closely comparable to the equivalent figures from Coombe Down. A different approach to the reporting of the animal and bird bone means that it is difficult to compare assemblages, but, on estimates of minimum numbers the quantities of cattle and sheep/goat were similar at Knighton Bushes as at Coombe Down. Bones of wild animals and bird, including domestic fowl are very rare. Although evidence of butchery was not reported, an almost complete skeleton of an elderly horse recovered from a late Romano-British context suggests that horse was not routinely butchered for its meat. Together, these observations are more reminiscent of Coombe Down than Chisenbury Warren.

For larger, nucleated settlements such as Chisenbury Warren and the other compact and linear settlements of Salisbury Plain as demonstrated by survey of surviving earthworks, there are two, local, excavated parallels on the chalk and further, but limited, comparative data from elsewhere in southern Britain. Excavation of a small area of well-preserved settlement earthworks at Overton Down (Overton Down XII), on the north Wiltshire Downs, about 30 km north of the study area in 1966–8, provides a good

parallel to Chisenbury Warren (Fowler 2000, 102–11). The site lies on the chalk, close to the Roman road between *Cunetio* (Mildenhall) and *Aquae Sulis* (Bath), and to the River Kennet. Except in one case where there is clear evidence of an entire building constructed in timber (Building 4a), the others were composed of unmortared, irregularly shaped sarsens with some flints. These, in turn, probably supported a timber superstructure. Such arrangements are very reminiscent of the structural remains at Chisenbury Warren. Altogether, the ground plans of four rectangular buildings were recovered. The dating evidence suggests that the occupation belongs only to the late Romano-British period, from the mid–late 3rd century.

In comparison with Chisenbury Warren, however, the material culture appears richer and much more diverse. From Building 2, for example, the copper alloy artefacts comprised spoons, needles, a handle, several brooches, and other personal items, while the ironwork assemblage produced metal ties, loops, and staples. Building 3 contained a collection of iron tools including shears, chisels, a cleaver, a gouge, and various knives. The excavation also produced a particularly rich collection of late Roman glass, consisting mainly of drinking vessels (*ibid.*, fig. 6.23). Overall, the ratios of finds per square metre of excavated area is 1:5.5 for copper alloy coins, 1:16 for other objects of copper alloy, 1:3.3 for glass other than beads, and 1:19 for objects of iron excluding nails and cleats. In the case of the iron, the incidence may be higher as the working paper does not provide a complete catalogue (Fowler 2000, FWP 64). Of all the chalkland sites from which comparative data have been extracted, Overton Down XII has evidence of the highest incidence of loss of these categories of portable finds. In the case of the pottery, while the incidence of BB1 at 10% is comparable to our excavated sites, the ratio of fine wares, in this case almost exclusively Oxfordshire wares, is significantly higher than at Chisenbury Warren, and close to that at Coombe Down at 15.6%. However, like our sampled sites, neither stone roofing-tile (108 pieces), nor ceramic building material (20 kg) is particularly abundant.

As with the material culture, the analysis of the animal bone reveals a very different picture to that established for Chisenbury Warren. It shows that sheep dominated the assemblage at about 50% by both count of fragments and estimate of minimum numbers of individuals (MNI), and that they were kept, as elsewhere on our chalkland sites, to maturity, presumably for their wool and milk. The cattle, however, although only 13% by number and MNI, were being bred for consumption, and were not kept for traction or dairy production. Both pig and horse (each at about 10%) were also relatively more abundant than at either of our sites. In all respects the indicators from Overton Down indicate a more prosperous settlement than at Chisenbury Warren, while, in the case of animal husbandry, both sites share a similar strategy towards the rearing of sheep for wool and dairying, but differ in relation to cattle, where meat consumption was more important at Overton Down, itself another indicator of greater prosperity.

The rescue excavations at Butterfield Down, on the chalk about 10 km south of our western sample area and approximately 1 km) east of the River Avon and on the eastern outskirts of Amesbury, suggest the presence of a late Romano-British nucleated settlement extending over some 6 ha (Rawlings and Fitzpatrick 1996). While a larger area of the settlement was planned, only a small sample (trenches 1–23), extending over some 20,000 m^2, was excavated prior to development. Indeed, within the sample areas selected for excavation, resources allowed for only a selection of features to be excavated. Unlike Chisenbury Warren the evidence for late Iron Age and early Roman occupation was limited and the focus of occupation of that date may lie beyond the excavated areas. Most of the evidence to characterise the settlement of the 3rd–5th centuries derived from pits, and no clearly defined buildings were identified. Rather than indicating an absence of structures, this negative evidence probably relates to the manner of construction, perhaps timber-frame buildings resting on sill beams, or unmortared stone foundations. The presence of hearths and possible dryers, including a well preserved example of a corn drier associated with the charred remains of cereals, indicates, as at Chisenbury Warren, the importance of the cultivation of spelt wheat and barley. Although there was some evidence for the rearing of pigs, the evidence of the animal bone pointed to the overwhelming importance of sheep and cattle husbandry. Other species, including bird and wild animals were very rare. While the sheep appear to have been kept to maturity for their wool and milk, the age of the cattle suggests they were kept for their meat with over half the bone fragments from high meat-bearing bones. This profile has more affinity with that from Coombe Down than that from Chisenbury Warren which resembles more the pattern from the Iron Age with its emphasis on sheep slaughtered by two years, and a small number of older cattle kept for draught or dairying purposes. Otherwise there was also evidence for ironworking, though not certainly for any iron-making.

Although the strategies of selective excavation and artefact collection including fieldwalking and metal-detecting do not allow for easy comparisons of abundance (ratio of finds per square metre) between

the two sites, the range of material finds from Butterfield Down is also in keeping with the faunal remains in suggesting a relatively wealthier settlement than Chisenbury Warren. In addition to a small hoard of eight gold solidi of late 4th/early 5th century date from the periphery of the area investigated, the copper alloy finds include armlets, finger rings, brooches, a probe or pin, spoons, a key ring, and fragments of figurines and a sceptre-head. The ironwork (other than cleats and nails) also includes a greater range of items including both personal items and tools. Similar observations can be made about the relative diversity of the glass and worked bone assemblages. An ivory pin and a shale counter were also recorded. Beyond general characterisations of the stone, which make close comparisons with our material difficult, it is worth noting that a quantity of limestone roofing tiles was recovered and that the quern assemblage included examples in 'conglomerate', perhaps our Quartz Conglomerate of the Old Red Sandstone, as well as Greensand. As has been noted above in respect of the pottery, the ratio of BB1 at Butterfield Down compares well with that from our three excavated assemblages, but, while greater than that from Chisenbury Warren, the ratio of fine wares (7%) is considerably lower than at Coombe Down. In conclusion, while noting a greater wealth and diversity of finds than at Chisenbury Warren, we should acknowledge that this may be partly a correlate of the larger area investigated. However, the greater diversity of the finds assemblage at Butterfield Down can also be paralleled at a 'village' settlement off the chalk at Catsgore, Somerset.

Catsgore, Somerset is a very important example of a linear settlement. It is some 4 km north of the small town at *Lindinis* (Ilchester). In 1970–3 and 1979 an area totalling over 7250 m^2 was excavated after mechanical removal of the topsoil, revealing at least 14 rectangular, stone-footed buildings extending more than 270 m along the road from Ilchester and dating from the later 2nd to the 4th century AD (Leech 1982; Ellis 1984). The settlement appears to have originated in the early 2nd century. The buildings were of simple construction and decoration with limited evidence of internal subdivisions. While the majority were interpreted as dwelling houses, there are probable examples of at least one barn and one byre or cowshed. One building contained a corn drier. Roofing was of limestone tiles, but quantities were not recorded. There were no remains of painted wall-plaster and window glass was limited to two fragments.

The economy of the settlement was founded on the cultivation of cereals, notably spelt, and animal husbandry where cattle were more important than sheep or goat. Pig was relatively insignificant and there were few remains of horse, bird, including domestic fowl, and wild animals. Fish and oyster are present in very small quantities. The ages of death of the cattle, on the one hand, suggest that they were kept as draught animals, rather than for meat, while those of the sheep, on the other, suggest they were kept for their milk and wool, rather than for their meat. There is little evidence of very young animals, whether perinatal or less than three months old. Although there is commentary on the butchery of the cattle and sheep there is none on either horse or dog. This may be 'positive' negative evidence of butchery, and therefore, of the consumption of either horse or dog.

Human remains are also recorded. These comprised 20 infants, one child of 6–12 years, two teenage girls and three adults, as well as individual, perinatal bones from eight other features. The incidence of the infant burials at Catsgore is apparently much lower, only 1:312.5 m^2, compared with 1:37.5 m^2 at Chisenbury Warren (or 1:69, if we consider the total excavated area).

The material culture of Catsgore is notably diverse, both in the broad categories of material culture represented – copper alloy, iron, lead, bone, shale and other stone, and ceramics – and within each of them. So, for example, among the copper alloy objects brooches, bracelets, rings, toilet articles, pins, needles, spoons, leatherwork fittings, etc are catalogued, while among the ironwork, other than cleats and nails, some 12 different categories of artefacts are listed. However, the quantities based on the incidence of finds per square metre of excavated area are not remarkable. While coins (excluding hoards) produce a ratio of 1:13.8 m^2, those for other objects of copper alloy and for ironwork (other than cleats and nails) are, respectively, 1:74 m^2 and 1:82 m^2. The latter are midway between the ratios for Chisenbury Warren and Coombe Down, while that for the coins is the lowest of all the sites considered on this basis and therefore indicative of a relatively high rate of loss. One explanation for the apparently low incidence (high ratio) of non-ferrous and ferrous finds is that the report concentrates on the better preserved and identifiable items, rather than the fragments.

The pottery assemblage is characterised by a very high proportion of BB1 (72% in the combined 4th century assemblage) and a relatively high proportion of New Forest and Oxfordshire wares (8.5%). Though only 17 km or so closer to the source of the pottery than the Salisbury Plain settlements, the ratio of BB1 at Catsgore is typical of late Romano-British assemblages in Somerset and relates to the larger pattern of dispersal of this ware (Allen and Fulford 1996). The proportion of New Forest and Oxfordshire wares is 8.5%, a ratio which may be

depressed by the presence of residual table wares. If one adds to these wares the other table wares from the 4th century deposits which include samian and miscellaneous colour-coated wares, the ratio of fine wares amounts to 13.3%.

Although allowances have to be considered for the different approaches to each site – the mechanical removal of topsoil at Catsgore compared with the hand-digging of all trenches at Chisenbury Warren, there are both striking similarities and dissimilarities between the two sites. The rich diversity of the material culture at Catsgore is a world apart from the Chisenbury Warren assemblage where only three categories of copper alloy artefact other than coins and four of ironwork were recovered. Although the incidence of finds, expressed as a ratio per square metre of excavated area, is perhaps less than might have been expected at Catsgore, it is still significantly higher than at Chisenbury Warren. Equally, while the methodologies of studying the faunal assemblages differ, the evidence for animal husbandry and the consumption of meat suggests the latter, particularly beef, played a significantly more important role in the diet at Catsgore. The absence of evidence for the consumption of horse and dog meat is also a pointer that meat was relatively more available than on the Higher Plain. The lower incidence of neonatal burials also indicates a better quality of life at Catsgore. The higher incidence of coin finds suggests that local marketing, presumably through nearby Ilchester, played a more significant part in the economy of the site than at Chisenbury Warren.

Altogether, despite the relative lack of good comparative data, Chisenbury Warren emerges as the poorest of the sites reviewed and poorer than Coombe Down (or Beach's Barn). That poverty is expressed both in the material culture of the site and in the biological data of human, animal and bird remains. Perhaps the most striking figure is the estimated (but conservative) projection for the incidence of human neonates, perhaps the highest recorded from any settlement in Roman Britain. Although, on morphological grounds, there are similarities between the Overton Down settlement and Chisenbury Warren (and the other villages of Salisbury Plain with comparable, surviving earthworks), the contrast in wealth and status to be inferred from the material culture and animal remains is very striking. Coombe Down, on the other hand, has more in common with the chalkland settlement at Knighton Bushes, Berkshire, with greater evidence of material wealth and indications of a greater connectedness to trends observable in later Roman Britain at large, particularly in terms of animal husbandry.

In drawing connections with settlement and land use on the chalk of southern Britain beyond Salisbury Plain, the distinctiveness of the settlement pattern and exploitation of the latter, as understood by earlier commentators (above, p. 2) becomes less apparent. Indeed the differentiation in settlement type and status, as perceived through material culture, economy and lifestyle, as we have been able to establish through excavation and survey on the Higher Plain, suggests a variable pattern of land ownership and tenurial relations, rather than any overarching landlord, whether public or private. Similarly, in making the case for a connection between the nucleated 'village' on the high ground (in this case Chisenbury Warren) and the 'villa' in the river valley, we cannot, of course, distinguish between types of landlord.

Although the linear and compact villages of the Higher Plain stand out, at least in part from the quality and extent of their surviving earthworks (McOmish *et al.* 2002), the implication is that it is only the fact of their remarkable survival which sets them apart and give them a particular association with Salisbury Plain. Nevertheless, that survival is of crucial importance in understanding the character of rural settlement on the chalk. As we see from sites like Butterfield Down and Suddern Farm, destruction by prolonged cultivation of the earthworks of the settlement removes any chance of establishing the pattern of built structures whose structural support does not depend on post-holes or beam-slots cut into the subsoil. Both Chisenbury Warren (and Overton Down), however, show the potential for understanding the social dimension of their settlements, both in terms of the numbers and sizes of buildings occupied at any one time, particularly the late Romano-British period, and in attributing differential functions. The detailed study of one example of a village with good earthwork preservation will be of incalculable benefit in terms of understanding the larger picture of settlement and land-use on the chalk of southern Britain. Indeed, without such research it is doubtful whether we will ever be able to interpret the pattern of negative features in settlements where earthworks, such as 'hut platforms' no longer survive.

Despite the considerable variation between sites in the quantity, quality and diversity of material culture, the evidence of the agricultural economy of our sites presents a picture which is largely consistent with the wider, chalk-land context. The emphasis is on cereal cultivation, for which there are also powerful indicators of intensity, in the form of the incidence of driers and the extent and density of manuring scatters, with higher sherd counts per hectare than even for the Berkshire Downs. Equally there is consistency in the faunal record for sheep, not only in the latter's numerical dominance among the major domesticates but also in the evidence for their husbandry, with the animals being kept to maturity for their wool and milk. The picture for cattle

husbandry is more variable, with limited evidence for animals being kept to maturity for traction or dairy, or for their being raised for the market in respect of their meat value. It is hard to equate this evidence with the pattern of manuring which might suggest a much greater intensity of cattle husbandry, greater, for example, than in the clay lowlands (cf Tingle 1991). However, the discrepancy could be overcome if manure was additionally brought up from byres and lower-lying farms in the valleys. Other types of animal, including pig, were of minor importance. Proximity to markets, roads and rivers was undoubtedly an important factor in the development of a settlement's agricultural strategy and material prosperity. This may be an explanation for the difference, say, between the poverty of Chisenbury Warren and the relative wealth of Overton Down, close to the main road between Bath (*Aqcuae Sulis*) and Mildenhall (*Cunetio*) and the Kennet. Although the pattern from our study area suggest an evolution with its starting point at the end of the Iron Age, it would seem from what appear to be 'new' sites like Butterfield Down and Overton Down that the period of the greatest intensity of exploitation of the landscape was the 4th century.

8. Conclusions

We can review the results of the project in terms of methodology, the contribution to knowledge and interpretation of settlement, landscape and society in the later prehistoric and Romano-British periods, and the implications for present and future conservation strategies of the SPTA.

Methodology

Our strategy involved both wide-spaced and intensive surface collection, test pitting and further, evaluative approaches using excavation at a range of levels from single, small trenches at individual sites to multiple trenches at the two sites of Coombe Down South and Chisenbury Warren, which were selected for more intensive investigation. The project built on the work of the former Royal Commission (RCHM(E)) which had focused on the plotting of the aerial photographic record and the measured ground-survey of settlements, field systems, trackways, etc, with surviving earthworks (McOmish *et al.* 2002).

Surface collection worked well to characterise both overall changing patterns of land use, as reflected in pottery discard assumed to be associated with manuring, and the spatial extent and specific characteristics of individual sites. In particular it proved an invaluable source of evidence for locating Late Bronze Age settlement and other activity in the landscape, notably where there was no corresponding aerial photographic evidence. The latter was particularly effective in the identification of enclosures and more complex sites, typically those where there was major intervention in the subsoil. Strategies of surface collection are perhaps the only, practical means by which unenclosed settlement of this Late Bronze Age date can be identified on the chalk.

For the Romano-British period surface collection was the principal technique used for the identification, determination of spatial extent, and the basic characterisation of the status of settlements from the range of material culture obtained. Plan evidence of individual settlements, however, is distinctly lacking, and requires the further, complementary and highly desirable application of geophysical survey.

The various approaches to excavation from test pitting to larger and multiple trenching were variously successful. At one level the former proved the only means of establishing the presence or absence of sites in pasture which were imprecisely located and otherwise characterised by earlier, mostly antiquarian investigations and for which there was no aerial photographic evidence. More serendipitously this approach produced outstanding results in terms of the discovery of the Romano-British corn drier at Beach's Barn and the Anglo-Saxon burials in the field systems above Tidworth. As a means of gaining insight into the chronology and changing environment of field systems this minimalist approach proved highly effective.

The trenching of enclosure ditches, particularly focused at entrances, proved successful in establishing chronologies. Whether the latter are representative of the entire occupation span of individual sites can only be tested by more extensive, area excavations of interiors. Consistency of results among enclosures positioned across the landscape from west of the Avon to east of the Bourne confirmed an Iron Age date range. With one exception abandonment had occurred by the end of the pre-Roman Iron Age, 1st century BC/1st century AD.

For the Romano-British period test-pitting linked to surface collection, small-scale excavation and, later, geophysical survey worked well in finding and defining the extent of the Beach's Barn settlement. It was helpful, too, at Chisenbury Warren in determining the extent of the settlement. The technique also worked well in characterising the development and chronology of lynchets and, with systematic sampling, facilitated the assessment of environmental change within the field systems through analysis of the molluscan evidence.

Larger-scale, multiple trenching for the Romano-British period was focused on the two settlements of Chisenbury Warren and Coombe Down, between the Avon and the Bourne, and with well preserved earthworks. The largest single trenches were of 150 m^2 with the larger, total area (at Chisenbury Warren) no more than 555 m^2. The situation at Coombe Down was complicated by the spectacular results achieved by geophysical survey and the ensuing evaluation strategy aimed both to test the chronology of the principal enclosure ditches and understand the relationship between earthwork and the sub-surface archaeology.

The results were informative in terms of establishing the chronology and character of the Iron Age occupation, obtained largely, but not exclusively, from the investigation of the ditches. In terms of the Romano-British (and post-Roman occupation) the approach was successful in retrieving evidence of chronology, status, and economy, but the structural evidence was very limited and the clarity of the earthwork survey was not sufficient to extrapolate intelligently from the small to offer an interpretation of the larger picture of the layout of the settlement and the plans of individual buildings.

In the case of Chisenbury Warren the results not only provided evidence of chronology, status and economy, but they were also more helpful in terms of interpreting the larger plan of the settlement, particularly, as it turned out, for the later Romano-British period. The RCHM(E) earthwork survey of Chisenbury Warren is one of the icons of Romano-British archaeology revealing, apparently, terraced, hut platforms distributed along a trackway or 'village street'. Excavation confirmed the essence of these interpretations and there was, for example, a good correlation between the hut platforms in trenches B and C as defined by the earthwork survey and the sub-surface archaeology. However, on the basis of our trenching, it seems likely that the earthwork survey is mainly indicative of the later Romano-British (3rd–4th century), settlement plan and cannot be used predictively to understand earlier layouts and buildings.

Academic results

We have mentioned above the significant increase in knowledge of the location and distribution of (probable) unenclosed, Late Bronze Age settlement through systematic, surface collection. To this, for the later prehistoric period, we can add the establishment of a chronology for enclosed settlement. More significant, perhaps, is the evidence for sweeping change across the landscape at the end of the pre-Roman Iron Age and the beginning of the Romano-British period with the abandonment of enclosed settlement and the emergence of the nucleated, 'village', represented in our study by Chisenbury Warren. This is matched in the wider landscape by the development of field systems and an intensification of cultivation reflected, particularly, in the growth of lynchet banks. The changes in settlement pattern that can begin to be documented for Salisbury Plain are mirrored by similar developments elsewhere in southern Britain (*cf.* Fulford 1992). Although not investigated by excavation in this study, the combination of earlier and antiquarian finds and the programme of surface collection reported here points to the development of richer, 'villa' settlement in the Avon valley, possibly in the Bourne valley, and certainly eastwards towards Andover. This, as others have pointed out, overturns the notion that Salisbury Plain is characterised by an absence of 'villas' (*cf.* McOmish *et al.* 2002, 104–6).

Although resolving questions of land-ownership and tenurial relations among rural settlements is incredibly hard, if not impossible, to address from archaeological evidence, some pointers have emerged from the present study. In the first place there is no further evidence to distinguish between the type of owner, whether private, or imperial, of the various estates, individually or collectively, postulated from the survey evidence (*ibid.*, 106-7), but the potential relationship of 'villa' and dependent 'village' settlement is perhaps no different here than in other part of lowland Britain where it is generally assumed to be private. In our analysis of the two sample-excavated settlements of Chisenbury Warren and Coombe Down we have noted differences both in the character of their plans and in their material and biological assemblages. One interpretation is to postulate a link between the nucleated 'village' at Chisenbury Warren and a 'villa' in the Avon valley, while the indicators among the material culture and biological assemblages of Coombe Down argue for an independent status. The difference in character between these two settlements, so close together on the Higher Plain, suggests different types of ownership. The fact that, unlike at Chisenbury Warren, there is evidence of continuity of settlement at Coombe Down South from the Iron Age through to the Anglo-Saxon period may reflect that difference. That the Higher Plain supported different types of settlement in close proximity to each other (and Beach's Barn may represent another variation) is itself an argument for a variety of ownership and tenurial arrangements across this landscape.

Notwithstanding the lack of data from excavated settlements on the Higher Plain and elsewhere on the chalk of central southern Britain, we have attempted some comparative analysis. Despite differences in methodologies of excavation and information retrieval we have identified two other settlements, neither producing evidence of villa-type buildings, in Hampshire and Berkshire which have affinities with Coombe Down. Chisenbury Warren, however, remains *sui generis*, in terms of both its material culture and biological (particularly the animal and human remains), and the closest to a subsistence-only life-style for its inhabitants. Daily life in this community was harsh and life expectancy at birth was poor. Nevertheless, we interpret the presence of at least one corn drier, as recorded in one of our trenches, to indicate the processing of quantities of grain greater than was needed for daily consumption. We speculate that this implies the production of a surplus, but one destined for the estate owner as rent, rather than the market to be converted into other commodities, whether food or material goods, for the benefit of the inhabitants of the settlement. Our sample of Chisenbury Warren is tantalising, but it provides a compelling case for further investigation of the site, as it does for other linear and compact settlements on the Higher Plain to the west of the Avon.

As a settlement whose origin and development may have been linked to a land owner's desire to

exploit particular markets for agricultural produce, themselves the product of the Roman imperial administration, it is, perhaps, not surprising, that there is no evidence for post-Roman continuity at Chisenbury Warren. The settlement died with the disintegration of the larger system. While noting that Chisenbury Warren, like Coombe Down, lay at the upland extremity of the medieval parish of Enford, a situation which finds parallels with other Romano-British villages on the Higher Plain, the project has contributed little to our understanding of the development of settlement and landscape into the medieval period (cf. McOmish *et al.* 2002, 109–13). We have evidence of continuity of settlement at Coombe Down into the 6th–7th centuries, but a larger investigation is required to elucidate its character at this time. Overall, our principal observation is a negative one – the extreme rarity of Anglo-Saxon and medieval material, either from surface collections or excavations. This coincides with the lack of evidence in our study area of ridge-and-furrow overlying Romano-British field systems and reinforces the view that the Higher Plain was largely devoted to pasture, with cultivation concentrated in the river valleys, close to the medieval settlements (*ibid.*, 114–17). Just as it is important to pursue the nature of Romano-British settlement in the valley bottoms to understand the relationship between upland and lowland, so it is necessary to focus investigations on the medieval settlement pattern through research into the origins, character and economy of the medieval villages located along the river valleys.

Conservation

All our investigations have confirmed the prehistoric or Romano-British date of the investigated landscape features. This 'truthing' adds considerable value not only to the monuments actually investigated, but also, by extrapolation, to the analogues recorded by ground survey or transcription of aerial photography. The quality of preservation of settlements and field systems of Iron Age and Romano-British date is exceptional across the Salisbury Plain Training Area and is unique to southern Britain. The most outstanding aspects of the landscape are the remains of the Romano-British villages whose ground plans have been captured by the meticulous ground survey of the RCHM(E). What our evaluation trenches have established at Chisenbury Warren is that there is indeed a correlation between the upstanding earthworks and the sub-surface archaeology, particularly in relation to the later Romano-British phase of occupation. However, as can be seen more dramatically at Coombe Down South where geophysical survey has revealed a settlement plan which bears little or no relation to the standing earthworks (Fig. 3.9), the latter, as at Chisenbury Warren, provide little hint as to the nature and character of earlier phases of occupation.

At Chisenbury Warren we can confirm in at least one case that wall structures of unmortared flint and other stone occupied the earthwork features interpreted as hut platforms (cf trench C). Investigation of these structures revealed no trace of underlying wall trenches. Were cultivation to take place, or levelling of the earthworks by other means, it would destroy any evidence of the structure. Indeed, as we have seen, where other Romano-British settlements on the chalk have been investigated, little or no evidence survives with which to reconstruct the plan of individual buildings. With the settlements preserved as earthworks in the Salisbury Plain Training Area, there remains the possibility of recovering the plan of individual buildings, at least in the latest phases of occupation. In the same way, field systems similarly undamaged by later cultivation or military activity offer the prospect of recovering their developmental histories in considerable detail. This quality of preservation gives these settlements and their associated field systems an extraordinary value as historic monuments. Through a major programme of fieldwork it should be possible not only to reconstruct the plan of settlements in their later phases, but also to relate them to their associated landscape more clearly. Simple, but fundamentally important questions, such as the size of a settlement in the 4th century, the extent and nature of social differentiation within it, and the extent of its cultivated landscape could be addressed. While small-scale evaluations such as those reported here provide samples of material culture and biological remains sufficient to begin to sketch out the nature of the economy, cultural life, status, etc, it is only large-area excavations which will enable deeper penetration into the size, nature, and organisation of these settlements and their relationship with the wider landscape. The continued preservation of the late prehistoric and Romano-British settlements and landscapes of Salisbury Plain remains of the utmost importance. Given the scale of destruction elsewhere by cultivation and other forms of development, no other areas of southern Britain offer the same opportunities and possibilities as the Salisbury Plain Training Area for exploring locally the impact of the Roman Empire on rural populations.

Bibliography

Allason-Jones, L., 1985. Bell shaped studs?, in M.C. Bishop, *The Production and Distribution of Roman Military Equipment*, 95–108, Oxford, Brit. Archaeol. Rep. S275

Allason-Jones, L. and Miket, R., 1984. *The Catalogue of Small Finds from South Shields Roman Fort*, Newcastle, Soc. Antiq. Newcastle upon Tyne Monog. 2

Allen, J.R.L. and Fulford, M.G., 1996. The distribution of south-east Dorset Black Burnished category 1 pottery in south-west Britain, *Britannia* 27, 223–82

Allen, M.J., 1989. Landscape history, in *Excavations at the SPTA FIBUA site Copehill Down 1987–8*, Salisbury, unpubl. Wessex Archaeol. Rep.

Allen, M.J., 1991. The environmental evidence (Lain's Farm) and the environmental evidence (A303), in Bellamy 1991, 41-63

Allen, M.J., 1993. Mineralised coprolites and cess, in P. Woodward, S.M. Davies and A. Graham, *Excavations at Greyhound Yard Dorchester 1981–4*, 348–9, Dorchester, Dorset Natur. Hist. Archaeol. Soc. Monog. 12

Allen, M.J., 1995. Land molluscs, in G. Wainwright and S. Davies, *Balksbury Camp, Hampshire, Excavations 1973 and 1981*, 92–100, London, English Heritage Archaeol. Rep. 4

Allen, M.J., 1997. Environment and land-use; the economic development of the communities who built Stonehenge; an economy to support the stones, in B. Cunliffe and C. Renfrew (eds), *Science and Stonehenge*, 115–44, Oxford, Proc. Brit. Acad.

Allen, M.J., 2001. Land snail evidence for landscape and land-use change, in C.J Ellis and M. Rawlings, Excavations at Balksbury Camp, Andover 1995–97, *Hampshire Studies* 56, 54–67

Allen, M.J., 2002. Coprolites, in S.M. Davies, P.S. Bellamy, M.J. Heaton, M.J. and P.J. Woodward, 2002. E*xcavations at Alington Avenue, Fordington, Dorchester, Dorset*, 55, Dorchester, Dorset Natur. Hist. Archaeol. Soc. Monog. 15

Allen, M.J., 2003. Appendix 1: definition of the Shannon, Brillouin and delta indices, in C. French, H. Lewis, M.J. Allen, R.G. Scaife and M. Green, Archaeological and palaeo-environmental investigations of the Upper Allen valley, Cranborne Chase, Dorset (1998–2000); a new model of earlier Holocene landscape development, *Proc. Prehist. Soc.* 69, 201–34

Allen, M.J., Entwistle, R. and Richards, J., 1990. Molluscan studies, in J.C. Richards, *The Stonehenge Environs Project*, 253–8, London, English Heritage Archaeol. Rep. 16

Allen, M.J. and Gardiner. J., 2004. Neolithic of the Wylye Valley 1: millennium re-investigation of the Corton long barrow, ST 9030 4034, *Wiltshire Archaeol. Natur. Hist. Mag.* 97, 63–77

Anderson, A.S., 1979. *The Roman Pottery Industry in North Wiltshire*, Swindon Archaeol. Soc. Rep. 2

Anderson, A.S., 1980. Romano-British pottery kilns at Purton, *Wiltshire Archaeol. Natur. Hist. Mag.* 73, 51–8

Annable, F.K., 1962. A Romano-British pottery in Savernake Forest. Kilns 1–2, *Wiltshire Archaeol. Natur. Hist. Mag.* 58, 142–55

Baker J.R. and Brothwell D.R., 1980. *Animal Diseases in Archaeology*. London, Academic Press

Barrett, J.C., Bradley, R. and Green, M., 1991. *Landscapes, Monuments and Society. The Prehistory of Cranborne Chase*, Cambridge, University Press

Bass, W.M., 1987. *Human Osteology*, Missouri, Missouri Archaeol. Soc.

Beek, G.C. van, 1983. *Dental Morphology: an illustrated guide*, Bristol, Wright PSG

Bell, M.G., 1989. The landsnails, in P. Ashbee., M.G. Bell and E. Proudfoot, *Wilsford Shaft: Excavations 1960–62*, 99-103. London, English Heritage Archaeol. Rep. 11

Bell, M.G. and Jones, J., 1990. Land mollusca, W2 (1981) Coneybury 'Anomaly', and Land mollusca (Coneybury Henge), in J.C. Richards, *The Stonehenge Environs Project*, 154–8, London, English Heritage Archaeol. Rep. 16

Bellamy, P.S., 1991. The Investigation of the prehistoric landscape along the route of the A303 road improvement between Andover, Hampshire and Amesbury, Wiltshire 1984–1987. *Proc. Hampshire Field Club Archaeol. Soc.* 47, 5–81

Betts, I.M., 1986. I*dentifying Ceramic Building Material*, London, Mus. London Dept. Urban Archaeol.

Bewley, R.H., 2000. Aerial survey in the Danebury Environs area, 1981–1997, in Cunliffe 2000, 20–9

Boardman, S. and Jones, G., 1990. Experiments on the effects of charring on cereal plant components, *J. Archaeol. Sci.* 17, 1–11

Boessneck J.A., 1969. Osteological differences between sheep (*Ovis aries* Linne) and goat (*Capra hircus* Linne), In D.R. Brothwell and E.S. Higgs (eds), *Science in Archaeology,* 331–58, London, Thames & Hudson

Boesterd, M.H.P. den, 1956. *Description of the Collections in the Rijksmuseum G.M. Kam at Nijmegen.* V. *The Bronze Vessels*, Nijmegen

Boesterd, M.H.P. den and Hoekstra, E., 1965. Spectrochemical analyses of Roman bronze vessels, *Oudheidkundige Mededelingen* 46, 100–27

Bonney, D., 1968. Iron Age and Romano-British settlement in Wiltshire: some geographical considerations, *Wiltshire Archaeol. Natur. Hist. Mag.* 63, 27–38

Bowen C. and Fowler, P.J., 1966. Romano-British settlements in Dorset and Wiltshire, in Thomas 1966, 43–67

Bradley, R., Entwistle, R. and Raymond, F., 1994. *Prehistoric Land Division on Salisbury Plain: the Work of the Wessex Linear Ditches Project*, London, English Heritage Archaeol. Rep. 2

Brain, C., 1981. *The Hunters or the Hunted?* Chicago: University Press

Brown, L., 1984a. Test 2: fabric change within the stratified sequence, in Cunliffe 1984, 236–7

Brown, L., 1984b. Objects of stone, in Cunliffe 1984, 407–26

Brown, L., 1991. The Iron Age pottery, in Cunliffe and Poole 1991, 277–319

Brown, L., 2000a. The regional ceramic sequence, in Cunliffe, 2000, 79–124

Brown, L., 2000b. The pottery, in Cunliffe and Poole, 2000, pt 6, 75–102

Brown, L., 2000c. The pottery, in Cunliffe and C. Poole 2000, pt 4, 61–7

Brown, L., 2000d. The pottery, in Cunliffe and Poole, 2000, pt 5, 53–84

Bryant, A., 2002. *The Landscape and Land-use of Codford Circle: the Molluscan Evidence*, unpubl. BA dissert., Univ. Bristol

Buikstra, J.E. and Ubelaker, D.H., 1994. *Standards for Data Collection from Human Skeletal Remains*, Arkansas, Archaeol. Survey Res. Ser. 44

Bulleid, A. and Gray, St. George. H., 1917. *The Glastonbury Lake Village, Volume 2: A full description of the excavations and the relics discovered, 1892–1907,* Glastonbury, Glastonbury Antiq. Soc.

Butcher, S., 1993. Brooches, in M.J. Darling and D. Gurney, *Caister-on-Sea. Excavations by Charles Green, 1951–55*, 72–6, Norwich E. Anglian Archaeol. 60

Buxton, K., Howard-Davis, C., Huntley, J., 2000. Phase 1; the establishment of the Roman fort and settlement; Phase 2: renewal of the fort and rearrangement of the extramural area; Phase 3: demolition and rebuilding; Phase 4: the military fabricia and extramural annex, in K. Buxton and C. Howard-Davis (eds), *Bremetenacum: excavations at Roman Ribchester 1980, 1989–1990*, 25–49, 51–75, 77–101, 103–26, Lancaster, Lancaster Imprints Ser. 9

Campbell, G., 2000a. Plant utilisation: the evidence from charred plant remains, in Cunliffe 2000, 45–59

Campbell, G., 2000b. Charred plant remains, in Cunliffe and Poole 2000, 193–4

Campbell, G., 2000c. Charred plant remains, in Cunliffe and Poole 2000, 86–90

Carruthers, W J., 1989. The carbonised plant remains, in P.J. Fasham, D.E. Farwell and R.J.B Whinney, *The Archaeological Site at Easton Lane, Winchester*, 131–4, Winchester, Hampshire Fld Club Archaeol. Soc. Monog. 6

Carruthers, W. J., 1992. The carbonised and mineralised plant remains, in Bellamy 1992, 36–40

Carruthers W.J., 1995. Plant remains, in P.J. Fasham and G. Keevil, *Brighton Hill South (Hatch Warren)*, Salisbury, Wessex Archaeol. Rep. 7

Clarke, H.H., 1971. The plant remains: analysis of vegetable matter from the corn drier, in P.J. Fowler and C.V. Walthew, Archaeology and the M5: 1st report, 1969. *Trans. Bristol Gloucestershire Archaeol. Soc.* 90, 22–63

Clark, K.M., 1994. *Palaeopathology in Archaeological Animal Bone Assemblages: a new approach*, unpubl. PhD thesis, Univ. Southampton

Clark, K.M., 1995. The later prehistoric and proto-historic dog: the emergence of canine diversity, *Archaeozoologia* 7(2), 2–24

Cleal, R.M.J, Walker, K.E. and Montague, R., 1995. *Stonehenge in its Landscape: twentieth century excavations*, London, English Heritage Archaeol. Rep. 10

Cleal, R.M.J., Allen, M.J. and Newman, C., 2004. An archaeological and environmental study of the Neolithic and later prehistoric landscape of the Avon valley and Durrington Walls environs, *Wiltshire Archaeol. Natur. Hist. Mag.* 97, 218–48

Coe, D., Jenkins, V., and Richards, J., 1991. Cleveland Farm, Ashton Keynes: second interim report, investigations May–August 1989, *Wiltshire Archaeol. Natur. Hist. Mag.* 84, 40–50

Coles, J. and Minnitt, S., 1995. *'Industrious and Fairly Civilized' the Glastonbury Lake Village,* Taunton, Somerset Levels Project/Somerset Co. Counc. Mus. Service

Collingwood, R.G. and Myres, J.N.L., 1936. *Roman Britain and the English Settlements*, Oxford, Clarendon Press

Condron, F., 1995. When is a town not a town? Small towns on the Nene and Welland in their context, in A.E. Brown (ed.), *Roman Small Towns in Eastern England and Beyond,* 103–18, Oxford, Oxbow Monog. 52

Cool, H.E.M. and Price, J., 1994. R*oman Vessel Glass from Excavations in Colchester, 1971–85*. Colchester, Colchester Archaeol. Rep. 8

Coy, J., 1982. The animal bones, in C. Gingell, Excavation of an Iron Age enclosure at Ground-well Farm, Blunsdon St. Andrew, 1976–7, *Wiltshire Archaeol. Natur. Hist. Mag.* 76. 68–72

Coy, J., 1987. Animal bones, in P.J. Fasham, *A 'Banjo' Enclosure in Micheldever Wood, Hampshire (MARC3 Site R27)*, 45–84, Winchester, Hampshire Fld Club Archaeol. Soc. Monog. 5

Crawford, O.G.S. and Keiller, A., 1928. *Wessex From the Air*, Oxford, Clarendon Press

Crummy, N., 1983. *The Roman Small Finds from Excavations in Colchester 1971–9*, Colchester, Colchester Archaeol. Rep. 2

Cunliffe, B., 1973. Syntheses of the Iron Age and Romano-British periods, in E. Crittal (ed.), *Victoria County History of Wiltshire Vol. 1, part 2*, 408–67, London, Oxford University Press

Cunliffe, B., 1975. *Excavations at Portchester Castle* Vol. 1, *Roman*, London. Rep. Res. Comm. Soc. Antiq. London 32

Cunliffe, B., 1984. *Danebury: An Iron Age Hillfort in Hampshire. Volume 2, The Excavations 1969–1978: The Finds*, London, Counc. Brit. Archaeol. Res. Rep. 52

Cunliffe, B. 1992. Pits, preconceptions and propitiation in the British Iron Age. *Oxford J. Archaeol.* 11(1), 69–83

Cunliffe, B., 1995. *Danebury An Iron Age Hillfort in Hampshire, Volume 6, A Hillfort Community in Perspective*, London, Counc. Brit. Archaeol. Res. Rep., 102

Cunliffe, B., 2000, *The Danebury Environs Programme: The Prehistory of a Wessex Landscape, Volume 1 Introduction*, Oxford, English Heritage/Oxford Univ. Comm. Archaeol. Monog. 48

Cunliffe, B., 2005. *Iron Age Communities in Britain*, 4th edn, London & New York, Routledge

Cunliffe, B. and Poole, C., 1991. *Danebury An Iron Age Hillfort in Hampshire, Volume 5, The Excavations 1979–1988: The Finds*, London, Counc, Brit. Archaeol. Res. Rep. 73

Cunliffe, B. and Poole, C., 2000. *The Danebury Environs Programme: The Prehistory of a Wessex Landscape, Volume 2*, Oxford, English Heritage/ Oxford Univ. Comm. Archaeol. Monog. 49

Cunnington, B.H. and Cunnington, M.E., 1913. Casterley Camp excavation, *Wiltshire Archaeol. Natur. Hist. Mag.* 38, 53–105

Cunnington, M.E., 1917. Lidbury Camp, *Wiltshire Archaeol. Natur. Hist. Mag.* 40, 12–36

Cunnington, M.E., 1923. *The Early Iron Age Inhabited Site at All Canning's Cross Farm, Wiltshire*, Devizes, Simpson

Cunnington, M.E., 1930. Romano-British Wiltshire, *Wiltshire Archaeol. Natur. Hist. Mag.* 45, 166–216

Cunnington, M.E., 1932. The demolition of Chisenbury Trendle, *Wiltshire Archaeol. Natur. Hist. Mag.* 46, 1–3

Curtis, L.F., Courtney, F.M. and Trudgill, S., 1976. *Soils in the British Isles*, London, Longman

Dark, K. and Dark, P., 1997. *The Landscape of Roman Britain*, Stroud, Sutton

Darling, M.J., 1985. The Roman pottery, in H.R. Hurst, *Kingsholm, Gloucester*, Gloucester, Gloucester Archaeol. Rep. 1, 55–93

Davis, S.J.M., 1987. *The Archaeology of Animals*, London, Batsford

Davies, S.M., 1981. Excavations at Old Down Farm, Andover, Part II: Prehistoric and Roman, *Proc. Hampshire Fld Club Archaeol. Soc.* 37, 81–163

Davies, S.M., 1990. Pottery, in P. Rahtz, Bower Chalke 1959: excavations at Great Ditch Banks and Middle Chase Ditch, *Wiltshire Archaeol. Natur. Hist. Mag.* 83, 30–7

Dobney K.M., Jaques S.D. and Irving B.G., 1996. *Of Butchers and Breeds. Report on Vertebrate Remains from Various Sites in the City of Lincoln*, Lincoln, City of Lincoln Archaeol.

Driesch, A. von den. 1976. *A Guide to the Measurement of Animal Bones from Archaeological Sites*, Peabody Museum Bulletin 1

Driesch A. von den and Boessneck, J., 1974 Kritische Anmerkungen zur Widerristhöhenberechnung aus Längenmaßen vor- und frühgeschichtlicher Tierknochen, S*äugetierkundliche Mitteilungen* 4, 325–48

Ecclestone, M., Gardner, K. S., Holbrook, N. and Smith, A. (eds), 2003. *The Land of the Dobunni,* King's Lynn, Heritage Publications

Ede, J., 1993. Carbonised seed remains, in Graham and Newman 1993, 42–4

Ede, J., 2001. Charred plant remains, in C.J. Ellis and M. Rawlings, Excavations at Balksbury Camp, Andover 1995–97, *Proc. Hampshire Fld Club Archaeol. Soc.* 56, 72–6

Egerton, J., 1996. Animal bones, in Rawlings and Fitzpatrick 1996, 35–6

Ellis, P., 1984. *Catsgore 1979. Further Excavation of the Romano-British Village*, Bristol Gloucester, Western Archaeol. Trust Excav. Monog. 7

Entwistle, R., Fulford, M., and Raymond, F., 1993. *Salisbury Plain Project: 1992–3 Interim Report*, Reading, Univ. Reading

Entwistle, R., Fulford, M., and Raymond, F., 1994. *Salisbury Plain Project: 1993–4 Interim Report*, Reading, Univ. Reading

Entwistle, R., 1994. The environmental setting of the linear ditches system, in Bradley *et al.* 1994, 101–21

Esmonde Cleary, A.S., 1989. *The Ending of Roman Britain*. London: Routledge

Evans, D.M., 1994. Preface: conservation issues in the archaeology of Salisbury Plain, in Bradley *et al.* 1994, 1–2

Evans, J.G., 1984. Stonehenge – the environment in the Late Neolithic and Early Bronze Age and a Beaker burial. *Wiltshire Archaeol. Natur. Hist. Mag.* 78, 7–30

Evans, J.G. and Hewitt, T., 1991. Land snail analysis, in Cunliffe and Poole 1991, 432–9

Evans, J.G., 1971. Durrington Walls: the pre-henge environment, in G.J. Wainwright and I.H. Longworth, *Durrington Walls: Excavations 1966–68*, 329–37, London, Rep. Res. Comm. Soc. Antiq. London 27

Evans, J.G. and Jones, H., 1979. The land Mollusca, in G.J. Wainwright, *Mount Pleasant, Dorset: Excavations 1970–1971*, 190–213, London, Rep. Res. Comm. Soc. Antiq. 37

Ford, S., 1987. *East Berkshire Archaeological Survey*, Reading, Dept Highways Planning, Berkshire Co. Counc. Occas. Pap. 1

Ford, S., Bowden, M., Mees, G., and Gaffney, V., 1988. The date of the 'Celtic' field systems on the Berkshire Downs, *Britannia* 19, 401–4

Fowler, P., 1981. Wildscape to landscape: 'enclosure' in prehistoric Britain, in R. Mercer (ed.), *Farming Practice in British Prehistory*, 9–54, Edinburgh, Univ. Press

Fowler, P.J. and Evans, J.G., 1967. Plough-marks, lynchets and early fields, *Antiquity* 61, 289–301

Fowler, P.J., 2000. *Landscape Plotted and Pieced. Landscape History and Local Archaeology in Fyfield and Overton, Wiltshire*, London, Rep. Res. Comm. Soc. Antiq. London 64

Fremersdorf, F., 1961, *Römisches Geformtes Glas in Köln,* Die Denkmaler des römischen Koln 6

Frere, S.S., 1999. *Britannia: a history of Roman Britain*, London, Routledge & Kegan Paul

Fulford, M., 1975a. *New Forest Roman Pottery*, Oxford, Brit. Archaeol. Rep. 17

Fulford, M., 1975b. The pottery, in Cunliffe 1975, 270–367

Fulford, M., 1989. The economy of Roman Britain, in Todd 1989, 175–201

Fulford, M., 1992. Iron Age to Roman: a period of radical change on the gravels, in Fulford and Nichols 1992, 23–38

Fulford, M., 2001. Links with the past: pervasive 'ritual' behaviour in Roman Britain, *Britannia* 32, 199–218

Fulford, M., 2003. The canton of the *Dobunni*, in Ecclestone *et al.* 2003, 17–23

Fulford, M., 2004. Economic structures, in Todd 2004, 309–26

Fulford, M. and Nichols, E. (eds), 1992. *Developing Landscapes of Lowland Britain. The Archaeology of the British Gravels: a review*, London, Soc. Antiq. London Occas. Pap. 14

Gaffney V. and Tingle, M., 1989. *The Maddle Farm Project: an integrated survey of Prehistoric and Roman landscapes on the Berkshire Downs*, Oxford, Brit. Archaeol. Rep. 200

Gale, R., 1994. Charcoal identification, in Bradley *et al.* 1994, 119

Gebbels, A., 1977, The animal bones, in M. Bell, *Excavations at Bishopstone, Sussex*, 217, Sussex Archaeol. Collect. 115

Getty, R. 1975. *Sisson and Grossman's 'The Anatomy of the Domestic Animals'*, Philadelphia, W.B. Saunders

Gillam, J.P., 1976. Coarse fumed ware in northern Britain, *Glasgow Archaeol. J.* 4, 57–80

Gingell, C.J., and Morris, E.L., 2000. Pottery, in Lawson 2000, 136–77

Graham, A. and Newman, C., 1993. Recent excavations of Iron Age and Romano-British enclosures in the Avon Valley, *Wiltshire Archaeol. Natur. Hist. Mag.* 86, 8–57

Grant, A., 1978, Animal bones, in R. Bradley, Rescue excavation in Dorchester-on-Thames, *Oxoniensia* 43, 32–6

Grant, A., 1982. The use of tooth wear as a guide to the age of domestic ungulates, in R. Wilson, C. Grigson and S. Payne (eds), *Ageing and Sexing Animal Bones from Archaeological Sites*, 91–108, Oxford, Brit. Archaeol. Rep. 109

Grant, A., 1984a, The animal husbandry, in Cunliffe 1984, 496–548

Grant, A., 1984b. Animal husbandry in Wessex and the Thames Valley, in B. Cunliffe and D. Miles (eds) *Aspects of the Iron Age in Central Southern Britain*, 102–19, Oxford, Univ. Comm. Archaeol. Monog. 2

Grant, A., 1987. Some observations on butchery in England from the Iron Age to the Medieval period, *Anthropozoologia* 1, 53–8

Grant, A. 1991. Animal husbandry, in B.W. Cunliffe and C. Poole, *Danebury: an Iron Age Hillfort in Hampshire; Vol 5. The Excavations 1979-1985: The Finds*, York, Counc. Brit. Archaeol. Res. Rep. 73, 447–87

Gray, H. St. George, 1917. Objects of baked clay, in A. Bulleid, and H. St. George Gray 1917, 558–81

Green F.J., 1981. The botanical remains, in Davies 1981, 94–5, 96, 111, 118, 131–2, 153–6, 160–1

Green, G.W., 1992. *British Regional Geology: Bristol and Gloucester Region*. London: HMSO

Greig J., 1991. The British Isles, in W. van Zeist, K. Wasylikowa and K-E. Behre (eds), *Progress in Old World Palaeoethnobotany*, 229–334, Rotterdam, Balkema

Grigson, C., 1974. The craniology and relationships of four species of *Bos*. 1. Basic craniology: *Bos taurus* L. and its absolute size, *J. Archaeol. Sci.* 1, 353–79

Grigson, C., 1976. The craniology and relationships of four species of *Bos*. 3. Basic craniology: *Bos taurus* L. sagittal profiles and other non-measurable characters, *J. Archaeol. Sci.* 3, 115–36

Grigson, C., 1982. Sex and age determination of some bones and teeth of domestic cattle: a review of the literature, in R. Wilson, C. Grigson and S. Payne (eds), *Ageing and Sexing Animal Bones from Archaeological Sites*, 7–23, Oxford, Brit. Archaeol. Rep. 109

Grime, J.P., Hodgson, J.G. and Hunt, R., 1988. *Comparative Plant Ecology: a functional approach to common British species*, London, Unwin Hyman

Grinsell, L.V., 1957. Archaeological gazetteer, in *Victoria County History of Wiltshire Vol. 1, part 1*, 21–272, London, Oxford Univ. Press

Guiraud, H., 1989. Bagues et anneaux à l'époque Romaine en Gaule, *Gallia* 46, 173–211

Hall, A.R. and Kenward H.K., 1990. *Environmental Evidence from the Colonia: General Accident and Rougier Street,* The Archaeology of York 14(6), 289–434 and fiche 1–9, London, Counc. Brit. Archaeol.

Hall, D. and Coles, J., 1994. *Fenland Survey: an essay in landscape and persistence*. London, English Heritage Archaeol. Rep. 1

Halstead, P., 1985. A study of mandibular teeth from Romano-British contexts at Maxey, in F. Pryor, C. French, D. Crowther, D. Gurney, G. Simpson and M. Taylor, *Archaeology and Environment in the Lower Welland Valley, Vol 1*, 219–24, Cambridge, E. Anglian Archaeol. 27

Hambleton E. and Maltby, M., 2004. *The Animal Bones from Battlesbury Bowl*, Salisbury, Wessex Archaeol. unpubl. rep.

Hamilton, J., 2000a. Animal husbandry: the evidence from the animal bones, in Cunliffe 2000, 59–76

Hamilton, J., 2000b. The animal bones, in Cunliffe and Poole 2000, 81–6

Hamilton, J., 2000c. The animal bones, in Cunliffe and Poole 2000, 101–16

Hamilton, J., 2000d. The animal bone, in Cunliffe and Poole 2000, 131–46

Hamilton-Dyer, S., 1996. Animal bone, in J. McKinley and M. Heaton, A Romano-British farmstead and associated burials at Maddington Farm, Shrewton. *Wiltshire Archaeol. Natur. Hist. Mag.* 89, 63–5

Hamilton-Dyer, S., 1997. The animal bones, in M. Fulford, S. Rippon, S. Ford, J. Timby and B. Williams, Silchester: excavations at the north gate, on the north walls and in the northern suburbs 1988 and 1991–3, *Britannia* 28, 131–5

Harcourt, R.A., 1979. The animal bones, in Wainwright 1979, 150–60

Harden, D.B., 1987. *Glass of the Caesars*, Milan, Olivetti

Harding, P., 1992. The flint, in C. Gingell, *The Marlborough Downs: a later Bronze Age landscape and its origins*, 123–33, Devizes, Wiltshire Archaeol. Natur. Hist. Soc. Monog. 1

Härke, H. and Entwistle, R., 2002. An Anglo-Saxon quadruple weapon-burial at Tidworth: a battle-site burial on Salisbury Plain, *Proc. Hampshire Fld Club Archaeol. Soc.* 57, 38–52

Hawkes, C.F.C., 1939. The excavations at Quarley Hill, 1938, *Proc. Hampshire Fld Club Archaeol. Soc.* 14, 136–94

Hawkes, C.F.C., and Hull, M.R., 1947. *Camulodunum: First report on the Excavations at Colchester 1930–39*, London, Rep. Res. Comm. Soc. Antiq. London 14

Hawkes, J.W., 1985. The pottery, in P.J. Fasham, *The Prehistoric Settlement at Winnall Down, Winchester, Winchester*, Hampshire Fld Club Archaeol. Soc. Monog. 2, 57–76

Hawkes, S.C., 1994. Longbridge Deverill Cow Down, Wiltshire, House 3: a major roundhouse of the Early Iron Age, *Oxford J. Archaeol.* 13, 49–70

Hazelgrove, C., Millett, M. and Smith, I. (eds), 1985. *Archaeology from the Ploughsoil*, Sheffield: Univ. Sheffield

Herne, A., 1991. The flint assemblage, in I. Longworth, A. Herne, G. Varndell and S. Needham, *Excavations at Grimes Graves, Norfolk 1972–1976. Fascicule 3: Bronze Age flint, chalk and metal working*, 21–93, London, Brit. Mus.

Hill, J.D., 1992. Can we recognise a different European past? A contrastive archaeology of later prehistoric settlements in southern England, *J. European Archaeol.* 1, 57–75

Hill, J. D., 1995. *Ritual and Rubbish in the Iron Age of Wessex; A Study on the Formation of a Specific Archaeological Record*, Oxford, Brit. Archaeol. Rep. 242

Hillman, G.C., 1981. Reconstructing crop husbandry practices from charred remains of crops, in R.J. Mercer, (ed.), *Farming Practice in British Prehistory*, 123–62, Edinburgh, Univ. Press

Hillman G., 1982. Evidence for spelting malt at Roman Catsgore, in Leech 1981, 137–40

Hillman, G., 1984. Interpretation of archaeological plant remains: the application of ethnographic models from Turkey, in W. van Zeist and W.A. Casparie (eds), *Plants and Ancient man: studies in the palaeoethnobotany*, 1–42, Rotterdam, Balkema

Hillson, S.W., 1979. Diet and dental disease, *World Archaeol.* 2(2), 147–162

Hinchliffe, J, and Schadla-Hall, R.T. (eds), 1980. *The Past under the Plough*, London, English Heritage

Hingley, R., 1989. *Rural Settlement in Roman Britain*, London, Seaby

Hinton, P., 1999. Charred plant remains, in McKinley 1999, 27–9

Hodder, I. R. and Millett, M., 1980. Romano-British villas and towns: a systematic analysis, *World Archaeol.* 12(1), 69–76

Hodgson, J.M. (ed.), 1976. *Soil Survey Field Handbook*, Harpenden, Soil Survey Technical Monog 5

Hopkins, R.W., 1999, *Savernake Ware: a reassessment of the evidence*, unpubl. dissert, Univ. Bristol

Hornsey, I., 2003. *A History of Beer and Brewing*. London, Roy Soc.Chemistry

Huidekoper, R.S., 1903. *Age of the Domestic Animals, Being a Complete Treatise on the Dentition of the Horse, Ox, Sheep, Hog, and Dog and on the Various Other Means of Determining the Age of these Animals*, Chicago, Alexander Eger

Humphrey, J. and Young, R., 1999, Flint use in later Bronze Age and Iron Age England – still a fiction?, *Lithics* 20, 57–61

Jackson, J.W., 1923. Notes on animal remains found at All Cannings Cross, Wiltshire, in Cunnington 1923, 43–50

Jones, G.E.M., 1984. Interpretation of plant remains: ethnographic models from Greece, in W. van Zeist, and W.A. Casparie, (eds), *Plants and Ancient Man, studies in palaeoethnobotany*, 43–61, Rotterdam, Balkema

Jones, G.E.M., 1987a. A statistical approach to the archaeological identification of crop processing, *J. Archaeol. Sci.* 14, 311–23

Jones, G.E.M., 1987b. The carbonised grain, in J.D. Hurst and J.S. Wacher, A multi-period site at Poxwell, Dorset, *Dorset Natur. Hist. Archaeol. Soc.* 108, 63–8

Jones M.K., 1975. Seed report, in M. Parrington and C. Balkwill, Excavations at Broad Street, Abingdon, *Oxoniensia* 40, 5–58

Jones M.K., 1979. Plant remains from dry bulk samples, in Lambrick and Robinson 1979, 79–81

Jones, M.K., 1981. The development of crop husbandry, in M.K. Jones, and G. Dimbleby (eds), *The Environment of Man, the Iron Age to the Anglo-Saxon Period*, 95–127, Oxford, Brit. Archaeol. Rep. 87

Jones, M.K., 1987. Carbonised grain, in D. Mynard (ed.), *Roman Milton Keynes: excavations and field-work 1971–82*, 192–3, Aylesbury, Buckinghamshire Archaeol. Soc. Monog. 1

Jones, M.K., 1988. The arable field: a botanical battleground, in M. Jones (ed.), *Archaeology and the Flora of the British Isles*, 86–91, Oxford, Oxford Univ. Comm. Archaeol.

Jones, M.K., 1989. Agriculture in Roman Britain: the dynamics of change, in Todd 1989, 127–34

Jope, M. and Cunliffe, B., 1984. Other objects of copper alloy, in Cunliffe 1984, 340–6

Kennett, D.H., 1969. Late Roman bronze vessel hoards in Britain, *Jahrbuch des Römisch-Germanischen Zentralmuseum, Mainz* 16, 123–48

Kerney, M.P. 1963. Late-glacial deposits on the Chalk of south-east England B246, 203–54

Kerney, M.P. 1976. *Atlas of the Non-marine Mollusca of the British Isles*. Monks Wood, Inst. Terrestrial Ecol.

Kerney, M.P., 1977. A proposed zonation scheme for Late-glacial and Postglacial deposits using land Mollusca, *J. Archaeol. Sci.* 4, 387–90

Kerney, M.P., 1999. *Atlas of the Land and Freshwater Molluscs of Britain and Ireland*, Colchester, Harley Books

King, A., 1991. Food production and consumption – meat, in R.F.J. Jones (ed.), *Roman Britain: Recent Trends*, 5–20, Chichester, Wiley

King, A., 2004. Rural settlement in southern Britain: a regional survey, in Todd 2004, 349–70

King, C., 2000. The coins, in Cunliffe and Poole 2000, 115–16

Knight, S., 2003. The importance of being processed: butchery patterns from Danebury, in J. Humphrey (ed.), *Re-searching the Iron Age*, 25–34, Leicester, Univ. Press

Lambrick, G. and Robinson, M., 1979. *Iron Age and Roman Riverside Settlements at Farmoor, Oxfordshire*, London, Counc. Brit. Archaeol. Res. Rep. 32

Lawson, A.J., 1976, Shale and jet objects from Silchester, *Archaeologia* 105, 241–76

Lawson, A.J., 2000, *Potterne 1982–5 Animal Husbandry in Later Prehistoric Wiltshire*, Salisbury, Wessex Archaeol. Rep. 17

Leech, R., 1982. *Excavations at Catsgore 1970–1973: A Romano-British Village*, Bristol, Western Archaeol. Trust Excav. Monog. 2

Levine, M., 1982. The use of crown height measurements and eruption-wear sequences to age horse teeth, in R. Wilson, C. Grigson and S. Payne (eds), *Ageing and Sexing Animal Bones from Archaeological Sites*, 223–50, Oxford, Brit. Archaeol. Rep. 109

Light, A., Schofield, A.J. and Shennan. S.J., 1994. The Middle Avon Valley Survey: a study in settlement history, *Proc. Hampshire Fld Club Archaeol. Soc.* 50, 43–101

Lyman, R.L., 1994. *Vertebrate Taphonomy*, Cambridge: Univ. Press

Lyne, M. and Jefferies, R.S., 1979. *The Alice Holt-Farnham Roman Pottery Industry*, London, Counc. Brit. Archaeol. Res. Rep. 30

Maltby, M., 1981a. Animal bones, in Davies 1981, 147–53

Maltby, M., 1981b. *The Animal Bones from Winnall Down (M3 Motorway Archaeology Rescue Committee Site R17), Hampshire*, AML Report 3453

Maltby, M., 1981c. Iron Age, Romano-British and Anglo-Saxon animal husbandry: a review of the faunal evidence, in M. Jones and G. Dimbleby (eds), *The Environment of Man: the Iron Age to the Anglo-Saxon Period*, 155–204, Oxford, Brit. Archaeol. Rep. 87

Maltby, M., 1984a. The animal bones, in M. Fulford, *Silchester Defences*, 199–212, London, Britannia Monog. 5

Maltby, M., 1984b. The animal bones from the Iron Age settlement at Chilbolton Down, in P.D. Catherall, M. Barnett and H. MacClean (eds), *The Southern Feeder: the archaeology of a gas pipeline*, 109–13, London, British Gas

Maltby, J.M., 1985. The animal bones, in P.J. Fasham, *The Prehistoric Settlement at Winnall Down, Winchester*, 97–138, Winchester, Hampshire Fld Club Archaeol. Soc. Monog. 2

Maltby, J.M., 1987a. *The Animal Bones from the Excavations at Owslebury, Hants. An Iron Age and Early Romano-British Settlement*, AML Rep. 6/67

Maltby, J.M., 1987b. *The Animal Bones from Brighton Hill South (Trenches B, C and K), Farleigh Wallop, Hampshire*, AML Rep. 155/87

Maltby, M., (nd). *The Animal Bones from the 1973 Excavations at Balksbury, Hampshire*, draft AML Rep.

Maltby, M., 1989. Urban-rural variations in the butchering of cattle in Romano-British Hampshire, in D. Serjeantson and T. Waldron (eds), *Diet and Crafts in Towns: the evidence of animal remains from the Roman to the post-medieval periods*, 75–106, Oxford: Brit. Archaeol. Rep. 199

Maltby, M., 1994a. Animal exploitation in Iron Age Wessex, in A. Fitzpatrick and E. Morris (eds), *The Iron Age in Wessex: recent work,* 42–6. Salisbury, Association Française d'Ètude de l'Age du Fer/Trust for Wessex Archaeology

Manning, W.H., 1985. *Catalogue of the Romano-British Iron Tools, Fittings and Weapons in the British Museum*, London, Brit. Mus.

Marsh, G.D., 1978. Early second century fine wares in the London area, in P. Arthur and G.D. Marsh (eds), *Early Fine Wares in Roman Britain*, 119–224, Oxford, Brit. Archaeol. Rep. 57

Mays, S., 1993. Infanticide in Roman Britain, *Antiquity* 67, 883–8

McKinley, J.I., 1989. *Human Bone from Chisenbury Warren*, Salisbury, unpubl. Wessex Archaeol. rep.

McKinley, J.I., 1999. Further excavations of an Iron Age and Romano-British enclosed settlement at Figheldean, near Netheravon, *Wiltshire. Archaeol. Natur. Hist. Mag.* 92, 7–32

McKinley, J.I., 2004. Compiling a skeletal inventory: disarticulated and co-mingled remains, in M. Brickley and J.I. McKinley (eds), *Guidelines to the Standards for Recording Human Remains*, 13–16, Reading, Brit. Assoc. Biological Anthrop. Osteoarchaeol./Inst. Fld Archaeol. Pap. 7

McOmish, D., 1996. East Chisenbury: ritual and rubbish at the British Bronze Age–Iron Age transition, *Antiquity* 70, 68–76

McOmish, D., Field, D., and Brown, G., 2002. *The Field Archaeology of the Salisbury Plain Training Area*. Swindon, English Heritage

Megaw, J.V.S., 1967. Notes on Iron Age and Neolithic material from Sidbury Camp, *Wiltshire Archaeol. Natur. Hist. Mag.* 62, 115–17

Melville, R.V. and Freshney, E.C., 1982. *British Regional Geology: The Hampshire Basin and Adjoining Areas.* London, HMSO

Mepham, L.N., 1993. The pottery, in Graham and Newman 1993, 8–57

Mepham, L.N., 1998. The pottery, in A.P. Fitzpatrick and A.D. Crockett, A Romano-British settlement and inhumation cemetery at Eyewell Farm, Chilmark, *Wiltshire Archaeol. Natur. Hist. Mag.* 91, 22–3

Mepham, L.N., 1999. Pottery, in McKinley 1999, 21–3

Miles, D., 1976. Two Bronze bowls from Sutton Courtenay, *Oxoniensia* 41, 70–6

Miles, D., 1978. The Roman pottery, in Parrington 1978, 74–8

Millard, J.I., 1996, The other pottery, in Rawlings and Fitzpatrick 1996, 27–34

Millett, M., 1990. *The Romanization of Britain. An Essay in Archaeological Interpretation*, Cambridge; Univ. Press

Monk, M.A., 1985. The plant economy, in P. Fasham, *The Prehistoric Settlement at Winnall Down, Winchester*, 112–17, Winchester, Hampshire Fld Club Archaeol. Soc. Monog. 2

Monk, M.A., 1987. Archaeobotanical studies at Poundbury, in C.J. Green, *Excavations at Poundbury, Dorset 1966–82. Vol. 1: the settlements*, Dorchester, 132–7 and fiches 5 and 6, Dorset Natur. Hist. Archaeol. Soc. Monog. 7

Morris, E.L., 1991. The pottery, in Bellamy 1991, 17–28

Morris, E.L., 1995. Pottery production and resource locations: an examination of the Danebury collection, in Cunliffe 1995, 239–45

Morris, E.L., 2000. Fabrics, in Lawson 2000, 140–9

Moulins, D. de, 1995. Charred plant remains, in G.J. Wainwright and S.M. Davies, *Balksbury Camp, Hampshire: Excavations 1973 and 1981*, 87–92, London, English Heritage Archaeol. Rep. 4

Noddle, B., 1984. A comparison of the bones of cattle, sheep, and pigs from ten Iron Age and Romano-British sites, in C. Grigson and J. Clutton-Brock (eds), *Animals and Archaeology, Volume 4; Husbandry in Europe*, 105–23, Oxford: Brit. Archaeol. Rep. S227

O'Connor, T.P., 1988. *Bones from the General Accident Site, Tanner Row*, Archaeol. York 15/2, London: Counc. Brit. Archaeol.

Palmer, R., 1984. *Danebury: An Iron Age Hillfort in Hampshire, An Aerial Photographic Interpretation of its Environs*, London, RCHM(E) Supp. Ser. 6

Parker, A.J., 1988. The birds of Roman Britain, *Oxford J. Archaeol.* 7, 197–226

Parrington, M., 1978. *The Excavation of an Iron Age Settlement, Bronze Age Ring Ditches and Roman Features at Ashville Trading Estate, Abingdon (Oxfordshire)* 1974–76, London, Counc. Brit. Archaeol. Res. Rep. 28

Payne, S., 1973. Kill-off patterns in sheep and goats: the mandibles from Asvan Kale, *Anatolian Stud.* 2, 281–303

Payne, A., 2000. Enhancement of the site record by magnetometry, in Cunliffe 2000, 29–34

Peacock, D.P.S., 1977. Pompeian Red Ware, in D.P.S. Peacock (ed.), *Pottery and Early Commerce*, 147–62, London, Academic Press

Pelling, R., 2002. Charred plant remains, in P.M. Booth, J. Evans and J. Hiller, *Excavations in the Extramural Settlement of Roman Alchester, Oxfordshire, 1991*, Oxford, Oxford Archaeol. Monog. 1

Perrin, J. R., 1999. *Roman Pottery from Excavations at and Near to the Roman Small Town of Durobrivae, Water Newton, Cambridgeshire, 1956–58*, Oxford, Oxbow/J. Roman Pot. Stud. 8

Phillips, C.W. (ed.), 1970. *The Fenland in Roman Times*, London, Roy Geog. Soc. Res. Mem. 5

Philpott, R., *Burial Practices in Roman Britain: a survey of grave treatment and furnishing, A.D. 43–410,* Oxford, Brit. Archaeol. Rep. 219

Poole, C., 1984a. Objects of baked clay, in Cunliffe 1984, 398–407

Poole, C., 1984b, The woodlands and their use, in Cunliffe 1984, 481–3

Potter, T. W., 1989. The Roman Fenland: a review of recent work, in Todd 1989, 147–73

Powell, A., 2000. Animal bone, in *Amesbury Phase 1 Housing, Boscombe Down, Wiltshire*, 14–15; 23; 29–31; 41, Salisbury, unpubl. Wessex Archaeol. rep.

Powell, A. and Clark, K.M., n.d. *Exploitation of domestic animals in the Iron Age at Rooksdaown.* Report to CHEE, University of Southampton and Wessex Archaeology (http://www.wac.soton.ac.uk/centres/CAAA/facilities/sites/Rooksdown.htm)

Powell, A.B., Allen, M.J., Chapman, J., Every, R., Gale, R., Harding, P., Knight, S., McKinley, J.I. and Stevens, C., 2005. Excavations along the Old Sarum water pipeline, north of Salisbury, *Wiltshire Archaeol. Natur. Hist. Mag.* 98, 250–80

Price, J., 2000. *Glass in Britain and Ireland AD 350–1100*, London, Brit. Mus. Occas. Pap. 127

Rahtz, P.A., 1963. A Roman villa at Downton, *Wiltshire Archaeol. Natur. Hist. Mag*, 58, 303–41

Rawlings, M. and Fitzpatrick, A.P., 1996. Prehistoric sites and a Romano-British settlement at Butterfield Down, Amesbury, *Wiltshire Archaeol. Natur. Hist. Mag.* 89, 1–72

Raymond, F., 1994. The pottery, in Bradley *et al.* 1994, 69–90

RCHM(E), 1970a. *Historical Monuments in the County of Dorset.* Vol II *iii, South-East*, London, HMSO

RCHM(E), 1970b. *Historical Monuments in the County of Dorset.* Vol III, *Central*, London, HMSO

RCHM(E), 1975. *Historical Monuments in the County of Dorset.* Vol V, *East*, London, HMSO

Reid, C., 1902, *The Geology of the Country around Salisbury*, Mem. Geol. Surv. UK. London, HMSO

Reynolds, P.J., 1979. *Iron Age Farm – The Butser Experiment*, London, Brit. Mus.

Reynolds, P.J., 1981a. Deadstock and livestock, in R. Mercer, (ed.), *Farming Practice in British Prehistory*, 97–122, Edinburgh, Univ. Press

Reynolds, P.J., 1981b. New approaches to familiar problems, in M.K. Jones and G. Dimbleby (eds), *The Environment of Man: the Iron Age to the Anglo-Saxon Period*, 19–49, Oxford, Brit. Archaeol. Rep. 87

Richards, D.J., 1989. Ironwork from the Maddle Farm and Knighton Bushes excavations, in Gaffney and Tingle 1989, 174–6

Richards, J.C., 1990. *The Stonehenge Environs Project*, London, English Heritage Archaeol. Rep. 16

Richardson, K.M., 1951. The excavation of Iron Age villages on Boscome [sic.] Down West, *Wiltshire Archaeol. Natur. Hist. Mag.* 54, 123–68

Rigby, V., 1982. The coarse pottery, in J.S. Wacher and A.D. McWhirr, *Cirencester Excavations 1: Early Roman Occupation at Cirencester*, 153–200, Cirencester, Cirencester Excav. Comm.

Robinson, M., 1984. Landscape and environment of central southern Britain in the Iron Age, in B.W. Cunliffe and D. Miles (eds), *Aspects of the Iron Age in Central Southern Britain*, 1–11, Oxford, Univ. Oxford Comm. Archaeol. Monog. 2

Rogers, B. and Roddham, D., 1991. The excavation at Wellhead, Westbury 1959–66, *Wiltshire Archaeol. Natur. Hist. Mag.* 84, 51–60

Roosens, H., 1962. *Quelques mobiliers funérarires de la fin de l'époque Romaine dans le nord de la France*, Dissertationes Archaeologicae Gandenses 7

Sanders, J., 1979. The Roman pottery, in Lambrick and Robinson 1979, 46–54

Scheuer, L. and Black, S., 2000. *Developmental Juvenile Osteology*, London, Academic Press

Schmid, E., 1972. *Atlas of Animal Bones*, Amsterdam, Elsevier

Schofield, A., 1991, Interpreting artefact scatters: an introduction, in A. Schofield (ed.), *Interpreting Artefact Scatters: contributions to ploughzone archaeology*, Oxford, Oxbow

Schweingruber, F.H., 1978. *Microscopic Wood Anatomy*, Zug, Zurcher AG

Schweingruber, F.H., 1990. *Anatomy of European Woods: an Atlas for the Identification of European Trees, Shrubs and Dwarf Shrubs*, Berne, Paul Haupt

Seager Smith. R.H., 1996. Pottery, in J.I. McKinley and M. Heaton, A Romano-British farmstead and associated burials at Maddington Farm, Shrewton, *Wiltshire Archaeol. Natur. Hist. Mag.* 89, 44–72

Seager Smith, R.H., 2000a. Worked stone, in Lawson 2000, 213–9

Seager Smith, R.H., 2000b. Worked bone and antler, in Lawson 2000, 222–40

Seager Smith, R.H., 2001. The coarse pottery, in A.S. Anderson, J.S. Wacher and A.P. Fitzpatrick, *The Romano-British 'Small Town' at Wanborough, Wiltshire; Excavations 1966–1976*, 232–300, London, Britannia Monog. 19

Seager Smith, R.H. and Davies, S.M., 1993. Roman pottery, in P.J. Woodward, S.M. Davies and A.H. Graham, *Excavations at Greyhound Yard, Dorchester 1981–4,* 202–89, Dorchester, Dorset Natur. Hist. Archaeol. Soc. Monog. 12

Sellwood, L., 1984. Objects of bone and antler, in Cunliffe 1984, 371–95

Sellwood, L., 1991. Objects of bone and antler, in Cunliffe and Poole 1991, 354–68

Serjeantson, D., 1991. 'Rid Grasse of bones': a taphonomic study of the bones from midden deposits at the Neolithic and Bronze Age sites of Runnymede, Surrey, England, *Int. J. Osteoarchaeol* 1, 73–89

Serjeantson, D., in press. Intensification of animal husbandry in the Late Bronze Age? The contribution of sheep and pigs, in C. Haselgrove and R. Pope (eds), *The Earlier Iron Age in Britain and the Near Continent* Oxford, Oxbow

Silver, I.A., 1969. The ageing of domestic animals, in D.R. Brothwell and E.S. Higgs (eds), *Science in Archaeology*, 283–302, London, Thames & Hudson

Shaffrey, R., 2003. The rotary querns from the Society of Antiquaries' excavations at Silchester, 1890–1909, *Britannia* 34, 143–74

Sharma, M.P. and Vandenborn, W.H., 1978. The biology of Canadian weeds, 27. *Avena fatua* L., *Canadian J. Plant Sci.* 58, 141–57

Shennan, S.J., 1981. Settlement history in East Hampshire, in Shennan and Schadla Hall 1981, 106–21

Shennan, S., 1985. *Experiments in the Collection and Analysis of Archaeological Survey Data: the East Hampshire Survey*, Sheffield, Dept Archaeol. Prehist.

Shennan, S.J. and Schadla Hall, R.T., 1981. *The Archaeology of Hampshire, from the Palaeolithic to the Industrial Revolution*, Hampshire Fld Club Archaeol. Soc. Monog. 1

Smith, K., 1977. The excavations at Winklebury Camp, Basingstoke, Hampshire, *Proc. Prehist. Soc.* 42, 31–129

Stace, C., 1997. *New Flora of the British Isles*, 2nd edn, Cambridge, Univ. Press

Stallibrass, S., 1984. The distinction between the effects of small carnivores and humans on post-glacial faunal assemblages. A case study using scavenging of sheep carcasses by foxes, in C. Grigson and J. Clutton-Brock (eds), *Animals and Archaeology, Volume 4; Husbandry in Europe*, 259–69, Oxford. Brit. Archaeol. Rep. S227

Stead, I.M., and Rigby, V., 1989. *Verulamium: the King Harry Lane Site*, London, English Heritage Archaeol. Rep. 12

Stevens, J., 1993. *An Analysis of the Worked Flint from Warren Hill Enclosure, Salisbury Plain, Wiltshire*, unpubl. MA dissert., Univ. Leicester

Stevens, C.J., 2003. An investigation of agricultural consumption and production models for prehistoric and Roman Britain. *Environ. Archaeol.* 8, 61–76

Stewart, J.R., 1992. *The Turdidae of Pin Hole Cave, Derbyshire*, Unpubl. MSc dissert., City of London, N. London & Thames Polytechnics

Straker, V., 1997. Charred plant remains, in R.J.C. Smith, F. Healy, M.J. Allen, E.L. Morris, I. Barnes and P.J. Woodward, *Excavations Along the Route of the Dorchester By-pass 1986–8*, 184–90, Salisbury, Wessex Archaeol. Rep. 11

Sumner-Smith, G., 1966. Observations on epiphyseal fusion of the canine appendicular skeleton, *J. Small Animal Pract.* 7. 303–11

Swain, H., 1988. Pottery survival in the field: some initial results of experiments in frost shattering, *Scot. Archaeol. Rev.* 5, 81–9

Swan, V.G., 1971. The coarse pottery, in G.J. Wainwright, The excavation of Prehistoric and Romano-British settlements near Durrington Walls, Wilts., 1970, *Wiltshire Archaeol. Natur. Hist. Mag.* 66, 100–16

Swan, V.G., 1975. Oare reconsidered and the origins of Savernake ware in Wiltshire, *Britannia* 6, 36–51

Swan, V.G., 1984. *The Pottery Kilns of Roman Britain,* RCHM Supp. Ser. 5

Tate, H., 1991. *Five Thousand Years of Glass*. London, Brit. Mus.

Thomas, C. (ed.), 1966. *Rural Settlement in Roman Britain*, London, Counc. Brit. Archaeol. Res. Rep. 7

Thomas, K.D., 1977. The mollusca from an Iron Age pit at Winklebury, in Smith1997, 70–4

Tingle, C., 1991. *The Vale of White Horse survey: a study of a changing landscape in the clay lowlands of southern Britain from prehistory to the present day*, Oxford, Brit. Archaeol. Rep. 218

Todd, M., 1989. *Research on Roman Britain 1960–89*, London, Britannia Monog. 11

Todd, M., (ed.), 2004. *A Companion to Roman Britain*, Oxford, Blackwell

Veen, M. van der, 1991. Charred grain assemblages from the Roman-Period corn driers in Britain, *Archaeol. J.* 146, 302–29

Veen, M. van der, 1992. *Crop Husbandry Regimes: an archaeobotanical study of farming in northern England 1000 B.C. – A.D. 500*, Sheffield, Sheffield Archaeol. Monog. 3

Wait, G.A., 1985. *Ritual and Religion in Iron Age Britain*, Oxford, Brit. Archaeol. Rep. 149

Wessex Archaeology, 1993. *Mill Street, Wantage, Oxfordshire, Archaeological Site Investigation*, Salisbury, unpubl. rep.

Wessex Archaeology, 1999. *Salisbury Plain Training Area Southern Range Road Stage 1 Archaeology Contract Assessment Report*, Salisbury, unpubl. rep.

Wessex Archaeology, 2006. *Time Team 2000. Beach's Barn, Fittleton, Wiltshire*, Salisbury, unpubl. rep.

Wheeler, R.E.M. and Wheeler, T.V., 1932, *Report on the Excavation of the Prehistoric, Roman and Post-Roman Site in Lydney Park, Gloucestershire*, London, Rep. Res. Comm. Soc. Antiq. London 9

Williams Freeman, J.P., 1927. Notes, *Pap. Proc. Hampshire Fld Club Archaeol. Soc.*9, 388–416

Wilson D.G., 1978. Appendix I: Iron Age and Roman plant remains, in P.J. Drury, *Excavations at Little Waltham 1970–1971*, 142–5, London, Counc. Brit. Archaeol. Res. Rep. 26

Wilson, R., 1978. The animal bones, in Parrington 1978, 110–39

Wilson R., 1985. Degraded bones, feature type and spatial patterning on an Iron Age occupation site in Oxfordshire, England, in N.J.R. Fieller, D.D. Gilbertson and N.G.A. Ralph (eds), *Palaeo-biological Investigations: research design, methods and analysis*, 81–100, Oxford, Brit. Archaeol. Rep. 206

Young, C., 1977. *Oxfordshire Roman Pottery*, Oxford, Brit. Archaeol. Rep. 43

Young, R. and Humphrey, J., 1999. Flint use in England after the Bronze Age: time for a re-evaluation? *Proc. Prehist. Soc.* 65, 231–42

Index

A programme of systematic surface collection and evaluative excavation has provided important new insight into Iron Age and Romano-British settlement and its associated agricultural economy on the chalk lands of the Eastern Range of the Salisbury Plain (Military) Training Area, central southern England. Focusing on two sample areas, amounting to 34 km^2 of the chalk lands between the Avon Valley (Wiltshire) and the ridge east of the Bourne Valley extending into north-west Hampshire, the project included sample excavations on eight Iron Age enclosures, three sets of field systems and, more extensively, on the Iron Age, Romano-British and early Anglo-Saxon settlement at Coombe Down and the Romano-British linear village settlement of Chisenbury Warren.

ISBN 978-1-874350-42-2

9 781874 350422

University of Reading

Wessex Archaeology

Report 20