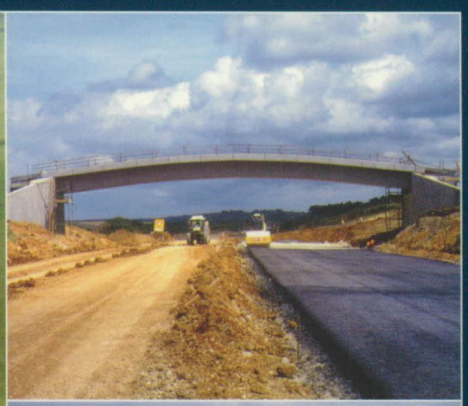
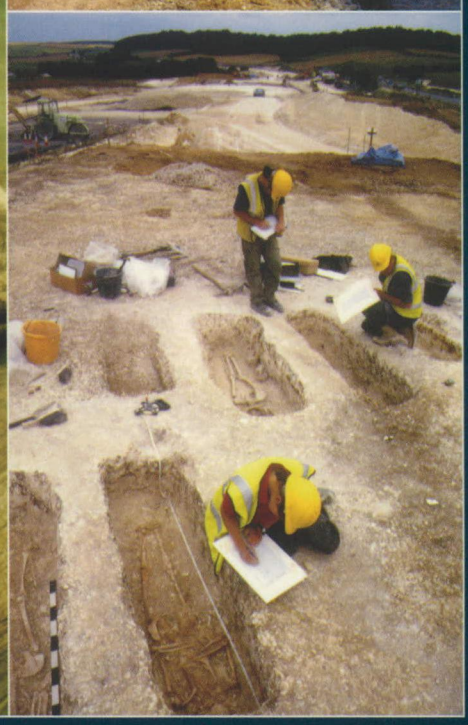
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incorporating excavations at Tolpuddle Ball 1993

Carrie M Hearne & Vaughan Birbeck







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with contributions by:

Denise Allen, Michael J. Allen, S.C. Bean, Peter W. Cox, Jo Draper, C. French, Rowena Gale, Sheila Hamilton-Dyer, P.A. Harding, Pat Hinton, M. Laidlaw, Emma Loader, Julie Lovell, Jacqueline I. McKinley, Lorraine Mepham, Karen Nichols, Paul Pettitt, Robert G. Scaife, Kit Watson, D. Williams, Jessica Winder

Wessex Archaeology Report No. 15

Wessex Archaeology 1999

Published 1999 by the Trust for Wessex Archaeology Ltd
Portway House, Old Sarum Park, Salisbury, England SP4 6EB

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

ISBN 1–874350–30–2
ISSN 0965 5778

Produced by Wessex Archaeology
Printed by Redwood Books Ltd, Trowbridge

Front Cover: (main photograph) Tolpuddle Ball excavation, January 1997; (upper right) road construction, summer 1998; (lower right) Tolpuddle Ball cemetery excavation, July 1998

Back Cover: (upper) Devil's Brook watermeadows, Burleston; (lower) Druce Lane watermeadows, Puddletown

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Acknowledgements

The archaeological project was commissioned on behalf of the Highways Agency by Connect A30/A35 Ltd, a Connect Group company which consists of BICC plc, Philip Holzmann AG and WS Atkins plc. The work was contracted through BBTA Construction Joint Venture which comprises Balfour Beatty Civil Engineering Ltd, Tilbury Douglas Construction Ltd and Deutsche Asphalt GmbH. The Department's Agent for the project was WSP Civils Ltd.

The successful integration of the archaeological and civil engineering projects was due to many individuals within BBTA. Particular thanks are due to John Cope (Project Manager) and Paul Rasmussen (Section Manager). Thanks are also due to Dave Walker (Project Director), Brent Mitchell (Section Manager) and Alan Rosindell (Commercial Manager) and to many other BBTA staff including Paul Axon, Joe Dowling, Claire Gorman, Mike Feasey, Martin Griffiths, Rab Gosbee, Angela La Mura, Mark Phipps, and Barry Ward. Acknowledgement is also due to the following for their support and assistance throughout the project: Clive Park, the Highways Agency's Construction Manager; Paul Luft and Chris Clark of Connect A30/A35 Ltd; Tony Zandona, John Patey and Malcolm Gordon of WSP Civils Ltd.

Wessex Archaeology was one part of an archaeological team whose combined efforts ensured the successful completion of the project. Grateful thanks are due to the monitoring staff for their assistance and advice: the Department's Archaeologist Peter Weddell of Exeter Archaeology (for WSP Civils Ltd); the Project Archaeologist George Lambrick and his deputy Paul Booth of Oxford Archaeological Unit (for Connect A30/A35 Ltd and BBTA Construction Joint Venture). The project was also monitored by Lawrence Keen (County Archaeological Officer) and Steve Wallis (Assistant Archaeologist) for Dorset County Council Environmental Services Directorate, and by Paul Gosling (Inspector of Ancient Monuments) for English Heritage to whom thanks are also due.

The project drew on many staff within Wessex Archaeology. The Project Manager was Carrie Hearne. Particular thanks are due to all the field staff for their conscientiousness and professionalism. The advance fieldwork (1996–7) was implemented by Vaughan Birbeck (Lead Project Officer), supported by Kit Watson (Project Officer – Surveying), Rod Brook, Dominic Barker (Supervisors), Paul Cafe, Steve Legg, Rob Symmons, Gary Wickenden (Site Assistants) and Natasha Hutcheson (Finds Supervisor). The Tolpuddle Ball cemetery excavation (1998) was led by Emma Loader and Jim Stedman supported by Bill Moffat and with the assistance of Nicholas Cooke, Jan Grove, Kate O'Farrell, Theresa Marsh, Darren Miller, John Pouncett, Carolyn Waller, Kit Watson, Dave Webb and Matthew Wright. Thanks are also due to Joanne Best, Angela Brennan, Jim Chapman, Antony Firth, Emily Glass, Emma Kerrod, Paul Pearce and Alex Prior for their help during the cemetery excavation. The watching brief monitors were Vaughan Birbeck, Rod Brook, Richard Connolly, Nicholas Cooke, Bob Davies, Christopher Ellis, Julie Lovell, Dave Murdie, Paul Pearce, John Pouncett, Kevin Ritchie and Jim Stedman. Lorraine Mepham (Finds and Archives Manager) and Mike Allen (Environmental Manager) assisted during all stages of the project and also co-ordinated the various specialists during post-excavation. Technical support was also provided by Sarah Wyles and Hayley Clark (Environmental Technicians). Karen Nichols produced the illustrations. Elaine Wakefield prepared the plates. Carrie Hearne collated and edited the report; Julie Gardiner prepared it for printing. Carrie Hearne would like to thank all those involved in the many stages of fieldwork, post-excavation and publication for their input to the project, including Andrew Lawson (Director) and Sue Davies (Deputy Director) for their support and advice.

Finally, acknowledgement is due to a range of other people who provided many diverse forms of assistance and advice: Mrs V. A. Tory, Mr Drew, Audrey and Derek Wirdnam, Phil and Marion Roberts, the staff of Farwell's Plant Hire, McArdles Ltd and G. Crook and Sons Ltd, Peter Woodward (Dorchester County Museum), Susie White (Department of Archaeology, Liverpool University), Sarah Stanley and Andrew Wilson (Wiltshire Conservation Centre, Salisbury) Sarah Bridges (Dorset County Records Office), Claire Pinder (Dorset County Council), Dr Paul Pettitt and Debra Jenkins (Oxford University Radiocarbon Accelerator Unit) and the Venerable Graham Roblin. Thanks are also due to the following: Paul Higgins of Southern Archaeological Services Ltd for kindly providing access to unpublished information on the Bitterne Road cemetery; Dr Charles French of the University of Cambridge for providing a summary micromorphological description of the Lateglacial palaeosol; Laurence Keen and David Hinton for their helpful comments and advice on the Tolpuddle Ball cemetery report.

Carrie M. Hearne, April 1999

Tolpuddle Ball excavations 1993

Dr D.A. Higgins, formerly of the Archaeological Field Unit, University of Liverpool, wishes to make the following acknowledgement in respect of the 1993 excavations:

'Sincere thanks are due to all those who helped to make the project possible. The work was commissioned by the Highways Agency through their consulting engineers WSP Civils Ltd (formerly Frank Graham Consulting Engineers Ltd.) and carried out by the Field Archaeology Unit at the University of Liverpool on behalf of the Environmental Advisory Unit (later SGS Environment). The excavations were carried out by kind permission of Mrs V. A. Tory and facilitated by many local professionals and amateurs. Amongst these particular thanks must go to John Day, Jo Draper, Maynard Eastwick, Laurence Keen, Frances Radcliffe, Phil Roberts, Marion Roberts, Ken Wheatley and Peter Woodward. Last but by no means least especial thanks must go to all the diggers who worked so hard over four months, often under adverse conditions, to excavate and record the site.'

Prior to responsibility for completing the project being transferred to Wessex Archaeology, finds assessment reports were commissioned by Liverpool University from the following specialists: P. Bellamy (stone objects, ceramic building material, fired clay and daub); Dr K. Clark (animal bone); P.W. Cox (Kimmeridge shale); J.M. Mills (copper alloy and lead objects, bone and antler objects); Dr E. L. Morris (pottery); S. White (human bone); P.J. Woodward (worked flint). Liverpool University had also commissioned final reports on the oyster shells (by Dr J. Winder) and the Roman coins (by Dr S.C. Bean, Liverpool Museum) and these two reports are published essentially as submitted to Wessex Archaeology. Although a small number of inked site and finds drawings and plates had been prepared by Liverpool University they were not used in the production of this report. All illustrations for the Tolpuddle Ball 1993 site were prepared by Karen Nichols of Wessex Archaeology. The stratigraphic analysis, phasing and interpretation of the site were undertaken by Vaughan Birbeck, Wessex Archaeology.

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Abstract

This report provides a full description and interpretation of the archaeological mitigation works undertaken in connection with the construction of the A35 Tolpuddle to Puddletown Bypass, Dorset, a 'Design, Build, Finance and Operate' project (DBFO). The evaluation phase and some of the mitigation works (the excavation of an Iron Age and Roman site near Tolpuddle Ball) had been undertaken previously by the Archaeological Field Unit of Liverpool University in the period 1990 to 1993. The main phase of advance mitigation works was undertaken by Wessex Archaeology between October 1996 and February 1997. A watching brief was carried out between February 1997 and February 1999. This report incorporates the results from the 1993 excavation at Tolpuddle Ball since responsibility for completing the post-excavation of this site was transferred to Wessex Archaeology as part of the DBFO project.

The project has produced an important range of data for an area which has not, until now, yielded many opportunities for archaeological survey and excavation. The route of the bypass provided a 9 km east-west transect on the margins of the chalk uplands of Dorset at their interface with the Piddle valley and the Tertiary deposits of the Hampshire Basin. This is an important and interesting zone for regional studies, particularly for the later prehistoric and Roman periods, since it lies within the hinterland of the regional centre of Dorchester (Durnovaria) and the major industrial source area of Purbeck. The latter supplied salt, ceramics, building stone and stone and shale artefacts throughout the later prehistoric and Roman periods.

The project included the fortuitous discovery of Lateglacial and early Post-glacial deposits at Burleston Down (c. 12,000–8000 BC) which represents the first such recorded sequence for central southern England. The project has also provided important new data concerning Neolithic and Bronze Age activity including the identification of an Early / Middle Bronze Age settlement enclosure at Tolpuddle Ball, (c. 2400–1100 BC). The Late Bronze Age is represented by remains, usually poorly-preserved, from six sites along the route.

The main body of data from the project concerns the Middle / Late Iron Age and Romano-British period and is largely confined to the multi-period site near Tolpuddle Ball. The Middle / Late Iron Age settlement was focused on a rectangular enclosure which was established around 300 BC. The settlement included a large number of pits some of which contained 'special' deposits including the burial of animal heads and carcases (apparently including skinned dogs), neonatal human remains and other groups of objects. The Roman settlement was located in the same area and was occupied throughout the Roman period. The excavated evidence indicates the presence of a substantial Late Roman stone building and the range of activities recorded on the site includes the preparation of leather from sheepskins. Human burials were associated with both the Iron Age and Roman settlement; 26 individuals were recorded, almost half of the group consisting of the burial of neonates. Overall, the settlement appears representative of a small farming community of relatively prosperous standing, at least during the Roman period.

During the late stages of the project (July 1998) a Late Roman and post-Roman inhumation cemetery was discovered during topsoil stripping of an additional construction area. The cemetery lay approximately 100 m west of the Roman settlement at Tolpuddle Ball and was located beside a parish boundary. The excavated area appears to represent the entire cemetery and a total of 50 graves was recorded. Radiocarbon dates indicate that the cemetery continued in use until the late 7th century AD. The cemetery was very compact and orderly and comprised orientated graves in rows aligned north–south. No grave goods were associated with the burials. Coffin nails were also absent although there was probable evidence for the timber coffins in a few cases. The Tolpuddle Ball cemetery is only the second securely-dated post-Roman (British) cemetery so far excavated in Dorset, the other being Ulwell in the Isle of Purbeck. Detailed analysis of the human bone from the cemetery and an extended discussion of the site are included in this report.

Medieval and later deposits from the project are limited but include an unusual early 13th-century agricultural enclosure and midden excavated at West Mead near Bere Regis. A post-medieval road-side burial was also discovered, located on a parish boundary at the site of a former crossroads. The burial was that of a woman aged 40 years or older and is most likely to date to the 16th–18th century.

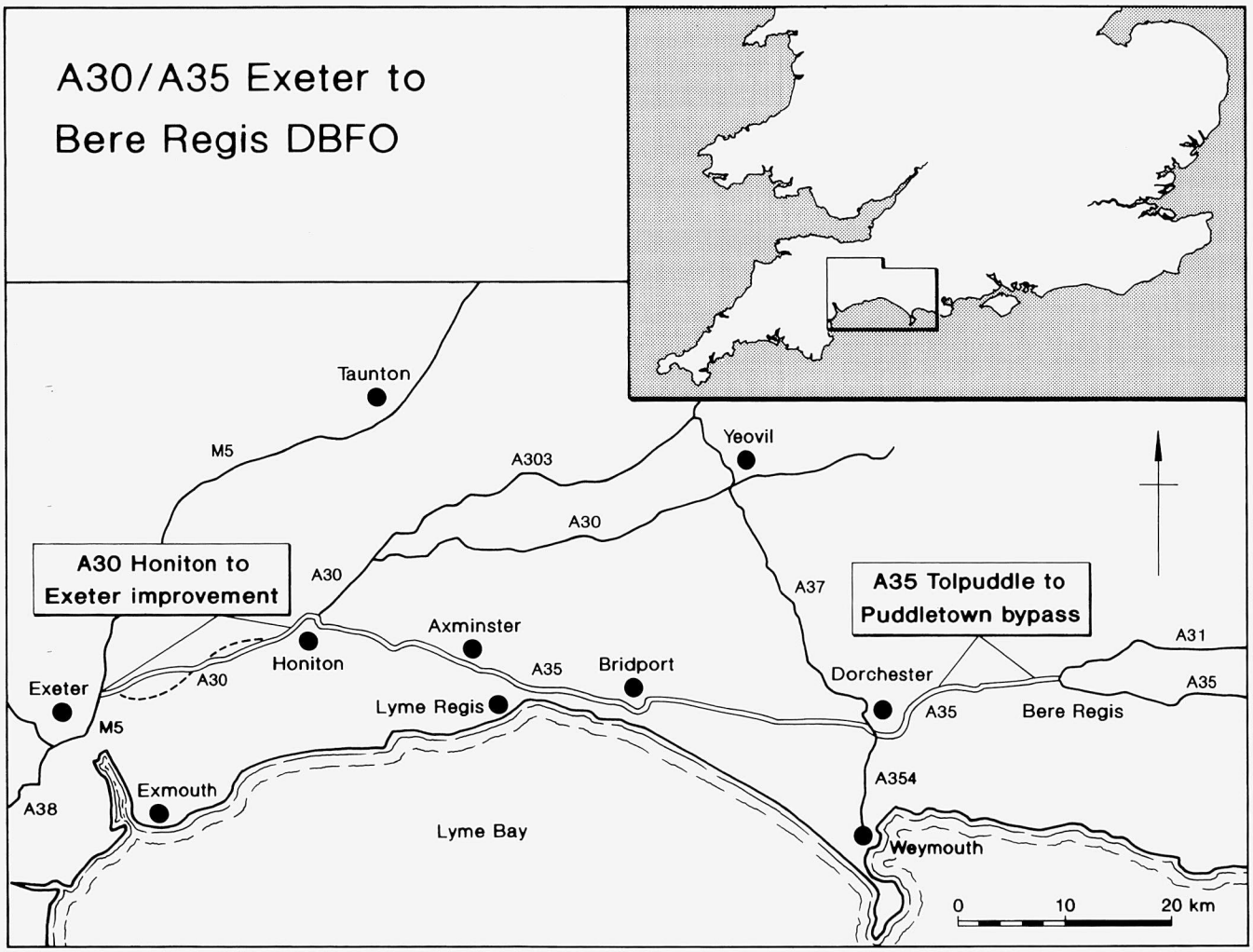


Figure 1 The A30/A35 DBFO road scheme

Section 1. Introduction

Carrie M. Hearne

The A30/A35 Exeter to Bere Regis Road Scheme

Background to the Scheme

In 1976 a bypass scheme for Tolpuddle and Puddletown was introduced into the National Trunk Road Programme. Public consultation took place in 1980 but the scheme was subsequently suspended. Progress on the scheme was resumed in 1985 and following further public consultation (1988) and a Public Inquiry (1992), the scheme was transferred into the Government's *Private Finance Initiative* (PFI) for road construction and improvement. Within the PFI strategy the construction of the bypass became a component of the A30/A35 Exeter to Bere Regis *Design, Build, Finance and Operate* (DBFO) road scheme. This scheme, involving 102 km of trunk road in Devon and Dorset, was announced in February 1995 as part of the Government's so-called Tranche 1A of DBFO projects (Fig. 1). The DBFO contract comprised two elements:

- to design and build the A30 Honiton to Exeter Improvement, Devon (*c.* 21 km) and the A35 Tolpuddle to Puddletown Bypass, Dorset (*c.* 9 km);
- to operate and maintain the A30/A35 Exeter to Bere Regis road for 30 years.

The DBFO Contract was awarded in 1996 to Connect A30/A35 Ltd, a consortium comprising BICC, Philip Holzmann and WS Atkins. The design and build works were undertaken for Connect A30/A35 Ltd by BBTA Construction Joint Venture which comprises Balfour Beatty, Tilbury Douglas and Deutsche Asphalt. The Oxford Archaeological Unit and Wessex Archaeology were appointed as Project Archaeologist



Plate 1 Burleston Down, Tolpuddle: general view looking west

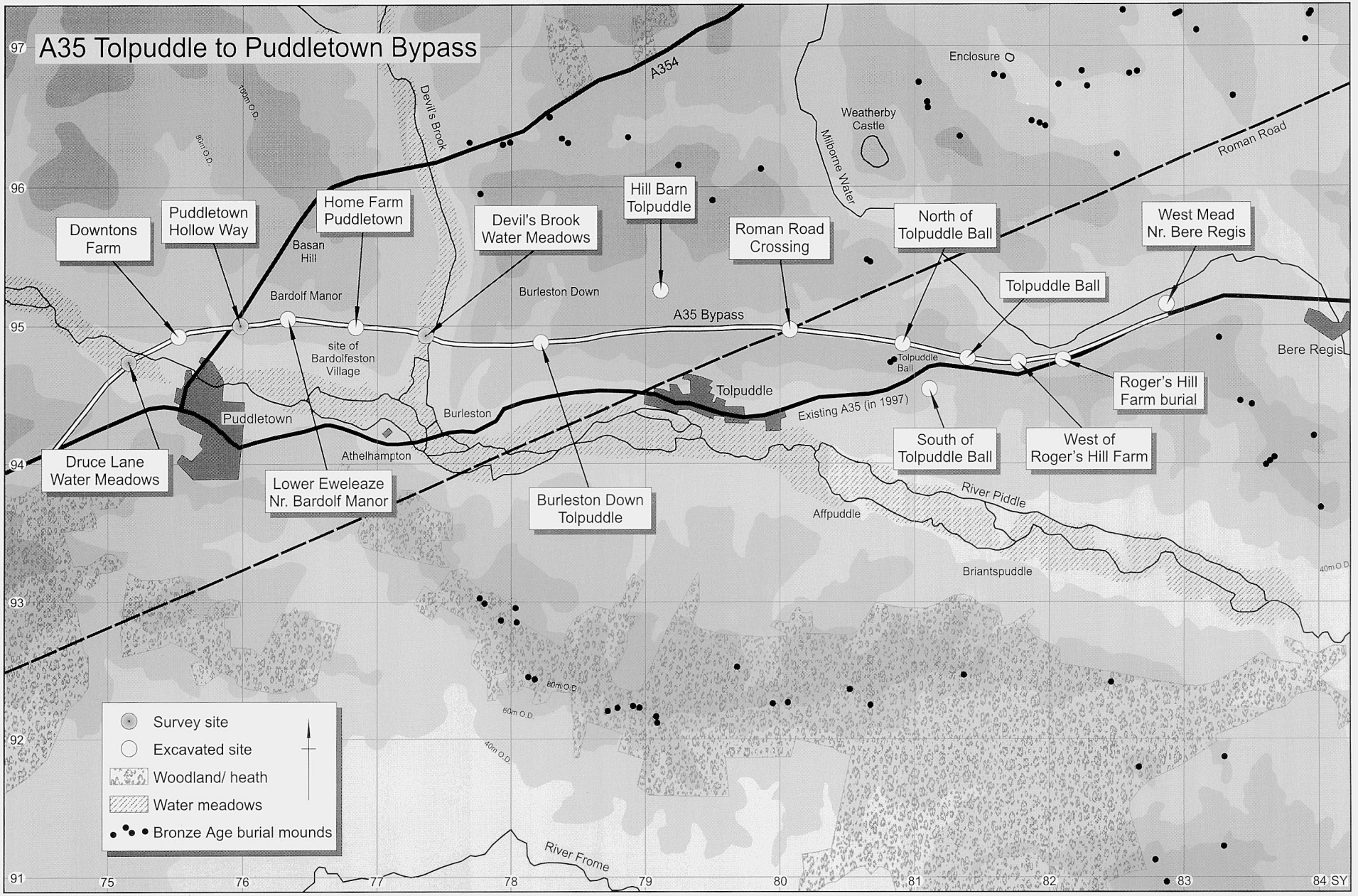


Figure 2 A35: location of archaeological sites



Plate 2 Extract from Isaac Taylor's survey of Dorset, 1765 (DCRO D/WIB/P2)

and Archaeological Contractor respectively for the A30/A35 scheme in August 1996. Construction started in October 1996 and the A35 bypass was officially opened in April 1999.

The A35 Tolpuddle to Puddletown Bypass

The bypass route runs north of the villages of Puddletown and Tolpuddle joining the Yellowham Hill dual carriageway in the west (SY 7446 9408) and the Bere Regis bypass in the east (SY 8320 9518), being approximately 9 km in total (Fig. 2). From its western end at Two Droves the route runs north-eastwards across a spur of chalk downland (up to *c.* 75 m OD) and then descends to cross the broad valley of the River Piddle near Northbrook (*c.* 60 m OD). From here the route runs eastwards, crossing an undulating downland landscape (63 m to 75 m OD), following a course south of Bardolf Manor and north of Home Farm. From here it crosses the narrow valley of the Devil's Brook (*c.* 58 m OD), at a point approximately 1.0 km north of Athelhampton and Burleston. The route then traverses Burleston Down (Plate 1) and Tolpuddle Common (70 m to 95 m OD), taking a course approximately 0.5 km north of Tolpuddle. From Tolpuddle Ball the bypass descends towards the Milborne Water keeping on its southern side (*c.* 60 m OD) for the easternmost section of the route.

The bypass is located on the interface of the chalkland of the Dorset Downs and the Tertiary deposits of the Hampshire Basin. The underlying bedrock of Upper Chalk is overlain for much of the route by Plateau Gravels and Reading Beds gravels on the higher ground, by river gravels and alluvial deposits in the three river valleys and by colluvial deposits in the dry valleys. Generally the soils in the downland area are light and well drained rendzinas. The route runs almost entirely across farmland, comprising a roughly equal mixture of arable and pasture fields.

Archaeological and Historical Background

Although the countryside around Tolpuddle and Puddletown is known to contain a variety of archaeological monuments and sites (of various dates) and important historic buildings, the area is one which has not previously been subject to large-scale archaeological survey or fieldwork.

The prehistoric period provides the most visible element of the local archaeological landscape in the form of numerous Bronze Age barrows on the higher ground overlooking the Piddle valley (Fig. 2). On the Downs to the north barrows have been recorded both as earthworks and cropmarks. To the south, many barrows are preserved but often hidden in the plantations of Puddletown Forest and on Affpuddle Heath. Those earthworks nearest the route are a pair of bowl barrows on the crest of Tolpuddle Ball (SMR ref. Tolpuddle 15

and 16) which lie 100 m south of the route. For the later prehistoric period the Iron Age hillforts of Weatherby Castle and Woodbury Hill provide foci in the landscape, the former lying just over 1 km north of the route, and the latter overlooking Bere Regis some 5 km further to the east.

For the Roman period the area is to a certain extent in the shadow of *Durnovaria* (Dorchester) which lies approximately 7 km south-west of Puddletown. The major local monument of this period is the line of the Roman Road between Badbury Rings, Wimborne (*Vindocladia*) and Dorchester (SMR ref. Tolpuddle 19A). The bypass intersects the line of the Roman Road on Tolpuddle Common. Tolpuddle village lies on the course of the Roman Road although no evidence for a Roman settlement has as yet been discovered.

By the later Saxon period – and probably earlier – the local village pattern was established. Both Tolpuddle and Puddletown are mentioned in the Domesday survey of 1086, the manors being held by Abbotsbury Abbey and Christchurch Priory respectively. The current fabric of the village churches dates from the 12th century onwards (see Wirdnam 1989 for a history of Tolpuddle village). The hamlet of Burleston lies approximately halfway between the two villages (Plate 2) and the deserted village of Bardolfeston is located less than 1 km north-east of Puddletown (Scheduled Monument 717; SMR ref, Puddletown 24). The bypass runs approximately 100 m north of Bardolfeston. A network of green lanes, probably of medieval (if not earlier) origin is a characteristic of the area, including three to the west of Puddletown: Chine Hill Lane, Charminster Lane, and Two Droves (SMR refs. Puddletown 73I, 73D, 73B).

The parish of Bere Regis, with the exception of Shitterton Manor which lies at the western end of the village, was a royal manor from the 10th century until the late 13th century when it was created a free borough by Edward I. Bere never developed into a thriving borough and market town but was recognised as an important small medieval town in view of its royal associations, its position at the convergence of roads to Poole, Dorchester and Wimborne and its renowned September market and fair held in the hillfort at Woodbury Hill (which only ceased in the 1950s).

Notable local elements of the post-medieval period include the Tudor manor house at Athelhampton which dates to the late 15th and 16th century, along with its important formal gardens which were laid out in the 1890s by Inigo Thomas. The extensive watermeadow systems in the Piddle and Devils Brook valleys date from the 17th century onwards and are among the earliest in southern England. Finally, no summary of the local history would be complete without mention of the Tolpuddle Martyrs who were transported to Australia in 1834.

It is clear, even from this brief summary, that the archaeology of the local area is not understood in any great depth, both in terms of its historic settlements and the surrounding countryside. Within the context of this countryside the location of the bypass is of interest for several reasons. As noted above, it lies on the margins of the chalk uplands at their interface with the Piddle valley and the Hampshire Basin. The local landscapes between which it lies have, however, witnessed intensive archaeological survey; namely the Dorchester bypass and South Dorset Ridgeway projects on the chalklands to the west (Woodward 1991; Smith *et al.* 1997) and the Wytch Farm Oilfield Project on the Tertiary heathlands and former heathlands of north Purbeck to the south-east (Cox and Hearne 1991). The location of the bypass is also notable in terms of trade and exchange networks since it lies both within the hinterland of Dorchester and between that town and the major industrial 'source' area of Purbeck which supplied salt, ceramics, building stone and stone and shale artefacts throughout the later prehistoric and Roman periods.

Archaeological Work Prior to the DBFO Scheme

Archaeological Evaluation (1990–1991)

During the planning stages of the bypass, prior to the scheme being converted to DBFO, the Highways Agency commissioned (through their consulting engineers, WSP Civils Ltd.) the Environmental Advisory Unit of Liverpool University (EAU) to undertake successive stages of archaeological assessment and evaluation. This work was carried out by the Field Archaeology Unit of Liverpool University during 1990 and 1991. Phase 1 of the evaluation comprised a desk-based study. This included examination of Dorset County Council's Sites and Monuments Record, consultation with the County Archaeological Officer, study of historical documents, inspection of aerial photographs, transcription of cropmarks and soilmarks, and a walkover survey of the route. Phase 2 comprised a field evaluation of the preferred route (Site Code TP91). The evaluation incorporated:

- a detailed field survey of the Devil's Brook water meadows and a study into its management system;
- surface collection of artefacts in available areas (approximately 50% of the route), specifically the section of the route between Tolpuddle Ball and the Roman Road crossing (Tolpuddle Common) and the area to the north of the deserted medieval village of Bardolfeston;
- geophysical survey in four areas of archaeological potential (north of Bardolfeston; Roman Road crossing; near Tolpuddle Ball; landscape area south of Tolpuddle Ball);
- trial excavations in four areas of archaeological potential (Site A, area east of Tolpuddle Ball; Site B, Roman Road crossing; Site C, east end of the route near Bere Regis; Site D, landscape area south of Tolpuddle Ball). Three of these sites were those identified in the Phase 1 assessment, either from aerial photographs (Site D) or fieldwalking results (Sites A and C). A total of 16 hand-dug test pits (Sites A, C and D) and one machine trial trench (Site B) were excavated.

Details of the scope of work, methodology and results of the archaeological assessment and evaluation undertaken by Liverpool University are contained in



Plate 3 Tolpuddle Ball (TP93): the 1993 excavations in progress (north at top) prior to the extension of the western end of the trench

reports compiled by the EAU (1991; 1992). In addition, summary articles on the evaluation were published in the *Proceedings of the Dorset Natural History and Archaeological Society* (Higgins and Davey 1993; Higgins 1995).

Tolpuddle Ball Excavations (1993)

Prior to the road scheme being designated a DBFO project the Highways Agency commissioned an archaeological excavation of one site, that east of Tolpuddle Ball, adjacent to the A35/Milborne St Andrew/Affpuddle road junction (SY 813 947). The site had been identified during the Phase 2 fieldwalking evaluation as a discrete concentration (*c.* 100 m x 70 m) of Iron Age and Roman pottery (EAU 1991, collection area G1). Trial excavations in the form of eight hand-dug test pits (generally each 1.00 m x 1.50 m) confirmed the presence of subsoil features indicative of Iron Age and Roman settlement and also located an inhumation burial (EAU 1991, Site A).

Excavation of this site, subsequently referred to as Tolpuddle Ball (Site Code TP93), was undertaken between August and December 1993 under the direction of Dr D. A. Higgins of the Department of Archaeology, University of Liverpool. An area of approximately 60 m x 60 m was initially stripped of topsoil by machine. Archaeological features appeared to extend beyond the limits of the trench in most directions (Plate 3). As a result, the western end of the trench was extended and the eastern continuation of the site was investigated by a series of machine trial trenches. The northern and southern edges of the excavation coincided with the proposed limit of the main road corridor. The final area investigated was approximately 150 m x 60 m (9000 m^2). Sample excavation revealed several phases of Middle to Late Iron Age and Romano-British settlement plus a small number of earlier and later features. An interim report was published shortly after the excavation (Higgins 1993).

The DBFO Archaeological Project (1996 onwards)

Project Structure

The structure of the archaeological project is summarised in Fig. 3. The same structure applied for the A35 and the A30, the only difference for the latter scheme being that the Department's Agent was Hyder Consulting Ltd. A brief summary of the key archaeological roles is as follows.

The *Department's Archaeologist* acted as the 'Curator', monitoring progress and standards and ensuring that the archaeological requirements were discharged. The Department's Archaeologist reported to the Department's Agent, WSP Civils Ltd in the case of the A35.

The *Project Archaeologist* acted as the overall archaeological adviser for the DBFO Company and the Construction Joint Venture. The Project Archaeologist monitored the Archaeological Contractor, acted as the interface between the Archaeological Contractor and the Department's Archaeologist and was also responsible for auditing and certifying work.

A35 Tolpuddle to Puddletown Bypass DBFO, Dorset

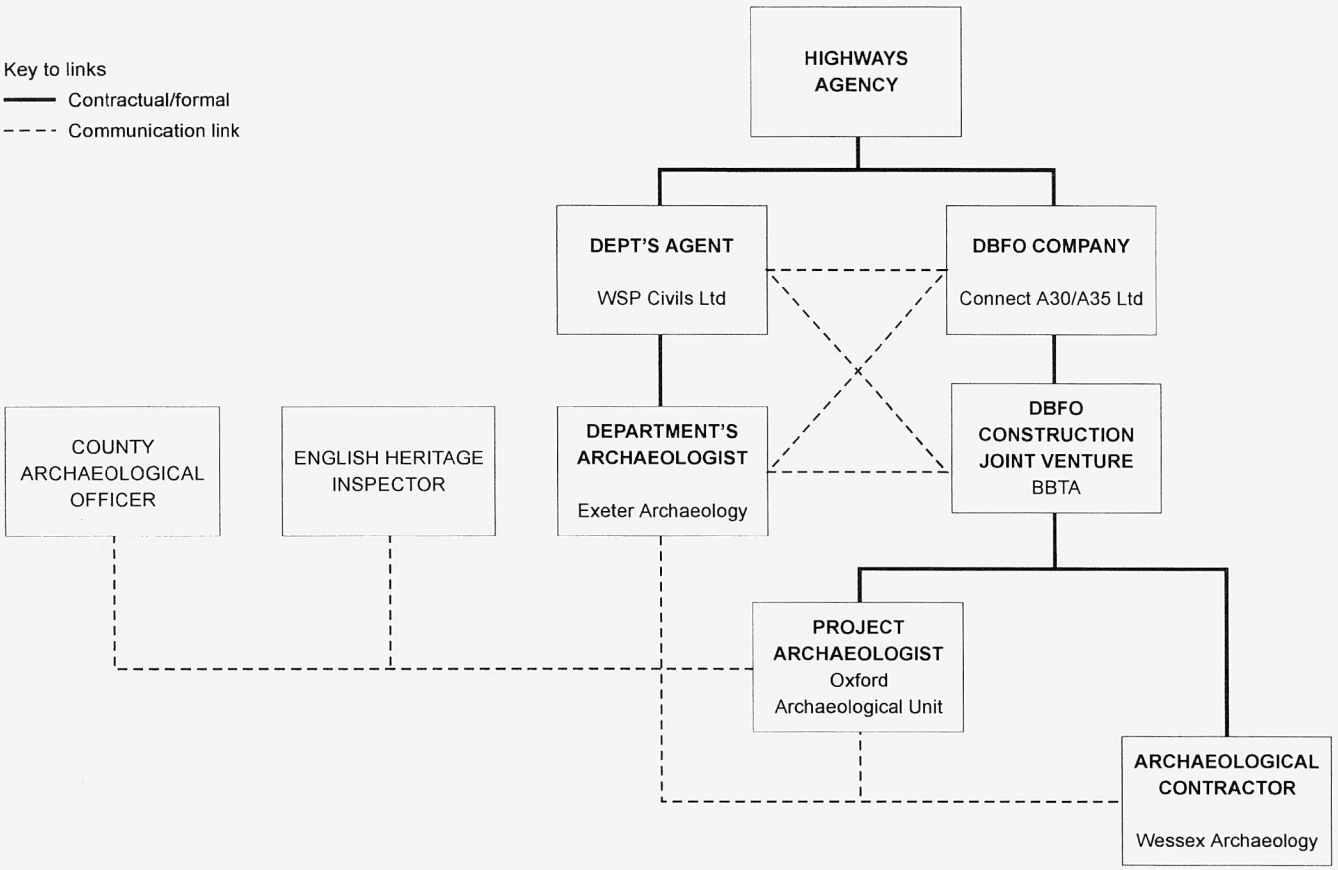


Figure 3 Project structure

The *Archaeological Contractor* undertook all agreed archaeological fieldwork and post-excavation on behalf of the DBFO Company and the Construction Joint Venture.

The Department's Archaeologist and the Project Archaeologist liaised with both the *County Archaeological Officer* (CAO) and the *English Heritage Inspector of Ancient Monuments* to ensure that they were briefed on the project. Where ancillary road developments (for example, a borrow pit) required planning permission the CAO undertook the normal role of Archaeological Curator.

Monitoring and Certification

As in all DBFO schemes monitoring of progress and standards was formalised in a process of certification. Defined pieces of work completed by the Archaeological Contractor, including the production of *Archaeological Project Designs* (see below), excavations, watching briefs and off-sites works were 'signed off' by means of an archaeological certificate issued by the Project Archaeologist and countersigned by the Department's Agent. The DBFO Company could not proceed with the next stage of archaeological work or construction until the appropriate certificate (or part-certificate) had been issued and accepted. In practice, the advance fieldwork was monitored at least on a weekly basis and on occasions more often (Plate 4). The watching brief and off-site phases were monitored as required. The post-excavation programme was monitored quarterly.

Four types of certificates were defined within the DBFO structure:

- *Certificate 1s* – Archaeological project designs, including the post-excavation assessment: to confirm that the general scheme project design, site-specific project designs and the post-excavation assessment met contractual requirements;
- *Certificate 2s* – Advance fieldwork: to confirm that each piece of fieldwork had been completed satisfactorily;
- *Certificate 3s* – Watching brief: to confirm that each area of topsoil stripping had been covered by a watching brief;
- *Certificate 4* – Publication of the final report and deposition of the archive: to confirm that reporting and deposition of the archive was satisfactorily completed (see Appendix 1).

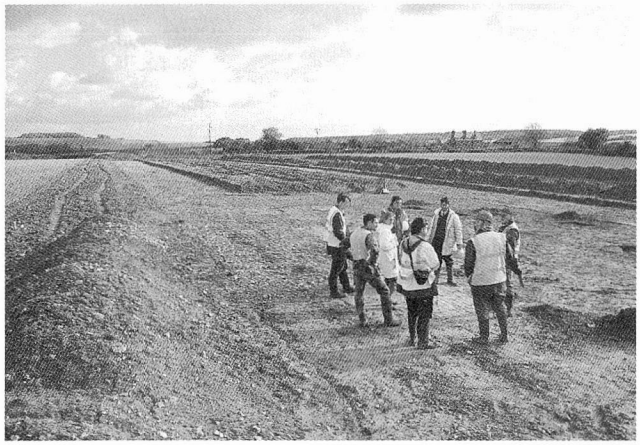


Plate 4 Monitoring at Home Farm, Puddletown, looking east to Home Farm and Burleston Down

Aims, Scope of Work and Methods

The aims of the project and scope of works for the fieldwork and post-excavation were defined in an *Outline Archaeological Project Design* (OPD), prepared by the Highways Agency, which formed part of the invitation to tender for the DBFO Contract. The OPD was contained in *Schedule 4: Construction and Handback Requirements, Part 1, Annex 4* (Annex 4A and its Appendix 1 relating to the A30 Devon section, Annex 4B and its Appendices 1 and 1/1 relating to the A35 Dorset section).

The stated aim of the A35 project was *'to preserve, either in situ, or by record, features and sites of archaeological interest along the proposed road corridor'* (OPD, Annex 4B, Appendix 1, Para 3.1). The objectives of the project were summarised as follows (para 3.2):

- to undertake an appropriate level of archaeological recording and sampling of all deposits of archaeological significance as identified in the outline project design or which are revealed during the course of the construction works;
- to carry out an agreed programme of post-excavation analysis and reporting following the procedures set out in MAP 2 (English Heritage 1991);
- to ensure the long term curation of the data recovered and its dissemination in a form appropriate to its significance and academic value.

The OPD defined two methods for the A35 advance fieldwork: 'Ground Survey' and 'Strip and Record' excavation. The OPD also specified that an archaeological watching brief be undertaken in all areas of topsoil stripping, including temporary construction areas, service diversions etc.

Archaeological Project Designs detailing the general strategy and methods to be adopted for the A30/A35 and for each separate site were prepared by Wessex Archaeology in consultation with the Project

Table 1: Summary of archaeological sites and methods

ADVANCE FIELDWORK		*WA site ref.*	*Chainage*		
Evaluation Ref.	*Site name in outline project design (sites ordered west to east)*			*Ground survey*	*Strip & record*
Site D	Druce Lane Watermeadows	W2402.1	980–1325	*	
Site F/AP 2	Downtons Farm (Northbrook Overbridge)	W2402.3	1500–1580		*
Site 1	Puddletown Hollow way	W2402.4	2060–2080	*	
AP 3	Lower Eweleaze	W2402.5	2400–2475		*
Site J/AP 4	West of Home Farm	W2402.6	2835–2985		*
Site L	Devil's Brook Watermeadows	W2402.7	3360–3580	*	
Site O/R/AP 5	Burleston Down East	W2402.8	4050–4450	*	*
Site T	Roman Road, Tolpuddle Common	W2402.10	5970–6200	*	*
Site U/AP 13	North of Tolpuddle Ball	W2402.12	6870–7275	*	*
n/a	Iron Age ditch, east of Tolpuddle Ball (A35/Milborne St Andrew Junction)	W2402.13	7575–7700		*
AP 14	South of Tolpuddle Ball (A35/B3390)	W2402.14	off-route		*
AP 15	West of Roger's Hill Farm	W2402.15	7740–7900		*
Site C	A35 East End, Bere Regis (renamed West Mead in 1997)	W2402.16	9080–9150		*
WATCHING BRIEF & ADDITIONAL WORK					
–	Hill Barn, Tolpuddle	W2402.18	off-route	evaluation	
–	Roger's Hill Farm Burial	W2402.19	8160	w. brief excavation	
–	Late Roman burial (near Tolpuddle Ball)	W2405	off-route	w. brief excavation	
–	Tolpuddle Ball Cemetery	W2405.17	7280–7320	excavation	
–	Watching Brief (general)	W2405	all areas	watching brief	



Plate 5 Tolpuddle Ball Cemetery (July 1998), looking east

Archaeologist prior to the start of fieldwork (Wessex Archaeology 1996a; 1996b). During the course of preparing this documentation, research by Wessex Archaeology confirmed that three of the sites specified for Strip and Record investigation in the *Outline Project Design* lay off the route of the bypass and were not affected by construction. These sites, AP 1 (Western End of route), AP 7 (Hill Barn West) and AP 10 (Tolpuddle Common) are not addressed further in this report. In all, 13 sites were investigated, as summarised in Table 1. The locations of the sites are shown on Figure 2 and Figures 4 to 8.

The advance fieldwork was undertaken between 5 October 1996 and 14 February 1997 (Site Code W2402). The watching brief (W2405) commenced in November 1996 and was completed in February 1999. There were three major discoveries during the watching brief, all in the late stages of the project after the main programme of post-excavation had been completed. A post-medieval roadside burial was discovered in April 1998. A Late Roman burial was discovered in June 1998. A Late Roman/post-Roman inhumation cemetery was discovered in July 1998 (Plate 5).

In addition to the advance fieldwork defined in the OPD, archaeological works were undertaken in connection with the site of a borrow pit near Hill Barn, Tolpuddle (Site Ref. W2402.18). Archaeological assessment and a trial trenching evaluation were followed by a watching brief (Wessex Archaeology 1997b; 1998). Work on the borrow pit was subject to local authority planning permission and was therefore also monitored by the County Archaeological Officer's representative.

Tolpuddle Ball 1993 – Post-excavation

As part of the overall scope of works for the DBFO Contract the Highways Agency transferred responsibility for completing post-excavation and publication of the 1993 excavations which had been carried out at Tolpuddle Ball by Liverpool University (see above) to Connect A30/A35 Ltd. This responsibility was, in turn, transferred by BBTA to Wessex Archaeology as the Archaeological Contractor for the scheme.

Table 2 : Tolpuddle Ball 1993 (TP93) post-excavation – progress at hand-over to Wessex Archaeology

Category / Task	*Quantity*	*Progress*
Site description		
Stratigraphic analysis/phasing	1570 contexts	Not undertaken
Archiving		
Ordering/indexing	–	Preliminary preparation
Finds / Reports		
Finds conservation	–	Coins conserved
Coins	*c.* 120	Final publication report
Copper alloy objects	43	Assessment report
Lead & lead alloys	36	Assessment report
Iron objects	*c.* 1000	Not assessed
Pottery	*c.* 191 kg	Assessment report
Clay & daub	826 pieces	Assessment report
Brick & tile	176 pieces	Assessment report
Glass	small no.	Assessment report
Worked flint	1500	Assessment report
Stone artefacts	166	Assessment report
Kimmeridge shale objects	85 frags	Assessment report
Worked bone and antler	7	Assessment report
Human remains	14 burials	Assessment report
Environmental Reports		
Oyster shell	*c.* 20	Final publication report
Animal bone	>8000 frags	Assessment report
Charcoal	small quantity	Not assessed
Samples	160 bulk	Not processed/ assessed
	14 non-soil	partially identified

An *Archaeological Brief* for the works required to complete the post-excavation of Tolpuddle Ball was provided in Appendix 1/1 of Annex 4B of the *Schedule 4: Construction and Handback Requirements, Part 1, Annex 4.* The brief included summaries of the finds assessments which had been carried out in 1994 and 1995 and a statement on the perceived potential of the site. Table 2 summarises the progress which had been made at the time responsibility to complete the post-excavation was transferred to Wessex Archaeology. Wessex Archaeology took receipt of the paper archive from Tolpuddle Ball in February 1997. The finds (including those relating to the evaluation of the site in 1991) and the soil samples were transferred to Salisbury in the period May to November 1997.

Table 3: Chronological summary

		Lateglacial/ early prehist.	Neo. to E–MBA	LBA to EIA	M/LIA	LIA to early RB	IA/RB	RB	Post-Roman	Medieval	Post-medieval
	Phase	–	1	2	3	4	3/4	5	5A	6	7
Site Ref.	*Name** *Approx. date range*	12,000–4000 BC	4000–1100 BC	1100–400 BC	400–100 BC	100 BC–AD 100	400 BC–AD 100	AD100–410	AD 410–700	1066–1499	1500+
W2402.1	Druce Lane Watermeadows										*****
W2402.3	Downtons Farm, Puddletown										
W2402.4	Puddletown Holloway									*****	*****
W2402.5	Lower Eweleaze, Puddletown										
W2402.6	Home Farm, Puddletown										
W2402.7	Devil's Brook Watermeadows										*****
W2402.8	Burleston Down, Tolpuddle										
W2402.18	Hill Barn, Tolpuddle										
W2402.10	Roman Rd, Tolpuddle Common										
W2402.12	North of Tolpuddle Ball										
W2402.14	South of Tolpuddle Ball										
W2405.17	Tolpuddle Ball cemetery (1998)										
TP93	Tolpuddle Ball (1993: Liverpool)										
W2402.13	Tolpuddle Ball (1996/7)										
W2402.15	West of Roger's Hill Farm										
W2402.19	Roger's Hill Farm burial										
W2405	*Watching Brief*										

* Sites ordered west to east

Key

Archaeological features/deposits

Artefactual evidence only

***** Date of unexcavated site (ground survey)

The Format of the Report

This report provides a detailed description of the results of the 1993 excavations at Tolpuddle Ball and all the works undertaken in connection with the A35 DBFO project (October 1996 to February 1999). The results from the A30 Devon scheme will be reported in a separate publication (Fitzpatrick *et al.* forthcoming).

Section 2 of the report provides descriptions of all the archaeological sites identified, including the ground survey sites. The sites and areas investigated ranged in date from early prehistoric to 20th century and in nature from an extensive multi-period site (Tolpuddle Ball 1993) to possible sites identified during the evaluation which proved to be of minimal archaeological interest. In archaeological terms, the excavations at Tolpuddle Ball are the most significant and a report on this site is therefore presented first. The data generated by the Wessex Archaeology excavation at Tolpuddle Ball in 1996/7 (W2402.13) have been integrated with those from the larger excavations by Liverpool University (TP93). Features recorded near the Tolpuddle Ball site during the watching brief are also incorporated in the site report, including a Late Iron Age horse burial and a Late Roman human burial which lay to the south and north of the main site respectively. A report on the Tolpuddle Ball cemetery is provided separately after the main site report. All the other site reports follow that of Tolpuddle Ball and have been ordered chronologically by reference to the earliest coherently-identified element within each site.

A phase sequence which incorporates all the sites was developed, as summarised below. Phasing was established primarily on the basis of artefact dating (mainly ceramic), demonstrable stratigraphic relationships, and radiocarbon dating in the case of the Tolpuddle Ball cemetery. Molluscan evidence has also been used to interpret the chronology of a few specific prehistoric features at Tolpuddle Ball. Table 3 presents an overall reconciliation of the phases represented at each site. Sections 3 and 4 provide specialist reports on the finds and environmental materials by category, the only exception being the finds and skeletal material from the post-medieval burial near Roger's Hill Farm which are described together with the site report (Section 2) for clarity. A synthesis of the project results is provided in Section 5 which includes a full discussion of the Tolpuddle Ball site, including the Late Roman/post-Roman cemetery.

A35 Tolpuddle to Puddletown Bypass – Phase Sequence (all sites)

Phase 1	Neolithic and Early/ Middle Bronze Age	*c.* 4000–1100 BC
Phase 2	Late Bronze Age/Early Iron Age	*c.* 1100–400 BC
Phase 3	Middle/Late Iron Age	*c.* 400–100 BC
Phase 4	Late Iron Age/Early Romano-British	*c.* 100 BC–AD 100
Phase 5	Romano-British	*c.* AD 100–410
Phase 5A	Post-Roman	*c.* AD 410–700
Phase 6	Medieval	1066–1499
Phase 7	Post-Medieval	1500–present

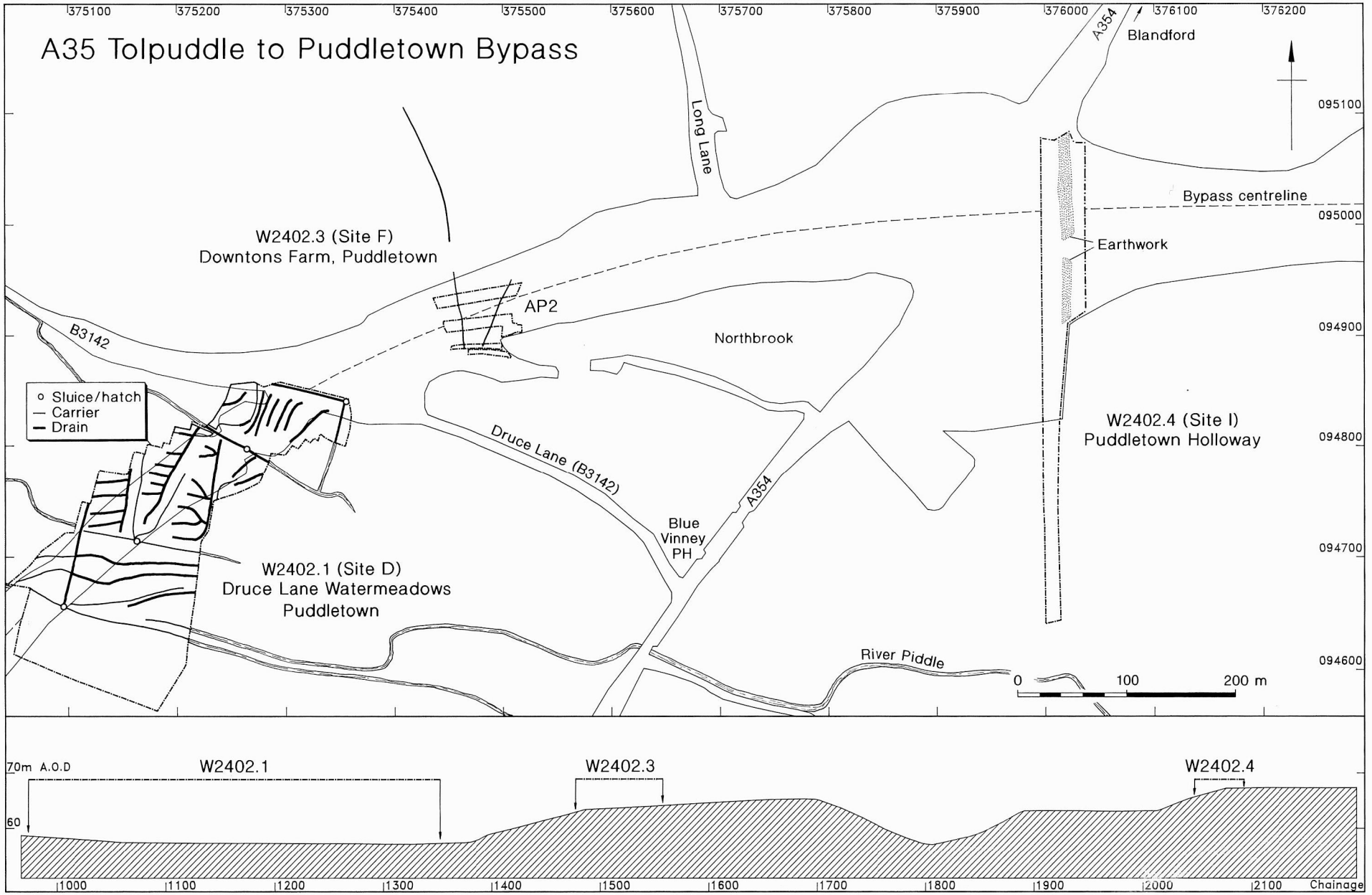


Figure 4 Route detail; Druce Lane to Puddletown Hollow way

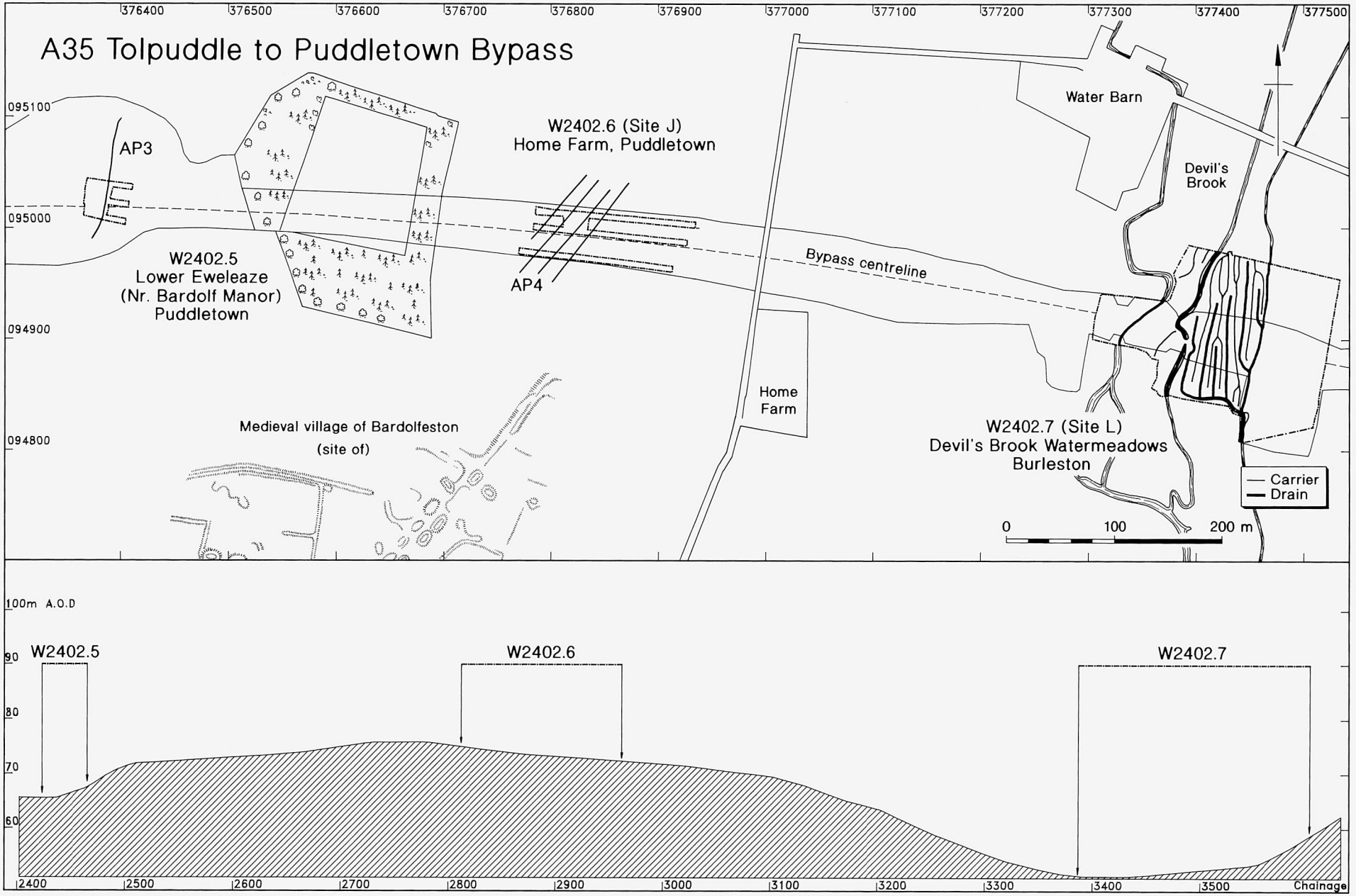


Figure 5 Route detail: Eweleaze to Devil's Brook Watermeadows

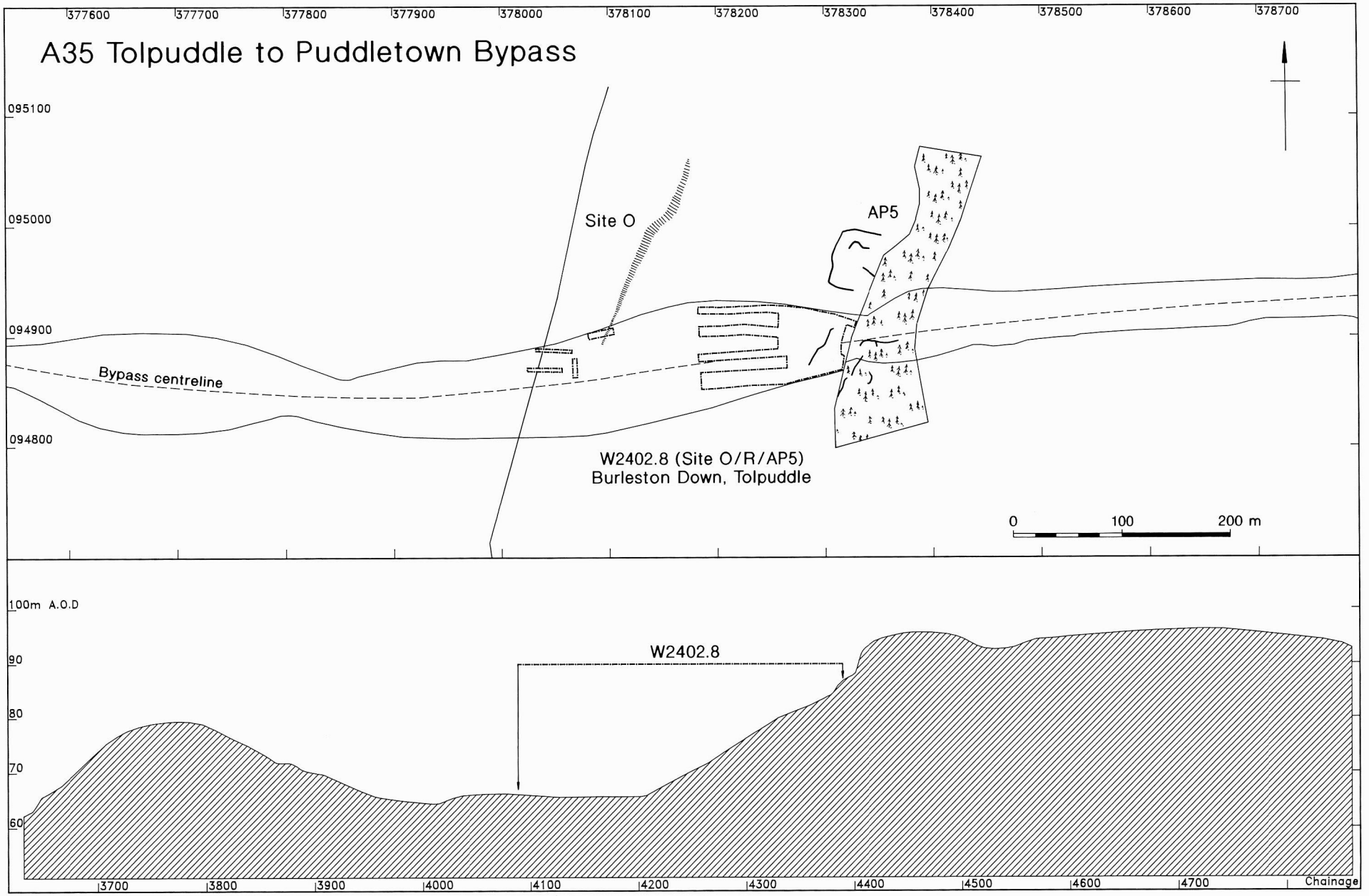


Figure 6 Route detail: Burleston Down

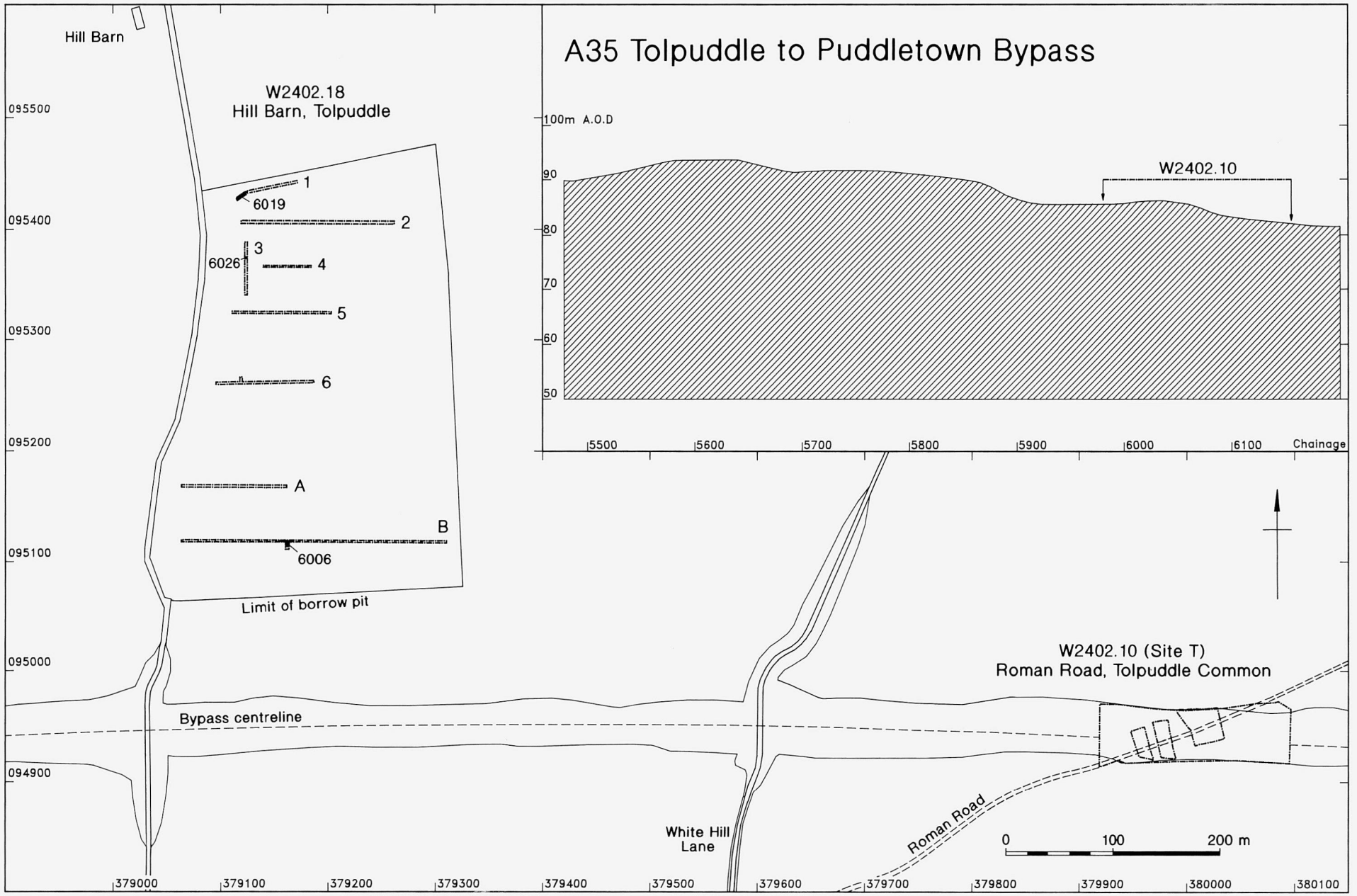


Figure 7 Route detail: Hill Barn Borrow Pit to Roman Road crossing

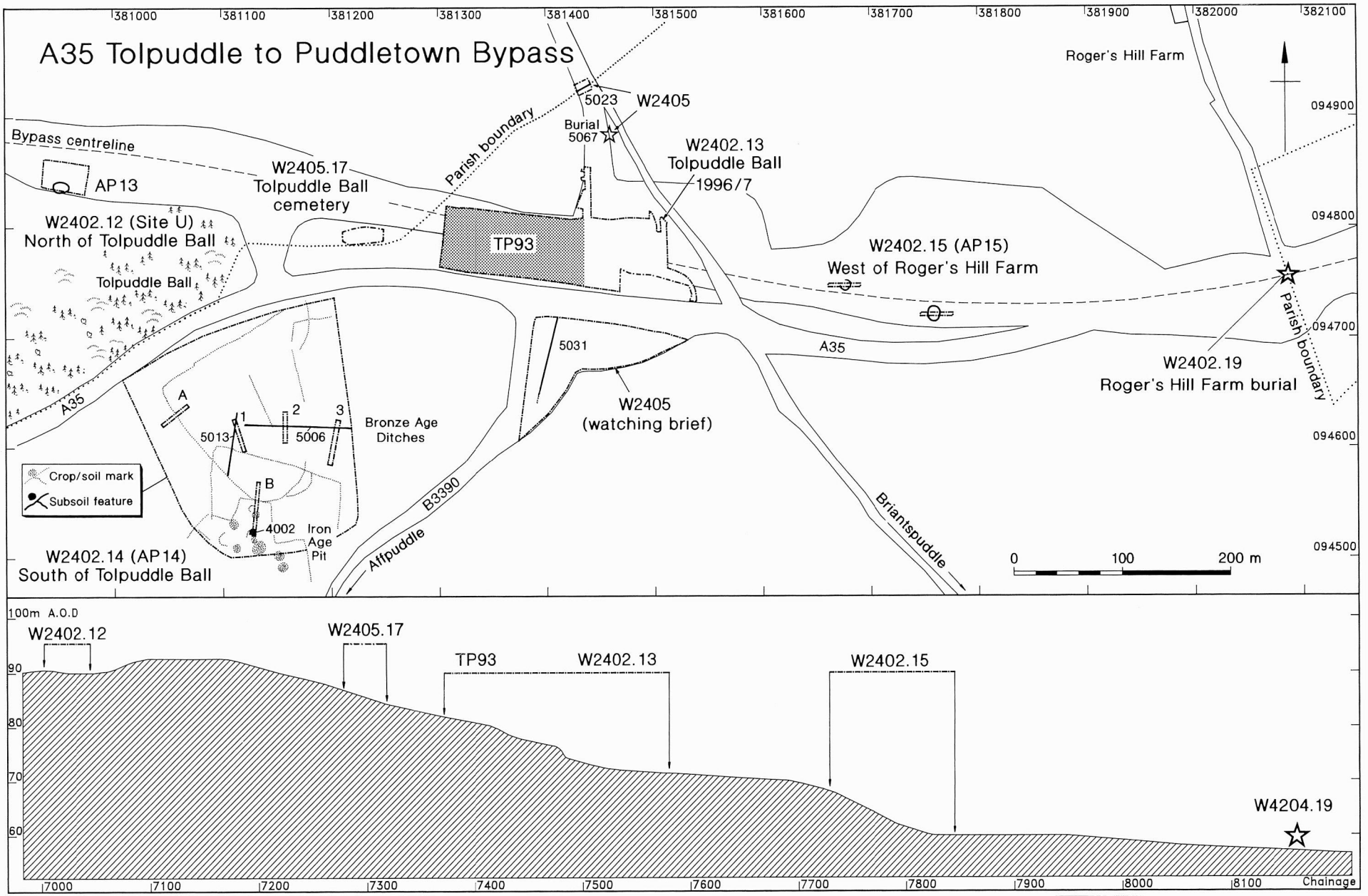


Figure 8 *Route detail: Tolpuddle Ball to Roger's Hill Farm*

Section 2. Site Reports

Vaughan Birbeck

TOLPUDDLE BALL: TP93 and W2402.13 (Figs 10–28) SY 8140 9480

Introduction

The excavation report for this site integrates data from the following stages of work:

- Liverpool University evaluation, 1991 (TP91, Site A);
- Liverpool University excavation, 1993 (TP93);
- Wessex Archaeology excavation, 1996/7 (W2402.13);
- Wessex Archaeology watching briefs, 1997/8 (W2405).

The relevant site code is provided on the detailed plans and sections to indicate which stage of excavation they originate from. Key to sections for all sites is provided in Fig. 9. Various difficulties were encountered when integrating the data from the 1993 and 1996/7 excavations. Levels provided on drawings from the 1993 excavations did not correspond with those taken in the later excavations and in some cases levels provided on 1993 pre-excavation plans did not correspond with those on post-excavation drawings. As a result, no levels taken in 1993 are shown on the plans and sections reproduced in this report. Although the majority of features excavated in 1993 were recorded textually, graphically and photographically, some (approximately 12%) were not fully recorded and/or the records appear to be contradictory. A discussion of the Tolpuddle Ball site is included in the overall project synthesis below (Section 5).

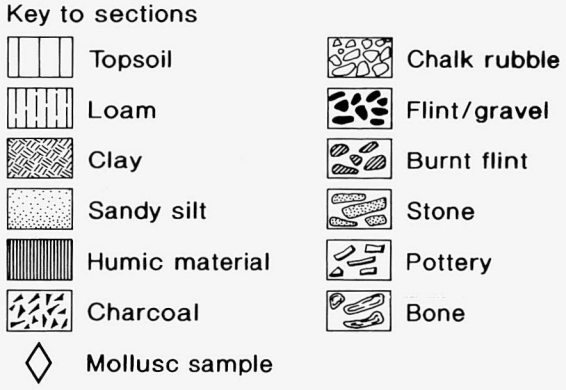


Figure 9 Key to sections

Phase 1: Neolithic and Early–Middle Bronze Age (Fig. 10)

Archaeological features of possible Neolithic and Early/Middle Bronze Age date were recorded during both the 1993 and 1996/7 excavations. The most substantial remains comprised a possible flint quarry and associated group of irregular pits, a small ditched settlement enclosure with internal features, two possible field boundaries, three small pits and postholes.

Neolithic Pit 841 (TP93)

This small sub-circular pit measured approximately 1.10 m by 0.80 m and 0.35 m deep and had steep sides and a slightly concave base (see below, Fig. 14 section). It lay in an apparently isolated position. The pit contained three distinct fills all of which produced Neolithic flint-working debitage. The primary fill, 849, comprised a dark brown silty loam with abundant chalk fragments. This was overlain by fill 848, another dark brown silty loam from which large quantities of flint-working debitage and a few sherds of Iron Age pottery were recovered. The topmost fill, 840, a dark yellowish–brown silty loam, also contained large quantities of debitage.

A total of 307 pieces of worked flint including chips and an apparently unfinished bifacial knife was recovered from pit 841, all in mint condition. The quantity, condition and size range of this assemblage suggest that it is unlikely to be residual. The presence of a small quantity of Iron Age pottery within the middle fill is problematic but the feature has been assigned to Phase 1 and assigned a Neolithic date on the basis of the flint assemblage and its location which is remote from the large group of Iron Age pits (see below, Phases 3 and 4).

Neolithic / Bronze Age Quarry Pit 2473 (W2402.13)

This very large, irregular pit was approximately 3.80 m by 2.40 m and up to 1.05 m deep with steep, irregular sides and an irregular base. The feature appears to have been deliberately backfilled shortly after its excavation. The fills comprise thick layers of loose chalk rubble with frequent loamy lenses (Plate 6). Dating of this feature is somewhat problematic. No finds were recovered from the primary or lower fills. The upper fills contained a

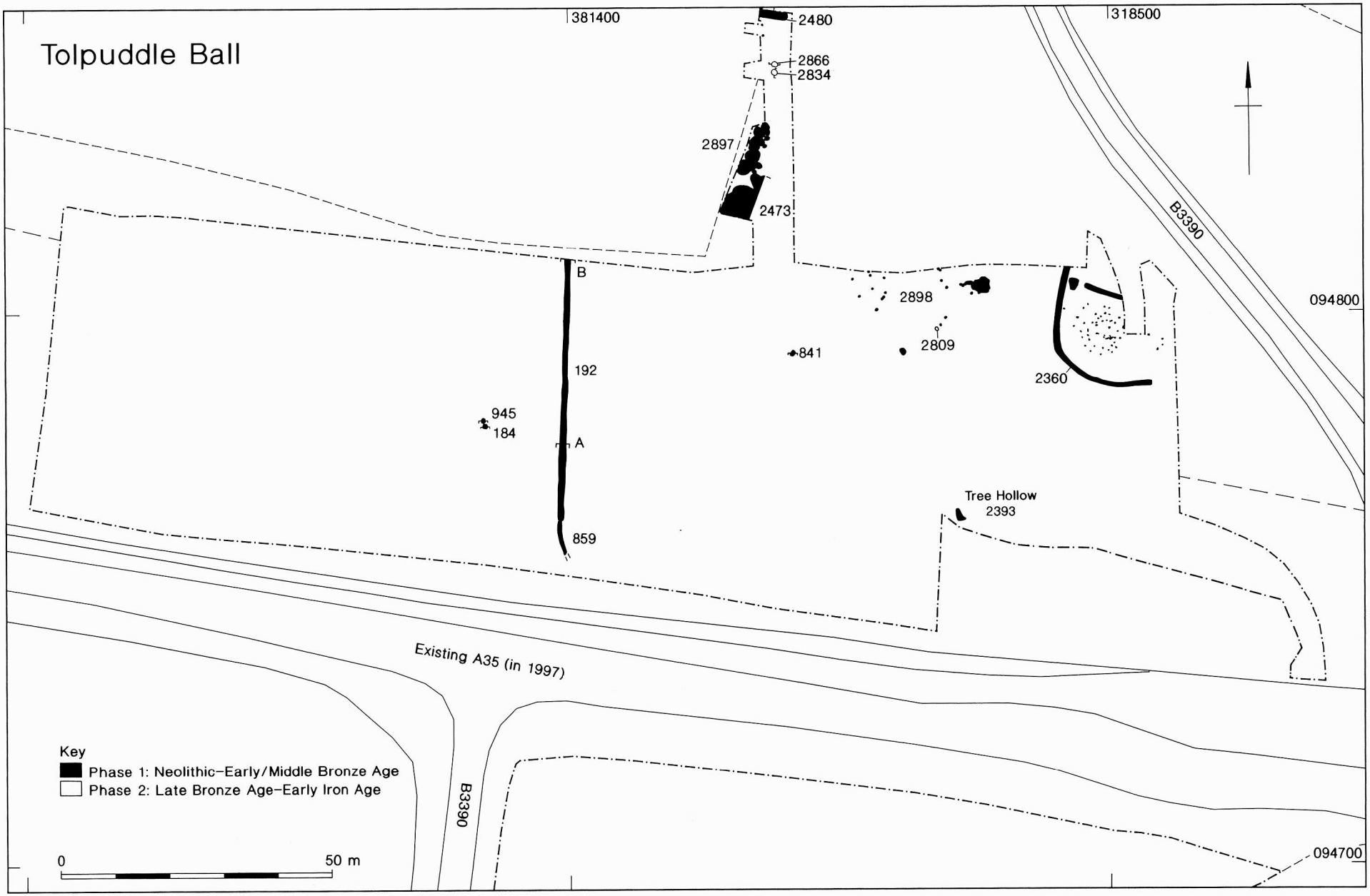


Figure 10 Summary plan of Phases 1 and 2



Plate 6 Tolpuddle Ball (W2402.13): Phase 1 quarry pits 2473 during excavation



Plate 7 Tolpuddle Ball (W2402.13): Phase 1 enclosure 2360, looking north-west to Weatherby Castle

mixed collection (313 pieces) of worked flint including diagnostically Neolithic material in a fresh condition, but in association with small amounts of Iron Age pottery. These upper fills appear to represent layers which accumulated over the pit as the chalk rubble backfill settled. The molluscan evidence from soil lenses within the chalk rubble backfill suggests the quarry was excavated in a landscape whose character was of pre Iron Age date (Allen, Section 4). The feature has therefore been interpreted as a flint quarry of possible Neolithic/Early Bronze Age date.

Immediately to the north of 2473 was a large group of 24 small irregular pits (2897) all apparently deliberately backfilled with chalk rubble similar to 2473. Datable material (pottery) was only recovered from the uppermost fills of these features and ranged from Early Bronze Age to Late Iron Age. Two of the pits were cut by a Phase 3/4 grave (2670, burial 2672) and this group of features therefore pre dates the later Iron Age. On the basis of their proximity to quarry 2473, the similarity of the fills and the molluscan evidence the group of pits are interpreted as broadly contemporaneous and of similar function to quarry pit 2473.

Early / Middle Bronze Age Enclosure 2360 (W2402.13) (Fig. 11; Plate 7)

This small enclosure comprised a 'C'-shaped ditch (2360) with the open side facing east. It measured approximately 18 m (east–west) by 30 m+ (north–south). A ditch aligned approximately east–west (2771) apparently formed an internal division. A large group of postholes within the enclosure appear to represent a series of roundhouses contemporary with the enclosure ditch. The enclosure continued beyond the northern limit of excavation: the northernmost part lay within an area where preservation *in situ* was possible. The full extent of the enclosure was not therefore recorded. During the excavation some of this area was topsoil stripped and the features recorded in plan but not investigated further.

Three slots, each 2.00 m long, were excavated across ditch 2360. The ditch was on average 1.00 m wide and 0.70 m deep with an irregular V-shaped profile with a flat base (Fig. 11, sections A–D). In general only two fills were noted. The primary fills comprised chalk rubble within a silty clay matrix (2369, 2375 and 2396) while the secondary fill (2362, 2374 and 2395) consisted of silty clay loam. In one slot (2394) a small, irregular layer of brown silty clay (2397) was noted underlying the

Table 4: Tolpuddle Ball, Early/Middle Bronze Age (Phase 1) roundhouses 2360/1 and 2360/2

Posthole	*Diameter / dimensions (m)*	*Depth (m)*
Roundhouse 2360 / 1		
2446	0.18	0.21
2444	0.20	0.18
2433	0.24x0.20	0.21
2449	0.20x0.16	0.20
2456	0.34x0.26	0.24
2414	0.25x0.21	0.16
2488	0.27	0.21
2418	0.26x0.18	0.19
2657	0.26x0.20	0.26
2600	0.28x0.24	0.19
Variation	*0.10*	*0.10*
Roundhouse 2360 / 2		
2461	0.30x0.23	0.24
2612	0.30x0.26	0.25
2425	0.23	0.18
2416	0.27x0.18	0.19
2420	0.20	0.20
2651	0.22x0.20	0.22
2602	0.28	0.20
2644	0.28	0.24
2453	0.30x0.22	0.22
Variation	*0.08*	*0.07*

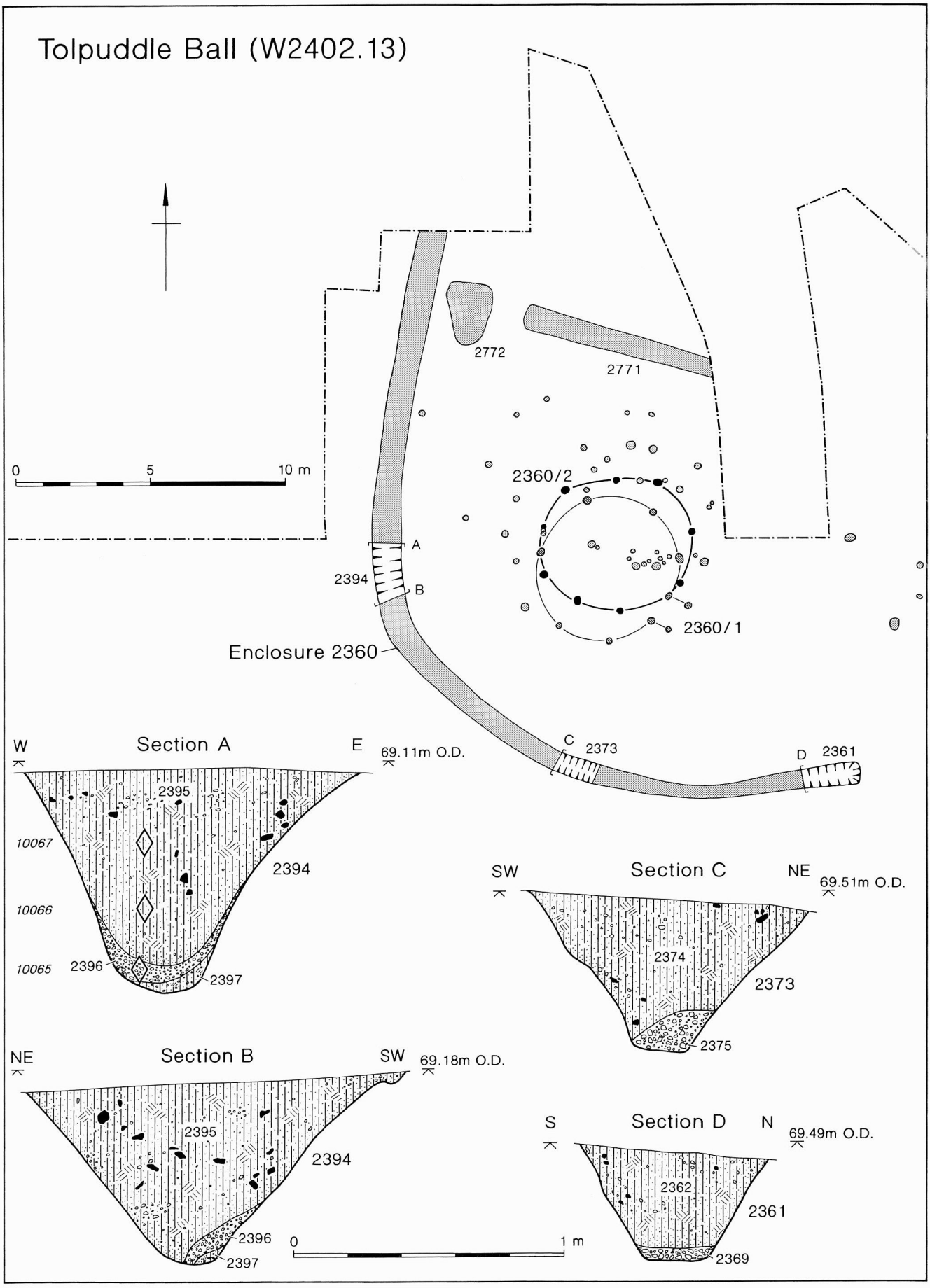


Figure 11 Phase 1: enclosure 2360

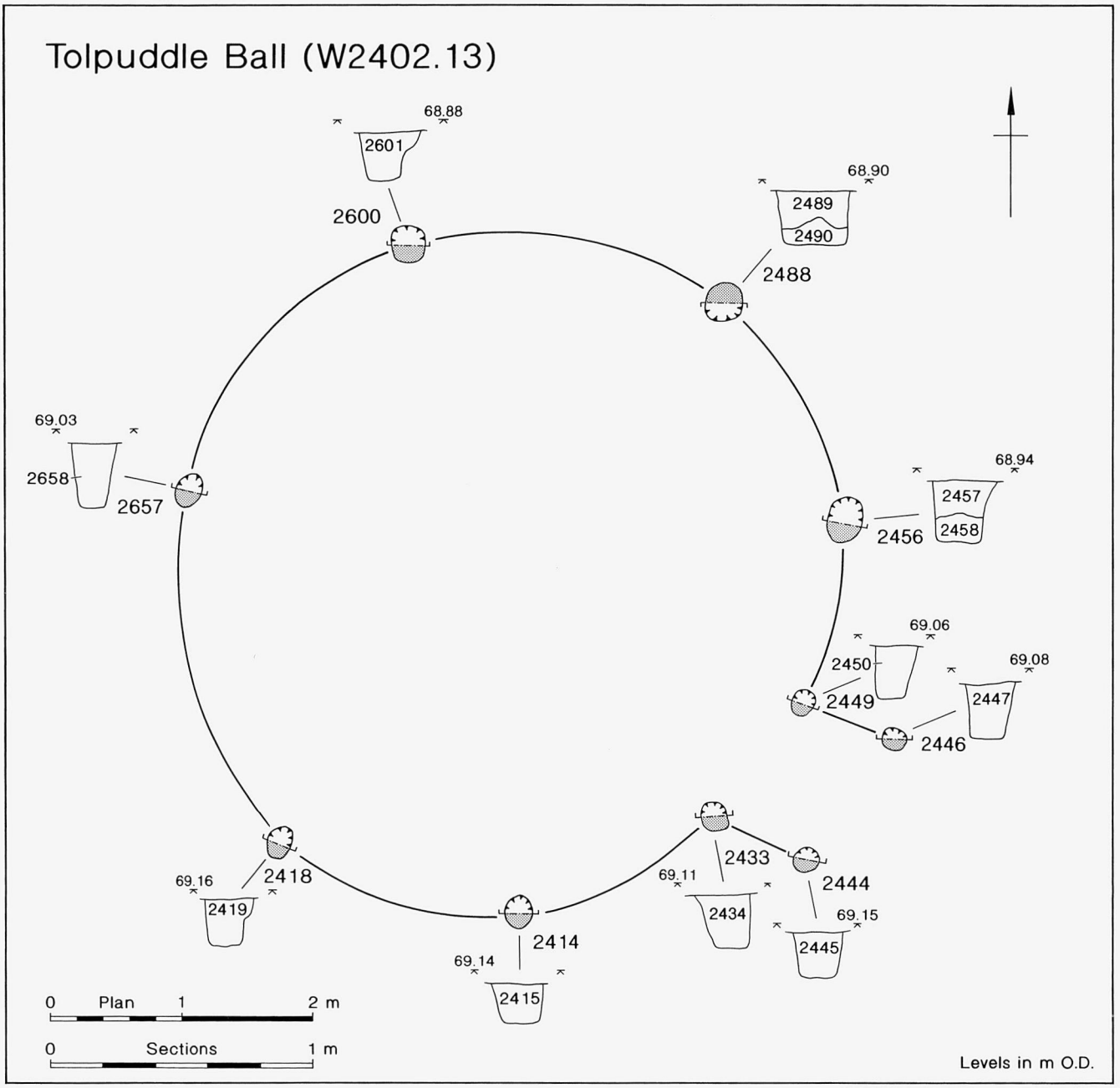


Figure 12 Phase 1: Roundhouse 2360/1

primary chalk rubble deposit (Fig. 11, section A and B). A small assemblage of pottery dated to the Early/Middle Bronze Age was recovered from both the primary and secondary fills. A suite of environmental samples was taken from the enclosure ditch for the extraction of land mollusca, charcoal and seeds. An internal ditch (2771), at least 7 m long and 0.85 m wide, and a pit (2772) lay within the *in situ* preservation area.

Post-built Structure/s within Enclosure 2360 (W2402.13)

Some 66 postholes and possible postholes were recorded within the enclosure. Post-excavation analysis demonstrated the presence of up to five separate circular structures of varying degrees of regularity, symmetry and size on the basis of the similarity of size, depth and regularity of plan of the postholes. Two separate roundhouses appear most convincing and have been denoted 2360/1 and 2360/2. Roundhouse 2360/1 (Fig. 12) is approximately 5 m in diameter. It incorporates a simple porch (1.20 m wide) facing south-east. Roundhouse 2360/2 (Fig. 13) is slightly sub-circular, 5.00 m x 5.50 m in plan. The location of the entrance is not certain from the plan. Table 4 summarises the evidence for these two structures.

Early/Middle Bronze Age Ditch 2480 (W2402.13)

The terminal and a 4.50 m length of this ditch was exposed in the extreme northern limit of the excavation trench (see Fig. 10). A 1.60 m long section of the terminal was excavated and revealed a 1.50 m wide and 0.70 m

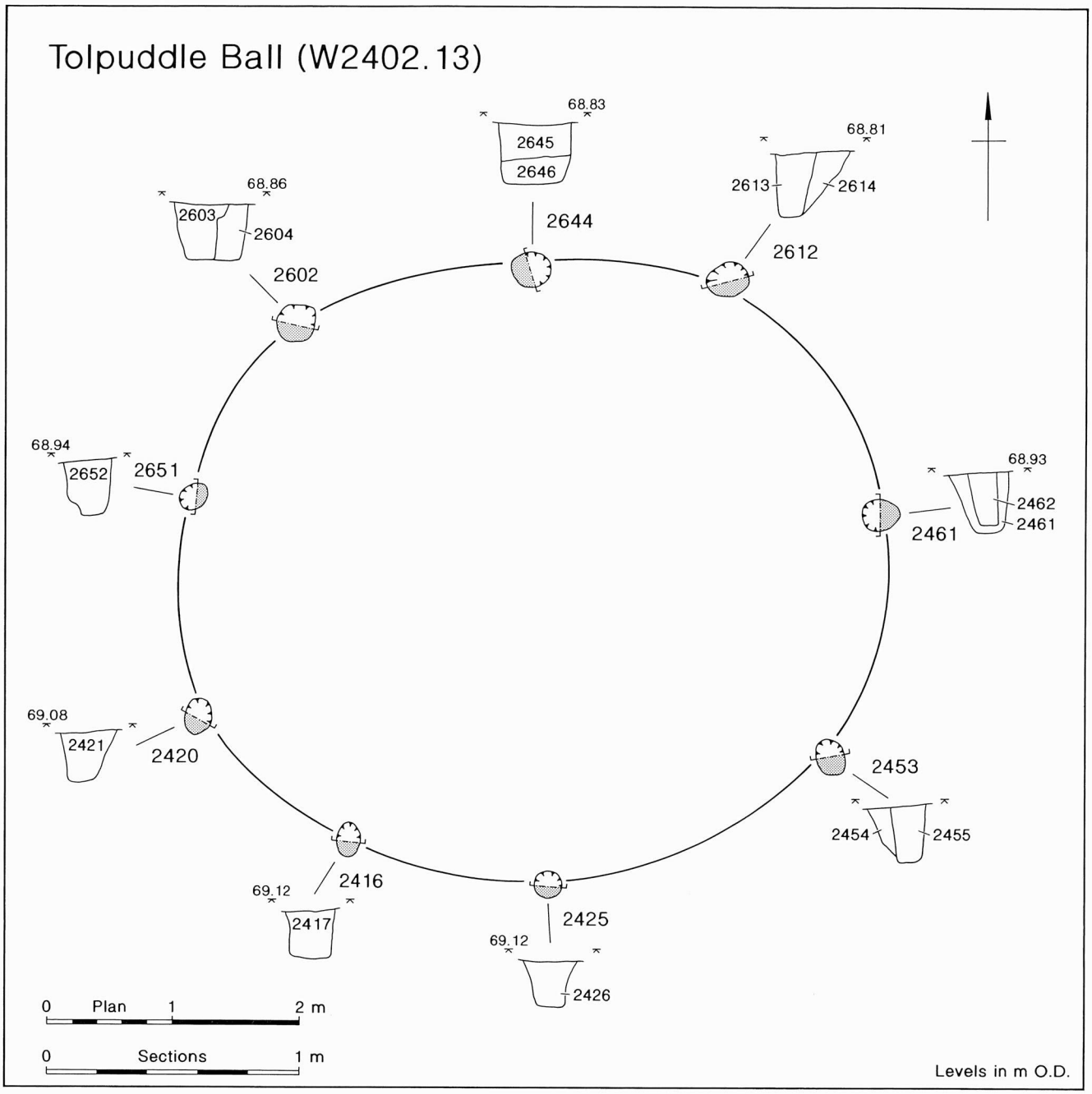


Figure 13 Phase 1: Roundhouse 2360/2

deep ditch with steep sides and a flat base (Fig. 14, section). The primary fill (2491) comprised a 0.25 m thick deposit of chalk rubble within a very pale grey silty clay matrix and contained a small assemblage of worked flint and burnt flint. The primary fill was sealed below a silty clay deposit (2481) which filled the remainder of the ditch. A small assemblage of Early/Middle Bronze Age pottery, worked flint and burnt flint was recovered from the main fill.

Early Bronze Age Pit 184 (TP93)

Pit 184 was approximately 1 m wide and 0.75 m long and 0.70 m deep with vertical or undercutting sides and a fairly flat base (Fig. 14, section). It contained two fills: the basal fill (960) comprised a dark reddish–brown silty loam with charcoal inclusions; the upper fill (183) was a dark brown silty loam with frequent flint pebbles, especially towards the top of the fill. A few of sherds of Beaker pottery were recovered from the upper fill. This feature appears to be associated with the similarly-dated pit 945 which lay immediately to the north-west.

Early Bronze Age Pit 945 (TP93)

Pit 945 was approximately 0.70 m in diameter and 0.40 m deep with straight sides and a flat base (Fig. 14, section). It contained a very dark (almost black) silty loam basal fill (958) with abundant charcoal inclusions (unfortunately not sampled). Directly overlying this fill

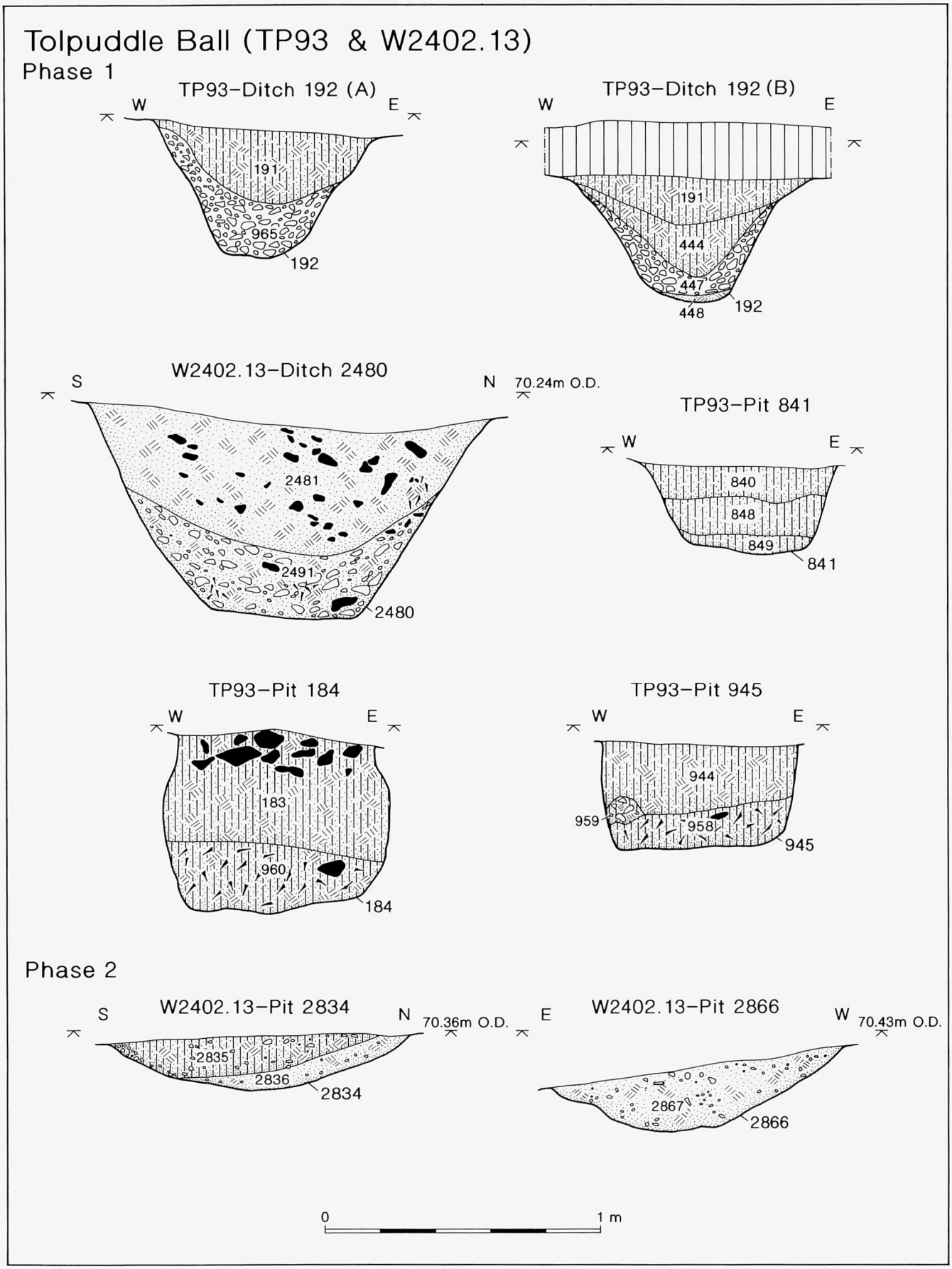


Figure 14 Phases 1 and 2: sections of pits and ditches (see Fig. 10 for location of sections)

was a chalky lens (959) which was in turn overlain by the topmost fill (944), a yellowish–brown silty loam from which small quantities of Beaker pottery were recovered.

Ditch 192 (TP93)

Ditch 192 was aligned north–south. It ran across most of the width of the 1993 trench and terminated towards the southern edge of the trench. A total length of 42 m was recorded. The ditch was cut by later features including ditch 375, grave 803 and trackway 58 (Phases 3 to 6). Ditch 192 was on average 0.85 m wide and 0.50 m deep with steep sides and a fairly flat base (Fig. 14, sections). The number of fills varied from one to four. The fills can be summarised as a chalk rubble and silty clay basal fill (448 and 965) and a yellowish–brown silty loam secondary fill (191, 444, 447, 966 and 967). The ditch was possibly contemporaneous with gully 859, which apparently continued southwards from the southern terminal of ditch 192 (see Fig. 10).

Gully 859 (TP93)

This short gully ran south from the southern terminal of ditch 192 for 6.50 m where it was completely truncated by the medieval or later hollow way. No clear relationship was discerned between ditches 192 and 859. They are interpreted as roughly contemporaneous on the basis of their similarity of alignment. Gully 859 was on average 0.45 m wide and 0.25 m deep with an irregular U-shaped profile. The basal fill comprised chalk rubble within a silty clay matrix (970) and the secondary fill a dark yellowish–brown sandy clay.

Posthole Group 2898 (W2402.13)

To the west of enclosure 2360 a group of 31 postholes was recorded (see Fig. 10). These features varied between 0.10 m and 0.50 m in diameter and between 0.10 m and 0.40 m in depth. Although the only finds recovered from these features comprised burnt flint and undiagnostic worked flint, they have been assigned to Phase 1 on the basis of their proximity to the Phase 1 enclosure 2360. No coherent structures could be discerned among this group but they could conceivably represent the traces of another Early/Middle Bronze Age post-built structure.

Phase 2: Late Bronze Age/Early Iron Age (Fig. 10)

The second phase of activity at Tolpuddle Ball is represented by two shallow pits in the northernmost part of the excavation area and a small pit or large posthole west of the Phase 1 enclosure. This group of features was recorded during the Wessex Archaeology excavation (W2402.13); no contemporaneous features have been identified from the 1993 excavation.

Pit 2834 (W2402.13)

This small oval pit lay to the north of the Phase 1 pit complex (2473 and 2897). The feature was cut into the natural chalk on a moderate to steep east-facing slope. It was 1.08 m long, 0.88 m wide and up to 0.20 m deep with a shallow 'bowl'-shaped profile (Fig. 14, section). It was very similar in shape, form and dating to pit 2866 which lay immediately to the north. The primary fill (2836) which comprised a yellowish–brown clayey silt with rare chalk inclusions filled the base of the feature and its northern side to a maximum depth of 0.09 m. It was overlain by a deposit of brown silty clay loam (2835). A small assemblage of Late Bronze Age pottery, animal bone and worked flint was recovered from the upper fill.

Pit 2866 (W2402.13)

This small circular pit, 1.00 m in diameter and up to 0.24 m deep (Fig. 14, section) was very similar to the nearby pit 2834. The single fill (2867), a light brownish–grey clayey silt, produced a small assemblage of Late Bronze Age pottery, animal bone and worked flint.

Pit / Posthole 2809 (W2402.13)

This small circular feature, either a small pit or a large posthole, lay approximately 20 m to the west of the Phase 1 enclosure 2360. It was 0.70 m in diameter and 0.30 m deep with vertical sides and a flat base. The single fill (2810) comprised a dark yellowish–brown silty clay loam with rare chalk inclusions from which Late Bronze Age pottery was recovered. Approximately 25% of the volume of the pit was filled with a concretion of pebbles. How or why this deposit formed is uncertain.

Middle Iron Age to Early Romano-British (Fig. 15)

The most extensive period of activity recorded on the site dates from the Middle Iron Age to the Early Romano-British period (4th century BC to 1st century AD). Nearly all the features associated with these periods were recorded in the TP93 excavation. A rectangular enclosure apparently formed the focus of activity during the Iron Age and its location was later re-utilised for the Roman settlement. At least two distinct phases of Iron Age activity have been defined from the stratigraphic and ceramic evidence. Further phases may have been represented in the archaeological record but the difficulty in assigning close date ranges to much of the ceramic assemblage, combined with apparent difficulties in the recording of stratigraphy, mean that they could not be identified with confidence.

The two main phases identified were:

- Phase 3 – Middle/Late Iron Age (4th to 1st centuries BC);
- Phase 4 – Late Iron Age/Early Romano-British (1st century BC to 1st century AD).

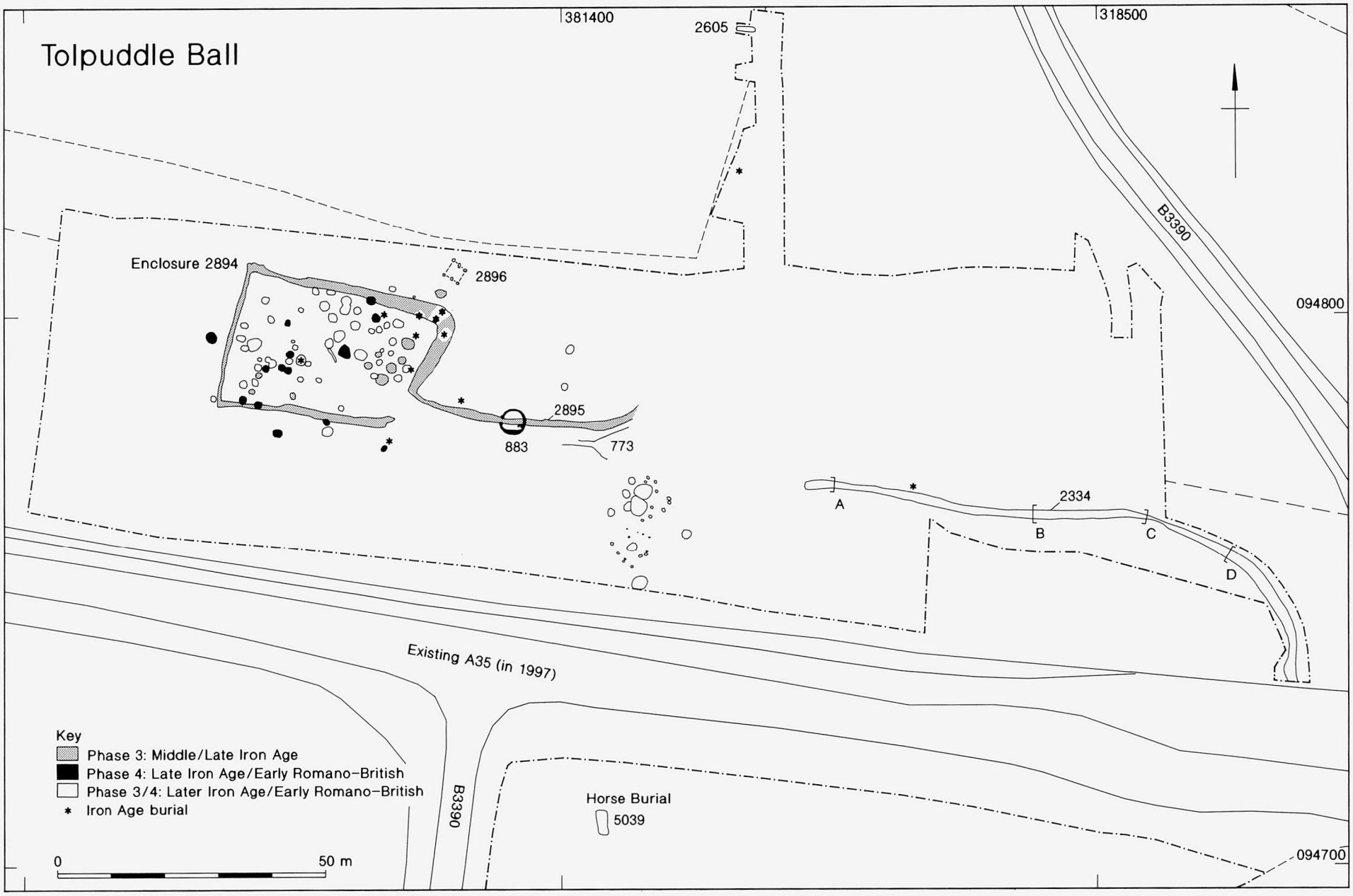


Figure 15 Summary plan of Phases 3, 4 and 3/4

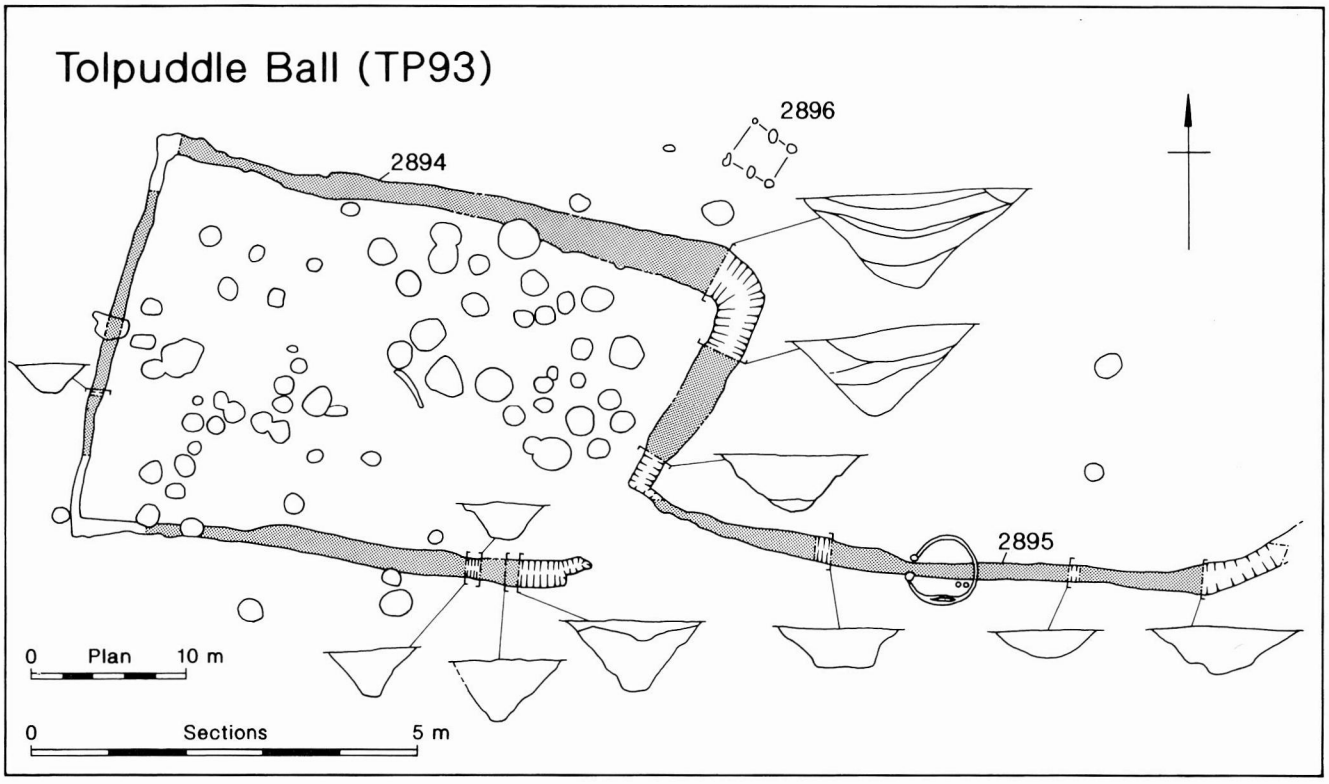


Figure 16 Phase 3: enclosure 2894 and antenna ditch 2895

Without the benefit of specific ceramic or stratigraphic evidence many features can only be assigned the broader date range of Middle Iron Age to Early Romano-British. Features in this group have been termed Phase 3/4 and are discussed separately. Among the large number of pits recorded, specific groups can be assigned to Phase 3 or to Phase 4 but many occur within Phase 3/4. The phasing of the pits is shown on Fig. 15. Pits numbers and major attributes (pit type and contents) are shown below on Figure 18. Similarly, Phase 3, 4 and Phase 3/4 human burials have also been identified; brief notes on their occurrence are provided in the relevant phase section but they are described in full as a group below (Phase 3–5).

A total of 82 pits, datable to Phase 3, Phase 4 or Phase 3/4, were excavated during the 1993 excavation. Several of the pits contained no datable finds, but have been included in these phases on the basis of their form and/or location. The pits varied between 0.30 m and 3.15 m in depth and between 0.90 m and 3.40 m in diameter. The pits were classified into three types on the basis of their profiles in cross-section and of their plans at top and bottom (see below Fig. 18):

- *Type B*: Bell pit – with undercut sides and generally circular plan, though sometimes sub-circular or sub-rectangular;
- *Type C*: Cylindrical pit – with vertical or near vertical sides and generally circular plan, though sometimes sub-circular or sub-rectangular;
- *Type O*: Other pit – with irregular, 'bowl shaped' or 'funnel shaped' profile and various shapes in plan.

It should be noted that there are considerable variations within these types and a degree of overlap between them. Of the 73 pits which could be classified 28 were type B, 26 were type C and 19 were type O. The remaining nine pits were not recorded in enough detail to enable them to be assigned to a type.

Within and around the main Iron Age enclosure (2894, see below – Phase 3) the pits can be divided into three groups, one in the north-eastern area, one in the south-western area and a small group in the north-western area. A fourth group of pits lies approximately 50 m to the south-east of the enclosure. Two other pits lay in apparently isolated positions. All the pits are summarised in Appendix 2. The pits which have been assigned to Phase 3 or 4 (11 and 13 in number respectively) are described in the relevant phase section below. A selection of the large group of pits allocated to Phase 3/4 are also described, generally being those which contained notable finds.

Phase 3: Middle/Late Iron Age

Phase 3 features comprise a rectangular enclosure with an associated linear ditch (the latter subsequently described as the 'antenna' ditch), a six-post structure and 11 pits, all excavated during the 1993 excavations (TP93). Two neonatal human burials (1357 and 1403) are also assigned to Phase 3 and are described more fully below (Phase 3–5).

Enclosure 2894 (TP93) (Fig. 16)

This sub-rectangular enclosure enclosed an area approximately 22 m (north–south) by 37 m (east–west) and had an entrance in the south-east corner. At its

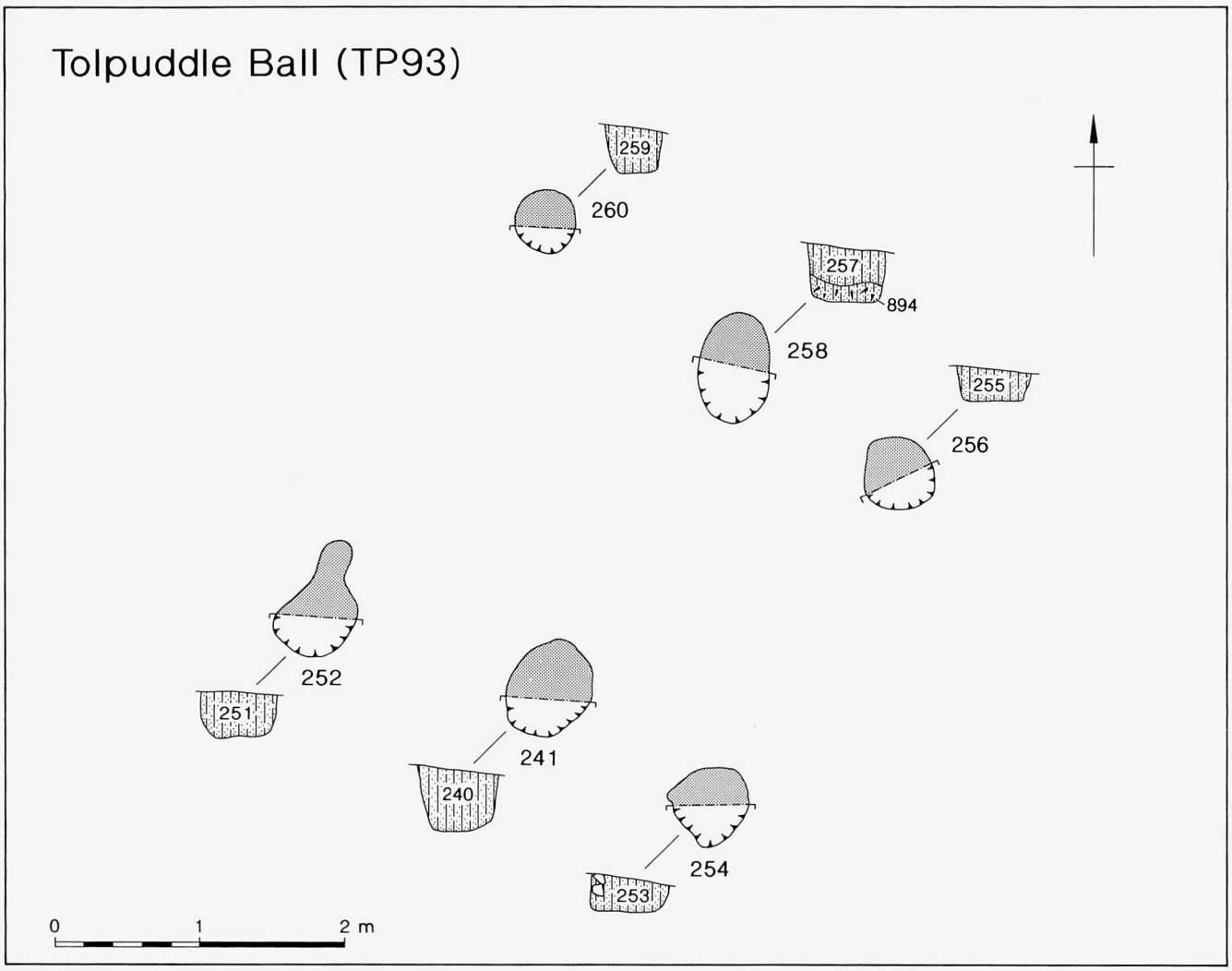


Figure 17 Phase 3: six-post structure 2896

widest the ditch was 2.80 m and 1.25 m deep with a regular V-shaped profile. The eastern side of the ditch was relatively well preserved. The western side, however, appeared to have been severely truncated and survived to a maximum depth of only 0.35 m and width 0.95 m (Fig. 16, profiles).

Approximately 17% of the length of the ditch was excavated in seven slots. The best preserved area appeared to be around the north-eastern corner. Here the ditch contained a well-stratified sequence of fills. Cut into the base of the ditch and apparently sealed below its upper fills was a neonate burial (1357 see below, Phase 3–5). The lower fills (1315 and 1371) comprised yellowish–brown silty clays to a maximum thickness of 0.60 m. A 0.15 m thick layer of chalk rubble within a silty clay matrix (1382) overlay the lower fills. Directly overlying 1382 was a large (over 109 kg) dump of fired clay (1286), mainly comprised of oven fragments. Approximately 55% of an infant skeleton (see below, Phase 3–5) interpreted as a probable *in situ* burial was also recovered from this deposit. Deposit 1286 was in turn overlain by *c.* 0.40 m of yellowish–brown silty clay loams (52 and 1381). Two later burials (52 and 1541, see below) appear to have been cut into the upper fills of the ditch in this area. Several other Phase 4, 5 and later features also cut the ditch, including large bell pits, a clay/stone-lined tank and a trackway.

The relationship between the enclosure ditch and the antenna ditch which ran eastwards from the northern terminal was investigated but no relationship was discerned. The two features are interpreted as contemporaneous.

No structures were recognised inside enclosure 2894. The pre-excavation plans, however, show a small curvilinear feature (371) approximately in the centre of the enclosure. It is possible that this was a remnant of a small roundhouse of a similar construction to the Phase 4 structure 883 (see below). If extended, the arc of feature 371 creates a circle approximately 8.0 m in diameter. This feature does not appear to have been excavated and any interpretation of it must therefore remain conjecture.

Antenna Ditch 2895 (TP93)

This irregular ditch ran from the northern terminal of the enclosure eastwards for approximately 37 m where it was truncated by the Phase 6 hollow way. It varied between 1.20 m and 2.00 m in width and was between

0.35 m and 0.60 m deep with a variable profile (Fig. 16, profiles). The antenna ditch cut the fill of Phase 1 ditch 192 and was overlain by the Phase 4 roundhouse (883). A small assemblage of Late Iron Age pottery and animal bone was recovered from the three slots excavated through the antenna ditch.

Six-post Structure 2896 (TP93) (Fig. 17)

This probable structure lay outside enclosure 2894, close to its north-east corner (see Fig. 15). It has been assigned to Phase 3 on the basis of a small assemblage of Middle/Late Iron Age pottery and so its dating is somewhat tentative. All the postholes were between 0.45 m and 0.60 m in diameter and between 0.21 m and 0.44 m deep (Fig. 17, sections). All the fills were described as brown silty loams with the exception of 894 – a charcoal-rich basal fill of posthole 258. Charcoal recovered from fill 894 was identified as predominantly oak heartwood with some hazel but is unlikely to be the remains of a post. The six posts would have supported a structure approximately 3 m square.

Phase 3 pits

Ten pits have been assigned to Phase 3. Nine lay within enclosure 2894, six towards the north-east corner (pits 19, 31, 33, 45, 84 and 1264) and three towards the south-west corner (pits 116, 1083 and 1095). The final Phase 3 pit lay outside the enclosure, approximately 1 m north of its north-east corner (pit 94) – see Fig. 18.

Pit 19 (TP93)
This sub-circular pit was 1.25 m in diameter at the top widening to 1.65 m at its base and was 1.20 m deep with irregular undercutting sides and a flat base. The primary fill (1174) comprised a yellowish–brown silty loam deposit, up to 0.40 m thick, from which a possibly articulated dog skeleton (SF 158) was recovered. Overlying 1174 was a 0.25 m thick deposit of dark yellowish–brown silty loam (1173) with charcoal lenses. Fill 1173 was in turn sealed by a chalk rubble deposit (963). The remainder of the pit was filled with a dark brown silty loam (18). A small assemblage of Middle/Late Iron Age pottery was recovered along with a larger assemblage of animal bones comprising cattle, sheep, pig, duck, crow and amphibian.

Pit 31 (TP93)
This circular pit was approximately 1.40 m in diameter and 0.80 m deep with irregular vertical sides and a flat base. The single fill (30) comprised a brown silty loam deposit. A small assemblage of Middle/Late Iron Age pottery and animal bone was recovered from the fill.

Pit 33 (TP93)
This pit was approximately 1.80 m in diameter and 1.60 m deep with vertical sides and a flat base. The primary fill (977) comprised a *c.* 0.40 m thick deposit of yellowish–brown silty loam from which a relatively large assemblage of Middle/Late Iron Age pottery was recovered. The secondary fill comprised an approximately 0.50 m thick deposit of chalk rubble (976) which was sealed by a thick dark yellowish–brown silty loam deposit (32) which filled the remainder of the pit. A small assemblage of Middle/Late Iron Age pottery was recovered from layer 32 along with a small quantity of animal bone.

Pit 45 (TP93)
This large, irregular, sub-circular pit was approximately 1.80 m in diameter at the top, widening to 2.25 m at the base and was 1.95 m deep with irregular, undercutting sides and a flat base (Fig. 19, section). The primary fill comprised a chalk rubble deposit with occasional loam lenses (1338, 1339, 1340 and 1344). The secondary fill comprised a dark brown silty loam deposit (1326, 1333 and 1337) which was in turn overlain by a second chalk rubble deposit with loam lenses (1267, 1268, 1269, 1324, 1325, 1335 and 1336). The remainder of the pit was filled with a dark yellowish–brown silty loam (44 and 1266). After recording, the skeleton of an infant (1403) was found in the remains of the collapsed section in this pit. The bones were collected and a bulk sample of the collapsed fill was taken in order to retrieve all the bones (subsequently processed by Wessex Archaeology). The position of the burial within the pit is not known.

Pit 84 (TP93)
This small sub-circular pit was 1.20 m in diameter and 0.45 m deep with vertical sides and a flat base. The pit was assigned to Phase 3 on the basis of Middle–Late Iron Age pottery from the primary fill, which comprised a 0.20 m thick, dark reddish–brown silty loam deposit (973), also containing animal bone and worked flint. The primary fill was sealed below a dark greyish–brown silty loam with abundant chalk fragments (972), which was on average 0.15 m thick. The remainder of the pit was filled with a dark brown silty loam (83).

Pit 94 (TP93)
This sub-circular pit was approximately 1.75 m in diameter and 1.36 m deep with slightly irregular vertical sides and a flat base. The primary fill comprised a chalk rubble deposit (927), confined to the eastern side of the pit. This was overlain by a dark brown silty loam deposit with *'red clay'* inclusions (925/927) overlying which was a second chalk rubble deposit (924/926) which was confined to the sides of the pit. A thick yellowish–brown silty loam (910) up to 0.30 m thick sealed all of the earlier deposits and Middle/Late Iron Age pottery was recovered from this context. A third chalk rubble deposit (909) overlay 910 and was in turn overlain by a 0.50 m thick layer of yellowish–brown silty loam (899). The two uppermost fills (93 and 888) appear to represent a slumping of the pit fills, possibly caused by the decomposition of organic remains within the pit. Romano-British pottery was recovered from context 888.

Pit 116 (TP93)
This sub-circular pit was 1.25 m in diameter at the top with slightly irregular undercutting sides. The flat base of the pit was approximately 1.50 m in diameter and the maximum depth of the pit was 1.10 m. The basal fill (856) comprised a 0.10 m thick layer of dark reddish–

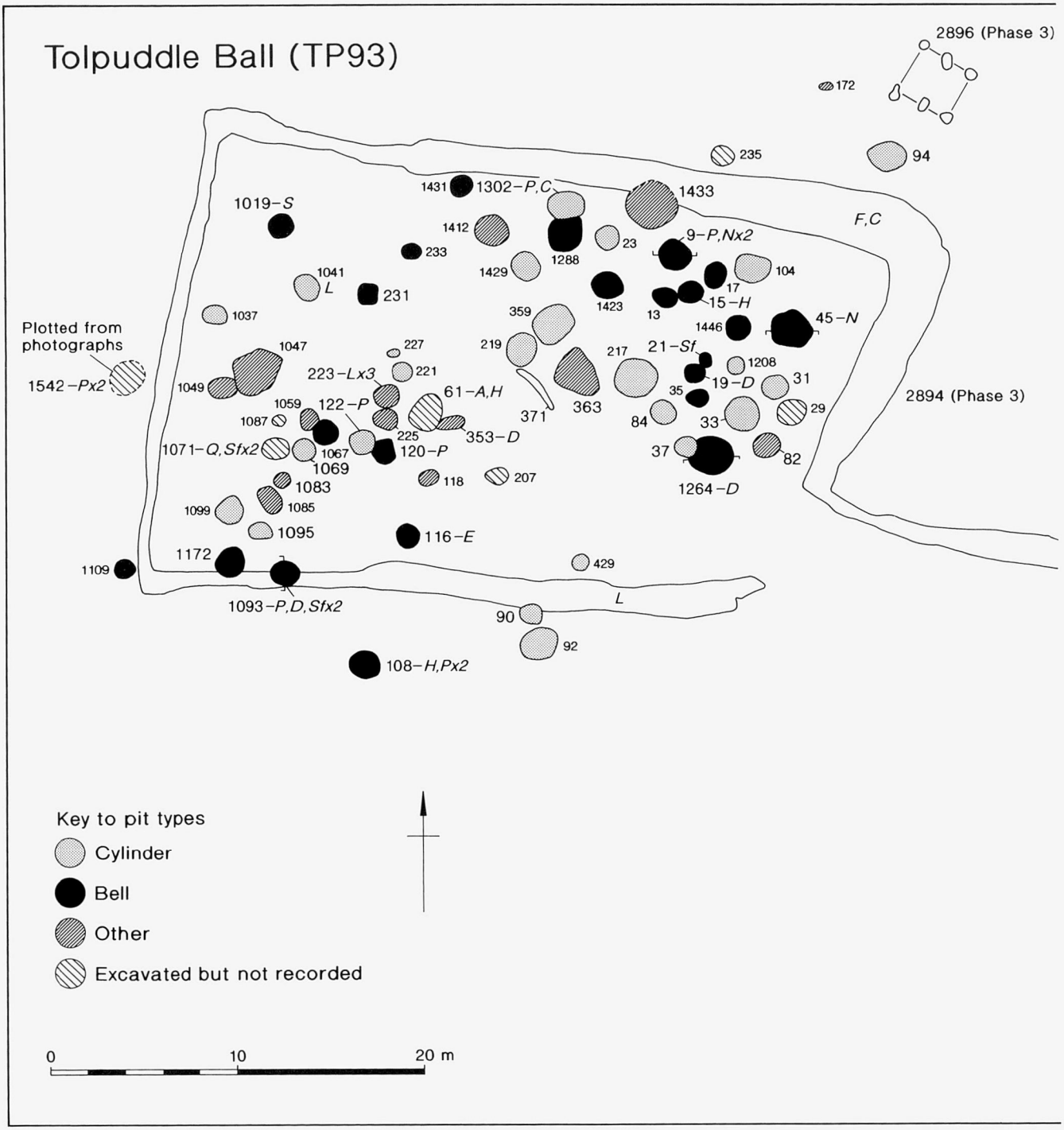
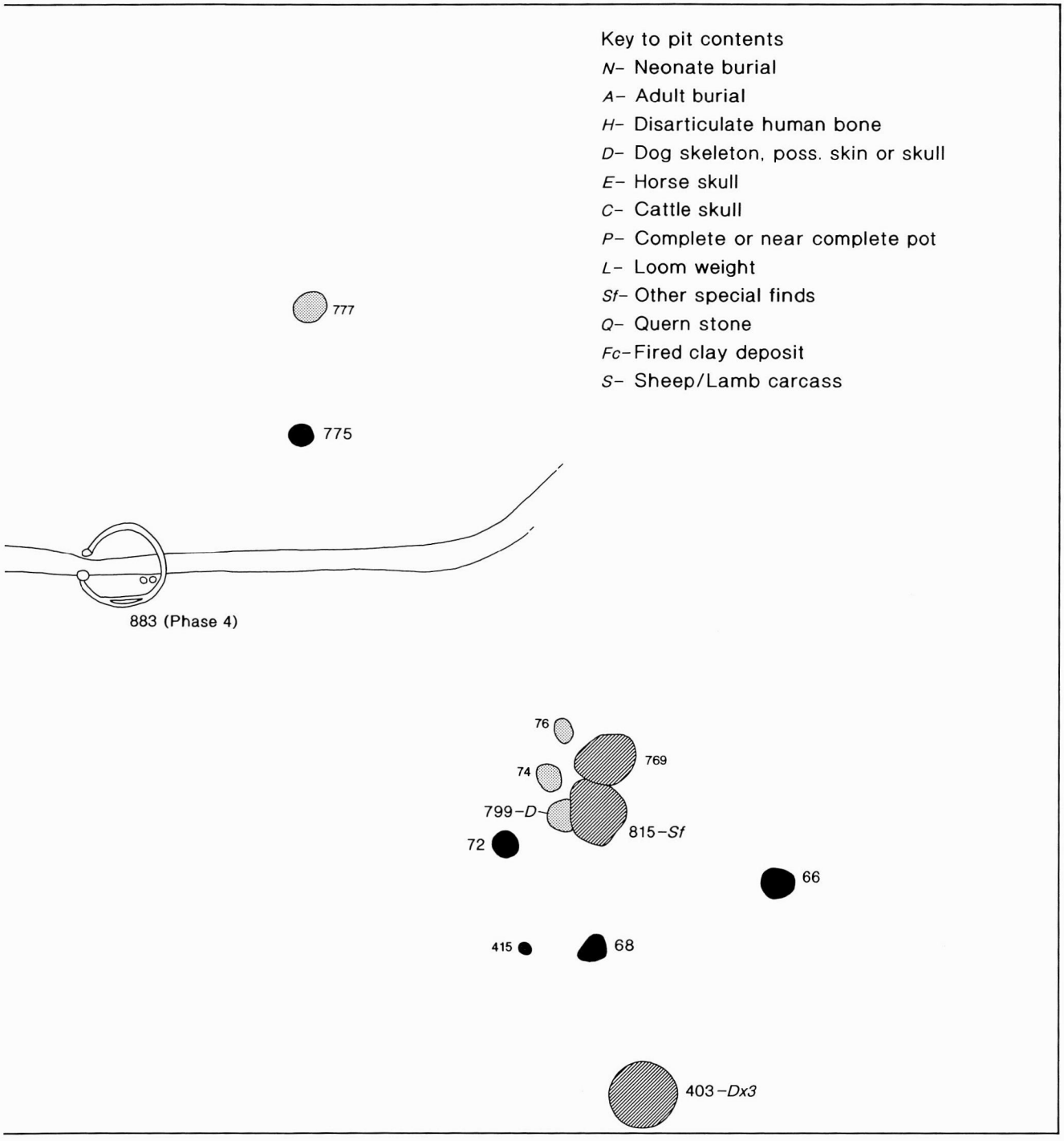


Figure 18 Phase 3, 4 and 3/4 pits: locations, types and contents

brown clay. The secondary fill was a layer of yellowish–brown clay loam (474) which was confined to the eastern side of the pit and from which Middle/Late Iron Age pottery and a horse skull and jaw (SF 230) were recovered. Sealing 474 was a 0.40 m thick deposit of yellowish–brown clay loam (470 and 471), which was overlain by a deposit of chalk rubble (469). The remainder of the pit was filled with a yellowish–brown silty loam deposit (115, 464, 465 and 816). A total of 187 animal bones were recovered from this pit, the majority of which were sheep, including the remains of at least two lambs.

Pit 1083 (TP93)

This sub-circular pit was approximately 1.10 m in diameter and 0.95 m deep with steep, irregular sides and an irregular base. The primary fill (1179) comprised a chalk rubble deposit from which Middle/Late Iron Age pottery and animal bone were recovered. Layer 1179 was overlain by a 0.45 m thick layer of dark brown silty clay loam (1178) which also contained Middle/Late Iron Age pottery. A second chalk rubble deposit (1181) confined to the western side of the pit overlay 1178. The remainder of the pit was filled with a brown silty clay loam (1082).



Pit 1095 (TP93)
This sub-circular pit measured 1.40 m by 1.20 m and was 0.65 m deep with slightly irregular vertical sides and a flat base. The primary fill (1156) comprised a silty loam deposit approximately 0.25 m thick which contained Middle/Late Iron Age pottery and animal bone. It was sealed below a 0.30 m thick chalk rubble deposit (1154). The topmost fill of the pit (1094) comprised a brown silty loam. The context sheet for 1094 records finds of pottery, flintwork and animal bones but these were not located in the finds archive.

Pit 1264 (TP93)
This large sub-circular pit was 2.30 m long, 2.00 m wide and 1.60 m deep with slightly undercut sides, widening to 2.40 m at the base (Fig. 19, section). The basal fill (1343) comprised a dark yellowish–brown silty loam deposit. This was overlain by a layer of loose chalk rubble (1342) which was in turn overlain by a second dark yellowish–brown silty loam (1334). A second chalk rubble deposit (1341) sealed fill 1334 and was below a third silty loam deposit (1300) which was also sealed below a chalk rubble layer (1299). A fourth silty loam deposit (1270) overlay 1299 and was in turn overlain by

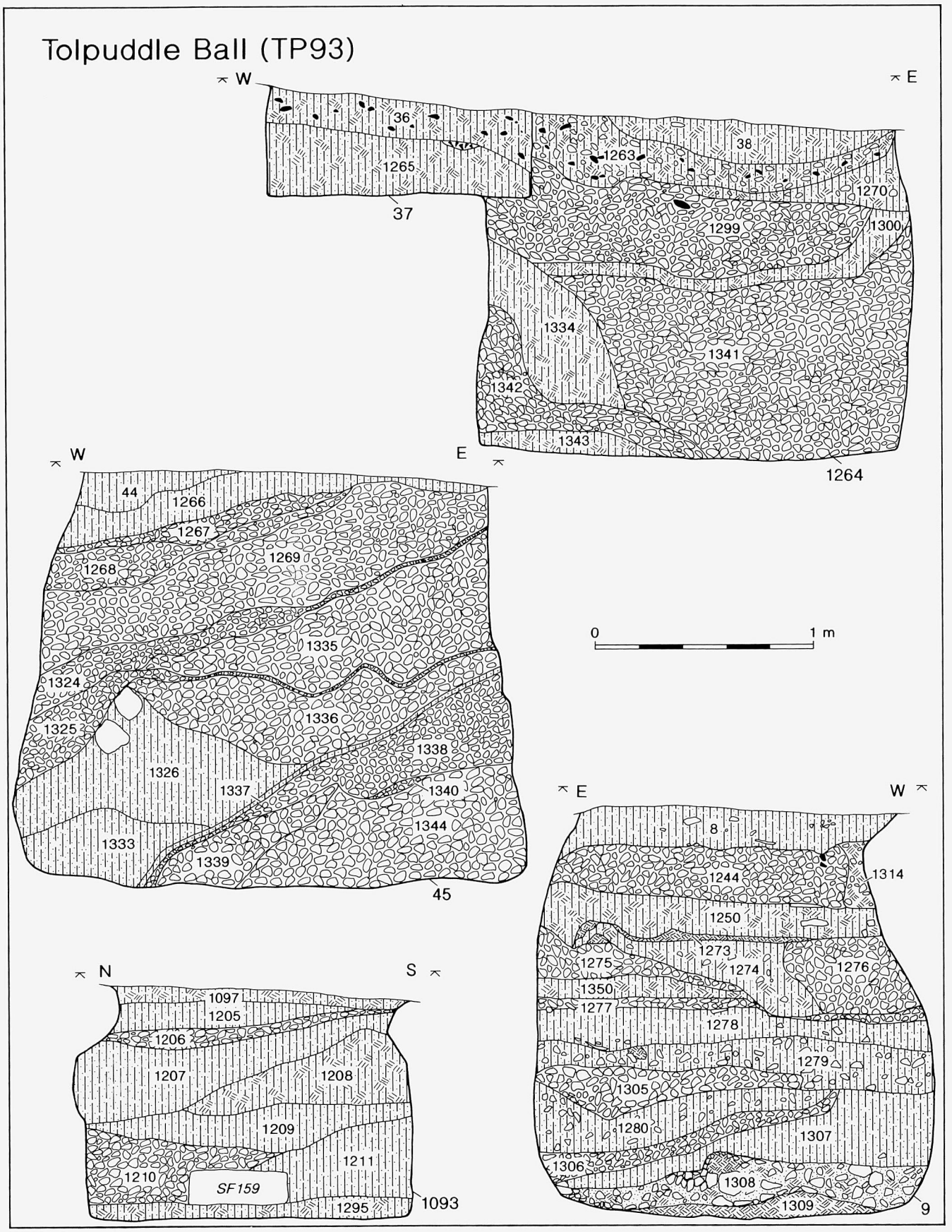


Figure 19 Phase 3 and 4: pit sections (see Fig. 18 for location of sections)

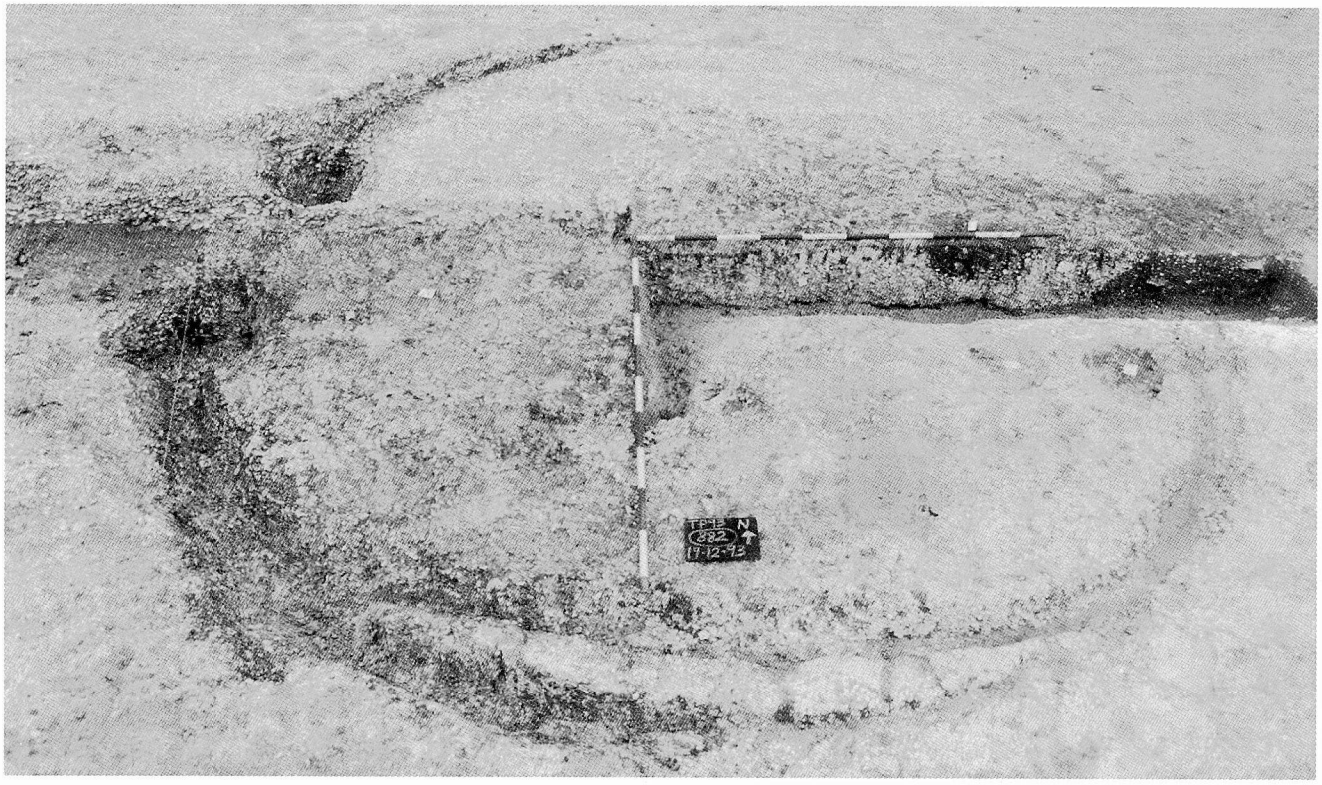


Plate 8 Tolpuddle Ball (TP93): Phase 4 roundhouse 883 overlying Phase 3 antenna ditch (scales 2 m)

a clay and chalk rubble deposit (1263). The topmost fill (38) probably represents a slump, possibly caused by the decay of organic deposits within the pit.

The pit was cut by a Phase 4 pit (37) and post-medieval trackway 58. Pottery from fill 1263 dates to the Early Iron Age and pottery from fill 1334 to the Middle/Late Iron Age. Romano-British pottery from fill 38 is probably derived from slumping after the pit had been completely filled. Animal bones recovered from the pit include the partial skeleton of a dog (SF 172) which may represent the head and feet of the animal within a skin (see Hamilton-Dyer, Section 4). Other animal bones recovered include a pair of cattle jaws (SF 171) and a small quantity of cattle, sheep and pig bones from the upper fill (38). Environmental samples taken from the loamy layers produced small quantities of charred wheat and barley grains.

Phase 4: Late Iron Age–Early Romano-British

Features assigned to Phase 4 (all recorded during the 1993 excavations) cut the Phase 3 enclosure or its antenna ditch, or contained diagnostic finds of 1st century BC/AD date. A roundhouse (883) post-dated the antenna ditch and four of the 13 pits assigned to Phase 4 cut the Phase 3 enclosure. Other features no doubt also belonged to this phase of occupation of the site, however, due to the lack of recorded stratigraphic relationships this cannot be proven. Five human burials consisting of three neonates and two adults were also assigned to Phase 4. Their occurrence and dating is noted here and they are described fully below (Phase 3–5).

Phase 4 Human Burials

Two partial neonate skeletons (1280A and 1280B) were assigned to Phase 4 since they were in a fill of Phase 4 pit 9. The skeletal remains were identified during post-excavation analysis and are interpreted as probable *in situ* burials not observed during excavation. Two adult inhumation burials were also assigned to Phase 4 on the basis of diagnostic grave goods and/or stratigraphy (1348 and 1541). A third neonate burial (568) below Phase 5 structure 702 contained a small Late Iron Age/ Early Romano-British jar. The burials are described fully below (Phase 3–5).

Roundhouse 883 (TP93) (Fig. 20, Plate 8)

A small (approximately 4 m diameter) roundhouse with a west-facing entrance was built over the Phase 3 antenna ditch. Approximately 4.50 m of the fill of the antenna ditch appears to have been removed and the cut backfilled with chalk rubble (1356) prior to the roundhouse being constructed (visible on Plate 8). The entrance to the structure comprised two substantial posts set 0.80 m apart (postholes 1257 and 1448). A penannular gully (883), with a possible re-cut (885), about 4 m in diameter represents the foundation gully for the walls of the building. Several small stake holes within and around the gullies indicate that the walls are likely to have been made of wattle and daub.

Within the structure, and presumably contemporary with it, were three small pits or postholes (1260, 1262 and 1290). These were generally sub-circular with a diameter of between 0.30 m and 0.50 m and between 0.20 m and 0.30 m deep with U-shaped profiles. An area of burnt chalk (1347) was apparently observed in the

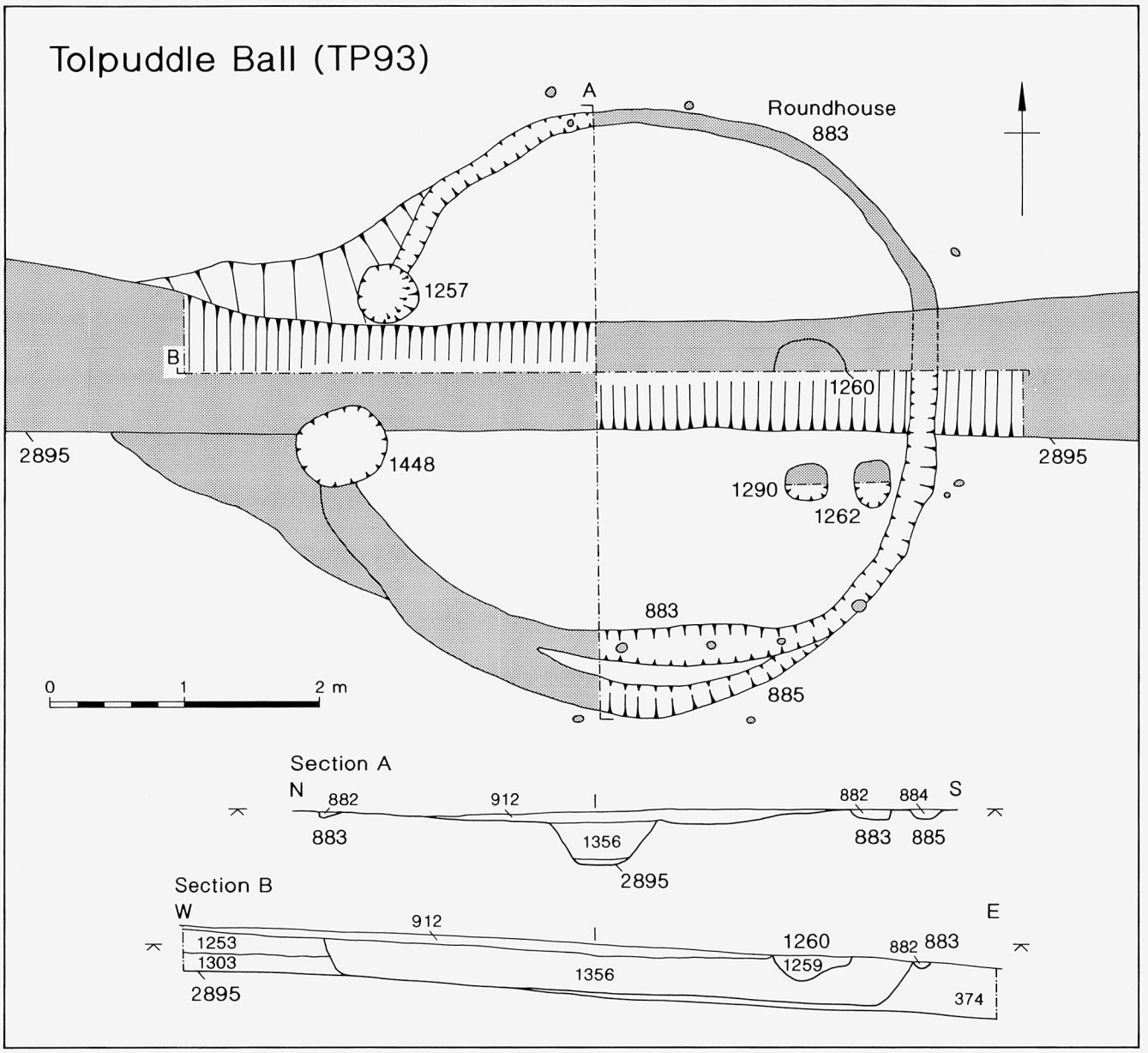


Figure 20 Phase 4: roundhouse 883

centre of the structure but its location and extent were not recorded (not therefore shown on Fig. 20).

Within the area enclosed by the roundhouse and extending beyond it to the west around the entrance and overlying some of the internal features was a layer of dark brown earth which was removed in two spits. The upper spit (189) may have been contaminated by ploughing and/or machining. The lower spit (912) may have represented a Late Iron Age occupation deposit. No samples were taken. A moderate assemblage of Late Iron Age pottery and animal bone, representing the remains of sheep, cattle and horse was recovered from the possible occupation deposit 912, gully 883 and the associated pits and postholes.

Phase 4 pits

Thirteen pits have been assigned to Phase 4. Of this group four cut the Phase 3 enclosure, three on the southern side (90, 1093 and 1172) and one on northern side (1433); seven lay within the Phase 3 enclosure (9, 120, 122, 223, 231, 363 and 1069) and the remaining two lay outside the Phase 3 enclosure, to the south (108) and to the west (1542) – see Fig. 15. Two of the Phase 4 pits contained possible structured deposits (9 and 1093) – see Fig. 18.

Pit 9 (TP93)

This large irregular sub-circular pit lay within the Phase 3 enclosure towards the north-east corner. At the top the diameter was on average 1.50 m with undercutting sides which widened to a slightly concave base 1.75 m in diameter. The pit had a maximum depth of 1.90 m and contained a complex sequence of 16 fills (Fig. 18, section). The four lowest fills comprised alternating layers of silty clay and chalk rubble. Overlying these, and confined to the eastern side of the pit, was a layer of friable grey loam (1280) from which the partial skeletons of two



Plate 9 Tolpuddle Ball (TP93): Phase 4 Pit 108 showing pottery in situ (scale 2 m)

human neonates were recovered during post-excavation. The large percentage of the two individuals recovered (60% and 40%), especially as the pit was only half sectioned, are interpreted as two *in situ* burials deliberately placed within the pit. Small quantities of disarticulated neonatal bone from the underlying fills (1307, 1308 and 1309) were also recovered and may be derived from the burials. Layer 1280 was overlain by a layer of chalk rubble (1305), which was also confined to the eastern side of the pit. Sealing this and extending across the whole pit was a layer of black, humic, silty loam. The remainder of the pit was filled with a series of alternating layers of chalk rubble and loam.

A relatively large assemblage of pottery was recovered from this pit (211 sherds), including diagnostic 1st century BC/AD forms and a near complete vessel. A suite of seven environmental samples from various deposits within the pit contained relatively large amounts of charred plant remains, including opium poppy. The presence of two neonate burials within a single fill of the pit and the complex sequence of deposits it contained may indicate the presence of a 'structured deposit'.

Pit 37 (TP93)
This small circular pit, 1.20 m in diameter and 0.45 m deep with vertical sides and a flat base, cut the upper fills of Phase 3 pit 1264. The fills comprised two layers of yellowish–brown silty loam (36 and 1265) separated by a small lens of charcoal (1320). A small assemblage of Late Iron Age pottery and animal bone was recovered from the fills.

Pit 90 (TP93)
The written records are unclear as to whether this pit actually cut the enclosure ditch or not. However, the photographs appear to show that the pit does cut the ditch and it has therefore been included in Phase 4. The pit was sub-circular, approximately 1.40 m in diameter and 0.30 m deep with vertical sides and a flat base. The single yellowish–brown silty loam fill produced Late Iron Age pottery and a single sherd of Late Romano-British pottery, the latter is interpreted as intrusive. A small assemblage of animal bone, representing sheep, cattle, horse and pig was also recovered.

Pit 108 (TP93)
This pit, which lay approximately 4 m south of the Phase 3 enclosure ditch, has been included in Phase 4 on the basis of a large assemblage of 1st century BC/AD pottery recovered from contexts 107, 780 and 781 (Plate 9). The pit was sub-circular, approximately 1.80 m in diameter at the top with slightly irregular undercutting sides and a flat base approximately 2.10 m in diameter. The pit was 1.15 m deep. The primary fill (794) comprised a deposit (up to 0.22 m thick) of chalk rubble, mainly confined to the sides of the pit, indicating an initial period of abandonment immediately after the use of the pit. Overlying the primary fill was a 0.15 m thick layer of dark yellowish–brown friable silty loam (781), again mostly confined to the sides of the pit. Overlying the two earlier fills, and confined mostly to the centre of the pit, was a 0.20 m thick black deposit (780) with abundant charcoal and burnt clay inclusions. Overlying deposit 780 and filling the remainder of the pit was a light yellowish–brown silty loam from which two near-complete, though fragmentary, Late Iron Age vessels were recovered.

Pit 120 (TP93)
This was a large sub-circular pit, one of a group towards the south-west corner of the Phase 3 enclosure. It was approximately 1.35 m in diameter and 1.50 m deep with

slightly undercutting sides and a flat base. This pit has been assigned to Phase 4 on the basis of diagnostic 1st century BC/AD pottery.

Pit 120 intersected pit 122 (see below); the stratigraphic relationship was unclear and the ceramic evidence suggests that there is no significant chronological separation between the two features. The primary fill (1361) was a thin deposit of dark brown clay loam from which pottery, and animal bones were recovered. The secondary fill (1362/1284) was a loose chalk rubble. The tertiary fill (1294), a silty loam, contained a near-complete, though fragmentary pot (SF 174). This was overlain by a further chalk rubble deposit (1281). The upper fills comprised yellowish–brown silty loams (119 and 1282).

Pit 122 (TP93)
This was a sub-circular pit approximately 1.30 m in diameter and 1.30 m deep with steep straight sides and a flat base. As noted above, its stratigraphic relationship with Pit 120 is unknown. The primary fill (1293) comprised loose chalk rubble, probably the result of the partial collapse of the pit sides during abandonment. The secondary fill (1283) was a yellowish–brown silty loam and was overlain by a thin charcoal deposit (1241). The upper fills (1200 and 121) comprised pale brown silty loams. Very large quantities of 1st century BC/AD pottery were recovered from this feature, 2293 sherds in all (over 24 kg). The small assemblage of animal bones includes goat, sheep, cattle, horse and herring gull. Environmental remains include opium poppy seeds.

Pit 223 (TP93)
This sub-circular pit was approximately 1.70 m in diameter and 0.90 m deep with irregular sides and a concave base. It was recorded as cutting pit 225 but the photographs appear to indicate the opposite. The primary fill (1396) comprised a brown silty loam and was overlain by layers of silty loam (1395 and 1394). Three loomweights (SF 188, 189 and 190) were found in the uppermost fill (222) – Plate 10. A small assemblage of 1st century BC/AD pottery was recovered from Pit 223 along with animal bone, mostly comprising sheep with a few fragments of horse, cattle, pig and dog.

Pit 231 (TP93)
This pit was one of a small group towards the north-western corner of the Phase 3 enclosure. Its exact shape and dimensions are unclear. From the post-excavation photographs it appears to be a sub-rectangular feature approximately 1.30 m by 1.50 m. It was 0.85 m deep with irregular undercutting sides and a flat base. The primary fill (1386), a coarse chalk rubble in a clay matrix, contained a small assemblage of diagnostic Late Iron Age pottery, animal bone, flintwork and shale. Overlying this was a dark yellowish–brown silty loam (1370) with abundant charcoal inclusions; this also contained diagnostic Late Iron Age pottery, animal bone, worked flint and shale. The tertiary fill (1368/1369) was a greyish–brown silty clay deposit from which Late Iron Age pottery and animal bone were recovered. The topmost fill (230) was a brown silty loam.



Plate 10 Tolpuddle Ball (TP93): Phase 4 Pit 223 showing loomweights (l–r) SF 189, 188, 190 in situ (Scale 0.5 m)

Pit 363 (TP93)
Pit 363 was one of a group in the centre of the Phase 3 enclosure. It was sub-circular, approximately 2.40 m by 2.00 m and 0.80 m deep with steep, irregular sides and a flat base. The primary fill comprised a yellowish–brown clay loam deposit (1345/1346). The context sheet record finds of pottery and animal bone from context 1345 but these were not located in the finds archive. The remainder of the pit was filled with a dark brown silty loam deposit (362/1318/1319). Late Iron Age pottery was recovered from contexts 362 and 1318.

Pit 1069 (TP93)
This sub-circular pit, approximately 1.00 m in diameter with vertical sides, lay towards the south-west corner of the Phase 3 enclosure. The depth of this pit is unknown (minimum 1.00 m). The lower fills comprised compacted chalk rubble (1440 and 1441) and the upper fills a pale brown silty loam (1439) and a brown silty loam (1068). A large assemblage of Late Iron Age pottery (1334 sherds) was recovered from fill 1068, along with a small assemblage of animal bone.

Pit 1093 (TP93) (Plate 11)
This was a large sub-circular bell pit which cut the Phase 3 enclosure ditch near its south-west corner. It was approximately 1.30 m in diameter at the top and 1.45 m at the base with irregular undercutting sides. The pit had a flat base and was 1.05 m deep (Fig. 19, section). A large pierced circular chalk disc (SF 159 = context 1296) appears to have been deliberately placed in the pit directly above the basal fill (Plate 11; see also below Plate 47). The object was partly overlain by a brown silty loam deposit which was confined to the southern side of the pit. An assemblage of Late Iron Age pottery (10

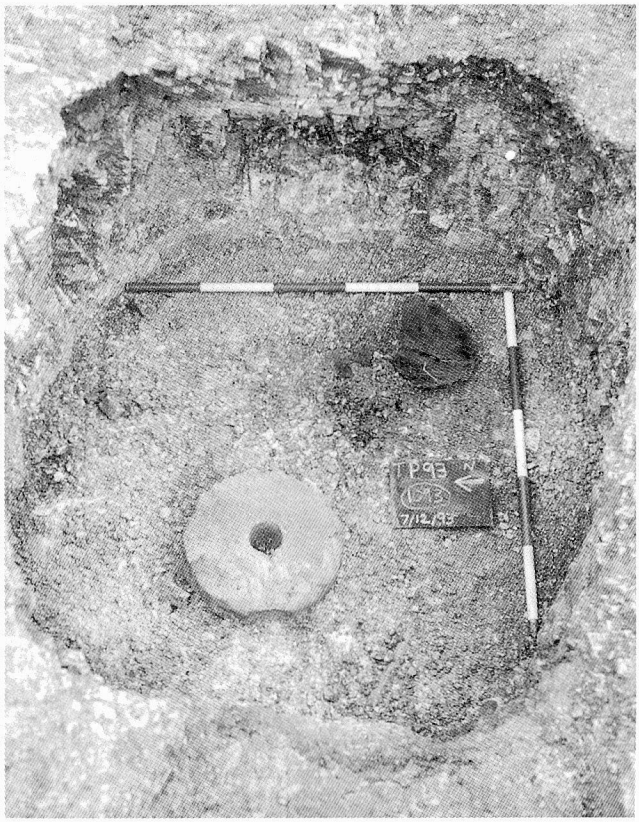


Plate 11 Tolpuddle Ball (TP93): Phase 4 pit 1093 showing chalk disc (SF 159) and pottery in situ (scales 1 m)

sherds weighing 877 g) comprising a near-complete, though fragmentary, vessel was recovered from 1211 and appears to have been placed beside the chalk disc. Partly overlying 1211 and the chalk disc was a chalk rubble deposit (1210), which was confined to the northern side of the pit. The animal bone from the pit included the partial skull, jaws and four neck vertebrae of a dog all recovered from the lower fills (1295, 1211 and 1210). Deposits 1211 and 1210 were both sealed below a layer of brown silty loam (1209) up to 0.20 m thick from which a copper alloy brooch (Fig. 42, 4) was recovered along with a small assemblage of Late Iron Age pottery and animal bone.

The overlying fills comprised two yellowish–brown silty loam deposits (1207 and 1208) sealed below a thin chalk lens (1206). The upper 0.20 m of the pit contained two layers of brown silty loam (1097 and 1205) which produced a small assemblage of Romano-British pottery. The range of finds recovered from this pit and the probable deliberate deposition of at least some of them suggest that pit 1093 contained a 'structured' or special deposit.

Pit 1172 (TP93)
This was a large sub-circular bell pit with straight undercutting sides and a flat base, approximately 1.80 m in diameter at the top and 2.20 m at the base with a depth of 1.25 m. A suggested re-cut (1097) is very irregular and is perhaps more likely to be the result of a slumping top fill which originally completely filled the pit but was truncated, probably by machining. The tip lines within the pit indicate that at least some of the fills were the result of deliberate backfilling from the southern side.

Pit 1433 (TP93)
This sub-circular pit, approximately 2.50 m in diameter and 0.55 m deep with steep, irregular sides and a flat base, lay in the north-eastern area of the Phase 3 enclosure, where it cut the enclosure ditch. The single fill (1432) contained a small assemblage of Late Iron Age pottery and animal bone, comprising sheep, cattle and pig bones.

Pit 1542/1544 (TP93)
This feature was excavated by two volunteers at the request of Liverpool University after the excavation had finished. It appears to have been located below the Phase 5 possible occupation deposit 1060, but this is uncertain. It was an irregular, sub-circular pit, approximately 1.50 m in diameter and 0.50 m deep with undercutting sides and a flat base. Two near-complete, though fragmentary, Late Iron Age Vessels (subsequently reconstructed, see below Plate 46) were found in this feature.

Phase 3/4: Later Iron Age/Early Romano-British

A large group of features excavated in 1993 cannot be dated more closely than later Iron Age/Early Romano-British due to the lack of firm dating evidence and/or the lack of stratigraphic relationships, or the failure to investigate or record such relationships as did appear to exist. This group includes linear features, postholes and a large number of pits. Five human burials were also assigned to Phase 3/4: four adults and one neonate. Finally, a few features excavated in the 1996/7 excavation (including a long curvilinear ditch) and a horse skeleton recorded nearby during the watching brief (W2405) were also assigned to Phase 3/4.

Phase 3/4 Human Burials

The four adult inhumations assigned to Phase 3/4 comprise two from the TP93 excavations (60A, 458) and two from the W2402.13 excavation (2313 and 2672). A single neonate (1286), recovered from the north-east corner of the Phase 3 enclosure ditch and identified during the post-excavation assessment, is also included in this group. The burials are described more fully below (Phase 3–5).

Ditch 2334 (W2402.13 and TP93)

The western terminal of this ditch was originally exposed at the extreme eastern end of the TP93 excavations (cut 734, fills 733 and 684). It was subsequently fully exposed within the road corridor in 1996 and nine slots were excavated across it by Wessex Archaeology. The ditch was traced from its western terminal eastwards for approximately 75 m before

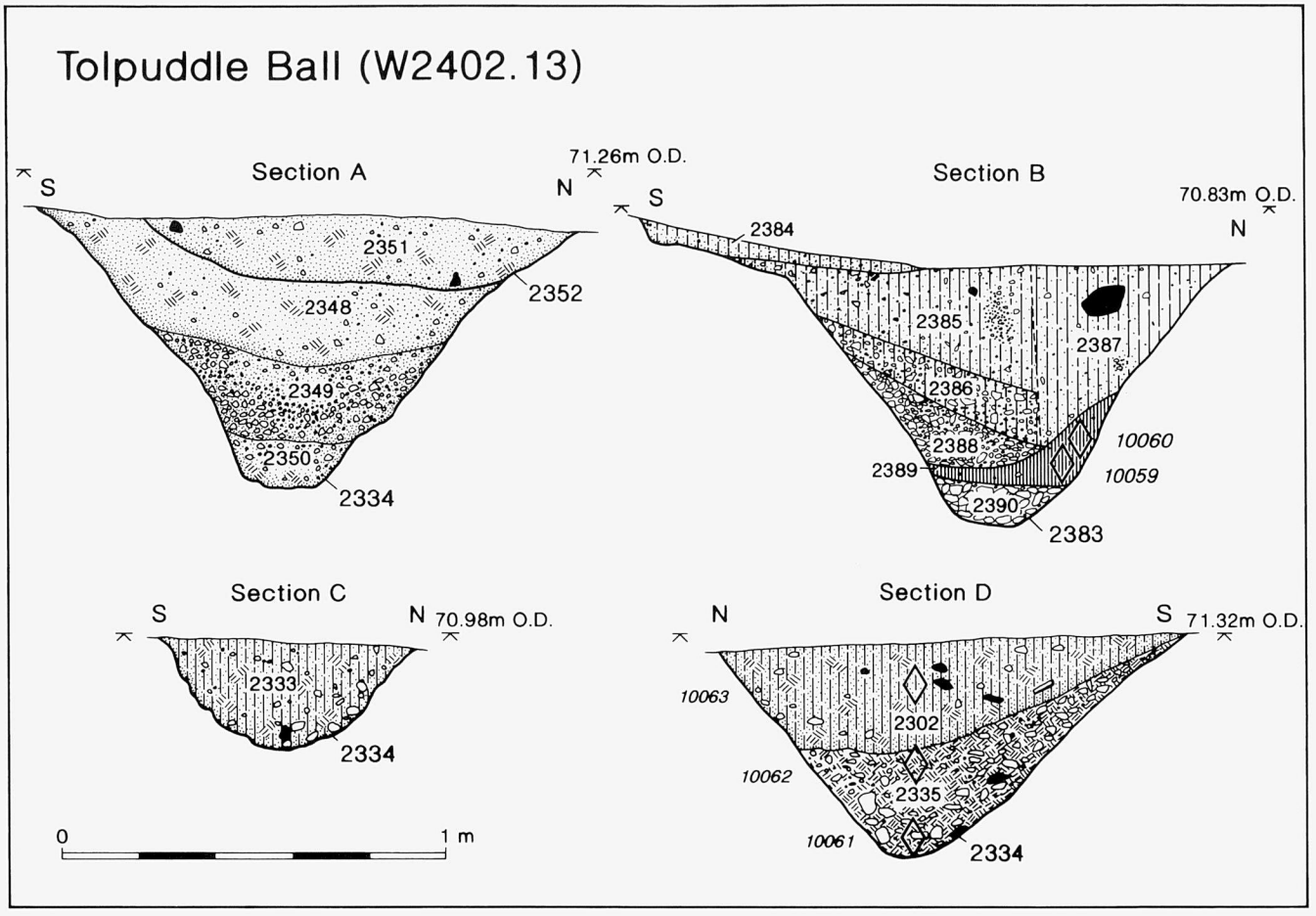


Figure 21 Phase 3/4: sections of ditch 2334 (see Fig. 15 for location of sections)

turning south for a further 30 m and continuing beyond the limits of excavation (see Fig. 15).

This ditch had a fairly regular V-shaped profile, although the actual width and depth displayed considerable variation, from 0.60 m to 1.65 m in width and from 0.30 m to 0.80 m in depth (Fig. 21, sections A to D). The fill sequence can generally be summarised as a chalk rubble in a silty clay primary fill (including 2345, 2335) and a dark yellowish–brown silty clay loam secondary fill (including 2302, 2333 and 2349), with the addition of a localised deposits or lenses of silty clay (e.g. 2342, 2350). Bronze Age and Iron Age pottery was recovered from many of these fills along with worked flint, burnt flint and animal bone. A series of mollusc samples was taken from the ditch (Allen, Section 4).

Linear Feature 773 (TP93)

This shallow, irregular linear feature was aligned approximately east–west. It was roughly parallel to and south of antenna ditch 2895. It was recorded over a length of only 9.00 m. At its eastern end the feature was truncated by the medieval hollow way; the western end appeared to peter out. Pottery of Iron Age date was recovered from its single yellowish–brown sandy silt loam fill (772). The feature was cut by Phase 5 (Romano-British) graves 802 and 908. The exact function of feature 773 is unclear.

Feature 2605 (W2402.13)

This small, shallow feature appeared to be the eastern terminal of an east–west aligned ditch, only a very short length of which (1.60 m) was exposed in the northern limit of the excavation area. It lay immediately south of the similarly-aligned Phase 1 ditch 2480. It had a slightly irregular profile and a fairly flat base. The single fill (2606) comprised a yellowish–brown silty clay loam from which pottery of Late Iron Age date, worked flint and burnt flint were recovered. As such a short length of this feature was exposed its interpretation as a ditch cannot be certain.

Horse Burial 5040 (W2405) (Fig. 22)

A large sub-rectangular pit (5039), 2.50 m long, 1.30 m wide and 0.80 m deep with slightly irregular, vertical-undercutting sides and a flat base was recorded during the watching brief. It lay approximately 100 m to the south-east of the entrance to the Phase 3 enclosure and 75 m to the south-west of the terminal of Phase 3/4 ditch 2334 (see Fig. 15). The pit contained a complete, articulated horse skeleton lying on its left side. The overlying fill (5038) comprised chalk rubble with frequent humic lenses, presumably the result of deliberate backfilling. A single very small sherd of Iron Age pottery and a few pieces of worked flint were the

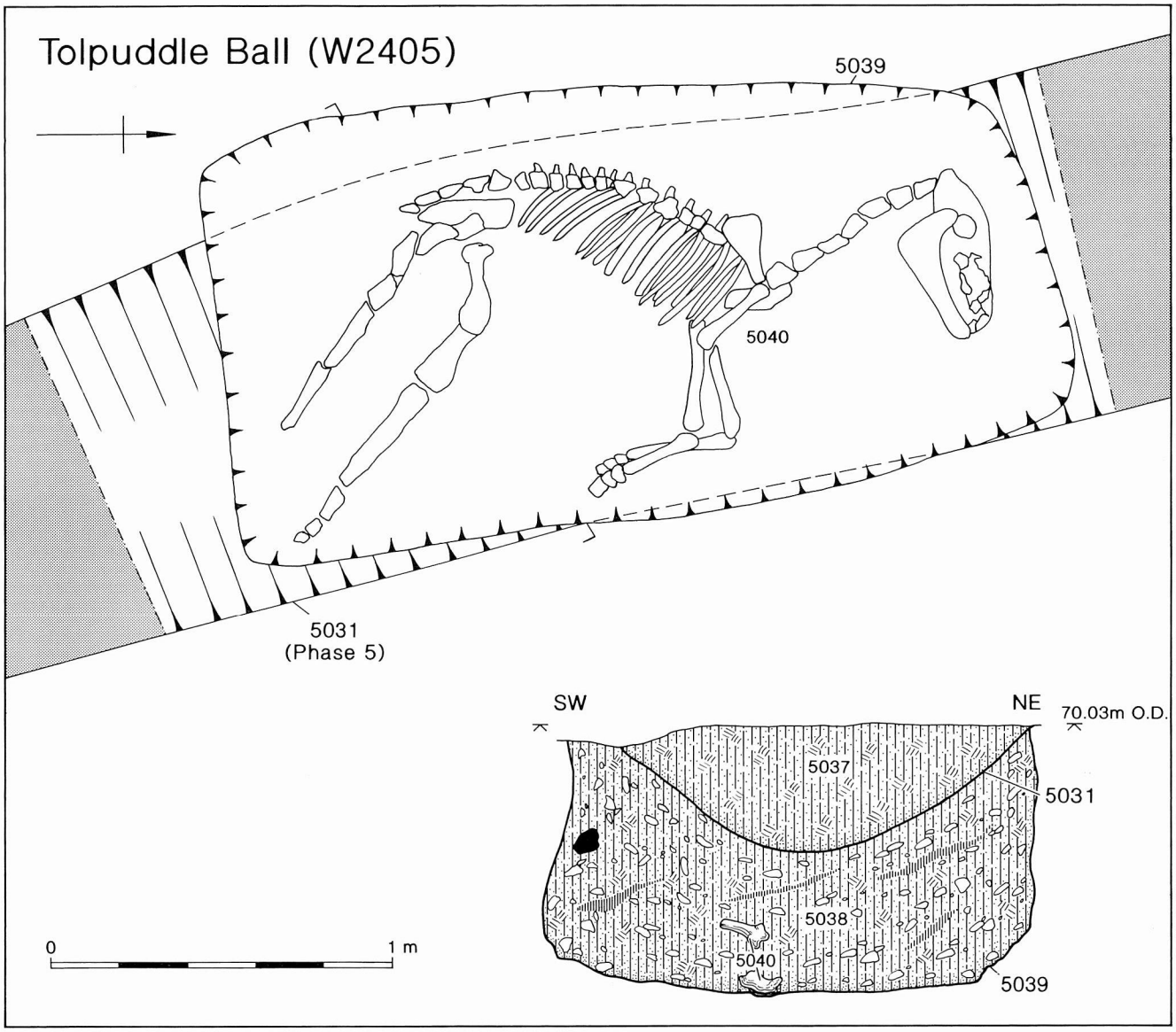


Figure 22 Phase 3/4: horse burial 5040

only finds recovered from the pit fill. The pit fill was cut by a later north–south aligned Romano-British ditch (5031, Phase 5).

Analysis of the skeleton indicates an animal aged five to eight years of a small pony-size, typical of the later prehistoric period. There is no evidence of gutting or skinning of the carcass and no obvious cause of death (Hamilton-Dyer, Section 4). It cannot therefore be determined if the animal died from natural causes or if the burial was a 'special' deposit of some sort.

Phase 3/4 Pits

A total of 58 pits was assigned to Phase 3/4. These include a large group inside the Phase 3 enclosure and a significant number outside the enclosure (see Fig. 15 for location). Several of the Phase 3/4 pits contained possible 'structured deposits' in the form of human (Pit 61) or animal burials (Pits 403, 353 and 799) and possibly deliberately-placed animal skulls in association with near complete pots (pit 1302). Other pits contained objects of intrinsic interest (e.g. pits 21, 66, 815, 1019 and 1071–see Fig. 18) and four pits had slightly unusual forms (pits 68, 72, 82 and 815). These pits are described below, ordered by feature number. The remainder of the Phase 3/4 pits are described in full in the archive and are summarised in Appendix 2.

Pit 21 (TP93)

Pit 21 was small and sub-circular, one of a group towards the north-eastern corner of the Phase 3 enclosure. It was approximately 0.90 m in diameter and 0.50 m deep with near-vertical sides and a flat base. The primary fill (1242) comprised a yellowish–brown silty loam deposit which produced Late Iron Age pottery, animal bone and two objects – a bone needle (Fig. 59, 3) and an unidentified iron fragment. The primary fill was sealed below a layer of chalk rubble (1241) which was in turn below the topmost fill.

Pits 61 and 353 (TP93)
Pit 61 was a large sub-circular pit, one of a group in the centre of the Phase 3 enclosure. It was between 1.50 m and 2.00 m in diameter. The depth and shape of the sides of the pit were not recorded. The context sheet describes six different fills (all context 60). No post-excavation plan or section was drawn and no post-excavation photographs were taken. A partial human skeleton (60A = SF 165) was found within this pit (see below Plate 18). It is unclear whether the human remains were actually within the pit or if they represent a later grave cut into it. It is probable that the burial was originally complete but was damaged by later ploughing. A small quantity of disarticulated human bone (60B) and animal bone (cattle, sheep and pig) were also recovered along with an assemblage of Late Iron Age pottery. Although only 14 sherds of pottery were recovered the mean sherd weight (69 g) may indicate that it was a deliberate deposit rather than accidental inclusion.

Pit 61 intercut with a small sub-rectangular pit (353), which was 1.40 m long and 0.70 m wide. The relationship between the two pits was not recorded. A small assemblage of Late Iron Age pottery was recovered from pit 353, as was a dog skull with butchery marks and a number of other dog bones, possibly representing a complete or partial skeleton.

Pit 66 (TP93)
This fairly large, sub circular pit, situated among the small pit group 55 m to the south-east of the entrance to the Phase 3 enclosure, was approximately 1.60 m in diameter and 1.50 m deep with vertical sides (slightly undercut on the south-eastern side) and a flat base. The pit produced a shed deer antler (SF 142). The antler shows no obvious signs of wear (for example as might be expected if it had been used as a pick) but one tine has been cut.

Pits 68 and 72 (TP93)
Pits 68 and 72 were both located in the group of pits approximately 50 m to the south-east of the Phase 3 enclosure. Pit 68 was sub-circular in plan, approximately 1.40 m in diameter and 1.30 m deep, with undercutting sides and a flat base. In the base of the pit, close to the southern side, was a small circular feature 0.45 m in diameter and 0.35 m deep with vertical sides and a flat base, the fill of which was indistinguishable from the basal fill of the pit. A small assemblage of Late Iron Age pottery was recovered from the pit and large quantities of barley and a small amount of wheat grains were recovered from samples taken from the basal fill.

Pit 72 was approximately 1.25 m in diameter and 1.05 m deep with irregular, undercutting sides and a flat base. In the base of the pit, close to the edge on the south-eastern side was a small circular pit or posthole, 0.45 m in diameter and 0.60 m deep, with vertical sides and a flat base. As in pit 68 the fill of the pit/posthole was identical to the basal fill of the pit. A small assemblage of Late Iron Age or early Romano-British pottery and animal bone, comprising horse, cattle and sheep bones, was recovered from this pit. A similar pit/posthole was found in the base of pit 815 (see below) which was in the same pit group. Such features cut into the base of pits have been recorded at other Iron Age sites, for example Danebury (Cunliffe 1995, 263).

Pit 82 (TP93)
Pit 82, which lay in the north-eastern area of the Phase 3 enclosure, was approximately 1.30 m in diameter and up to 1.20 m deep. The western side was undercut while the eastern side was near-vertical. The base of the pit was approximately 0.35m deeper on the western than the eastern side and a sharp step in the base possibly indicates that it was a partly-excavated bell pit which was being dug in a series of spits. Similar unfinished pits have been recorded at Danebury (Cunliffe 1984, 128).

Pit 403 (TP93)
This pit, located against the southern limit of excavation approximately 60 m to the south-east of the enclosure entrance, was the largest pit recorded on the site. The context records and drawings indicate that the pit was between 3.10 and 3.50 m in diameter and 3.15 m to 3.30 m deep. The pit sides were fairly steep and straight at the top and at a depth of approximately 2 m they became almost vertical down to the flat, *c.* 1.85 m diameter, base.

The basal fill (845) comprised a loose chalk rubble, on average 0.20 m thick, which was overlain by a 0.07 m thick, yellowish–brown silty loam deposit (839). A 0.45 m thick layer of chalk rubble (838) sealed deposit 839 and was overlain by a 0.10 m thick deposit of brown silty loam (837). Directly above 837 was a *'bed of flint and pebbles'* on which a dog skeleton (SF 123) lay on *'its left side in an extended position with legs bent'*, possibly deliberately placed. Other animal bones recovered from the same context appear to represent the partial remains of two pups. The bed of flint and pebbles and the dog skeleton are included in context 837 which, in addition to the above, also comprised the *c.* 1.30 m of chalk rubble which overlay them. The uppermost fill (402) comprised a 1.25 m thick deposit of brown silty loam.

Pits 799 and 815 (TP93)
Pit 799 was a circular pit approximately 1.50 m in diameter and 1.40 m deep with vertical sides and a flat base. It was one of a group which lay approximately 50 m to the south-east of the Phase 3 enclosure. A sherd of Late Iron Age pottery was recovered from its single fill, along with an assemblage of animal bone, including the skull and neck vertebrae of a dog. These bones were found in the base of the pit, close to the excavator's section line. It is uncertain whether the bones formed part of a complete articulated dog skeleton which was not fully excavated or represents the deliberate deposition of just the dog's head.

Pit 799 was truncated on its eastern side by a large irregular pit (815) which was 3.35 m long and 2.50 m wide. The sides of Pit 815 were straight and sloped inwards at an angle of about 45° to a depth of 0.60 m where the pit narrowed to about 1.80 m wide. Below this, the sides were vertical and dropped to a flattish base. A small irregular feature approximately 0.50 m in diameter and 0.25 m deep was cut into the base of the pit, close to the northern side (similar to those recorded in Pits 68 and 72 – see above). Among the finds recovered

from Pit 815 were Late Iron Age pottery, a fine antler linch pin (Fig. 59, 5), hare bones and a shark tooth. Pit 815 was cut on its northern side by a large irregular pit (811).

Pit 1019 (TP93)
This sub-circular bell pit, one of a small group in the north-western corner of the Phase 3 enclosure, was approximately 1.30 m in diameter at the top, widening to 1.50 m at the base, and was 1.10 m deep with irregular, undercutting sides and a flat base. The primary fill (1399) contained abundant charcoal including oak roundwood and heartwood, hazel, hawthorn, gorse and heather. The secondary fill (1398) comprised a small lens of chalk rubble confined to the eastern side of the pit. Overlying this was a sequence of silty loams (1400, 1402, 1404, 1018) some with abundant charcoal inclusions, and chalk rubble deposits (1401) which produced Late Iron Age to Early Romano-British pottery and animal bone. Most of the animal bone from the pit was sheep or sheep-sized, including a high number of immature bones, probably from a single animal of about six months old. It is probable that these bones represent a complete or partial carcase.

Pit 1071 (TP93)
Pit 1071, a sub-circular pit approximately 1.40 m in diameter, was located in the south-west area of the Phase 3 enclosure. The finds from the pit included Late Iron Age/Early Romano-British pottery, a flat iron disc, an iron knife and a fragment from a rotary quern.

Pit 1302 (TP93)
Pit 1302, a sub-circular pit approximately 1.70 m in diameter an 0.60 m deep with vertical sides and a flat base, lay in the north-eastern area of the Phase 3 enclosure, close to the enclosure ditch itself. On the base of the pit was a complete cattle skull, apparently deliberately placed. The skull lay close to the eastern side of the pit, among flint pebbles and unworked slabs of Kimmeridge shale. Late Iron Age pottery, including a near complete, though fragmentary, vessel was also recovered from this feature.

Phase 5: Romano-British (Fig. 23)

Features and deposits of Romano-British date were recorded within the 1993 excavation area (TP93) and during the watching brief, both north of the 1993 excavation area and to the south of the A35 (as it existed in 1997). The range of features encountered included probable building remains and occupation layers, a tank and pit likely to be associated with the preparation of leather, a grain drier, ditches and pits. Human burials was also assigned to Phase 5 comprising four adults and five neonates/infants.

Phase 5 Human Burials

Three of the adult burials assigned to Phase 5, one recorded during the evaluation (TP91, 7/3) and two excavated in 1993 (802 and 908, both in coffins) occured close together some 30 m east of the Phase 3 enclosure (see below Fig. 26). One of this group was an adult female (908) buried with an infant (1559). The four neonates comprised one excavated burial (1413), one identified by Liverpool University during post-excavation assessment (546) and two recorded during post-excavation (1038 and 1387). Two of the neonate burials were in close proximity (1038 and 1387) but overall they formed a dispersed group away from the contemporaneous adult burials. A fourth Romano-British adult burial (5067) was discovered during the watching brief some 100 m north of the main site (see Fig. 8 for location). This burial is dated later 4th century by a coin placed with the burial. All the Phase 5 burials are described more fully below (Phase 3–5).



Plate 12 Tolpuddle Ball (TP93): Phase 5 structure 702 (scales 2 m)

Structure 702 (TP93) (Fig. 24)

This probable structure, dated only to between the 1st and 4th centuries AD, appears to be the remains of a rectangular building which was partly terraced into the east-facing slope. The terracing cut (702) was aligned approximately north-west to south-east with a maximum depth (at the north-west end) of 0.24 m. The base of the terrace was level, varying by only 0.14 m over its 4.5 m length. The width of the terrace was approximately 3 m. Layer 716 was apparently some form of metalled surface within the building (not planned). The metalling apparently lay below the uppermost fill of the terracing cut (40) and above the basal fill (54/717). A possible wall or wall footing (718), comprising unmortared flint nodules, ironstone,

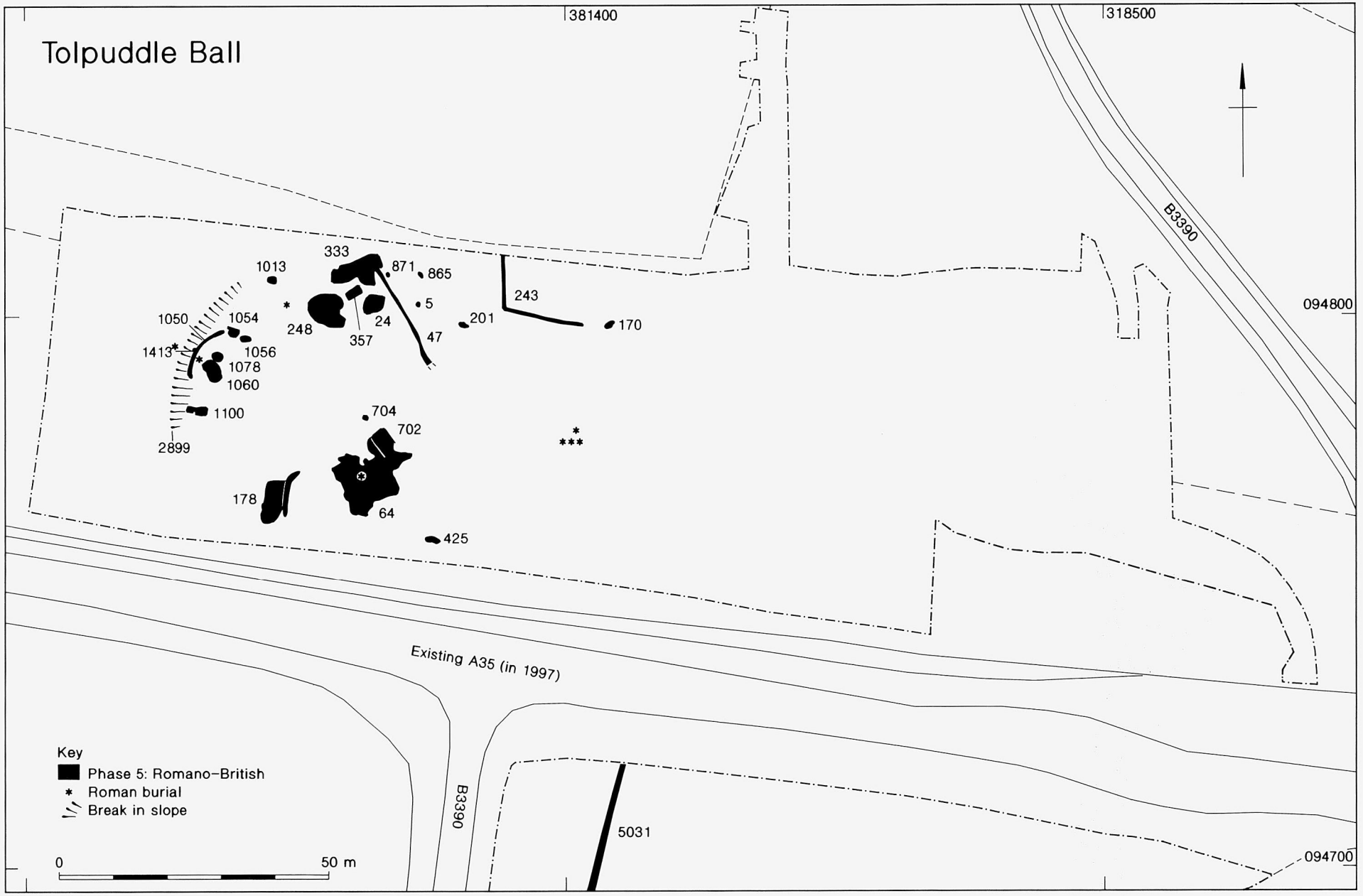


Figure 23 Summary plan of Phase 5

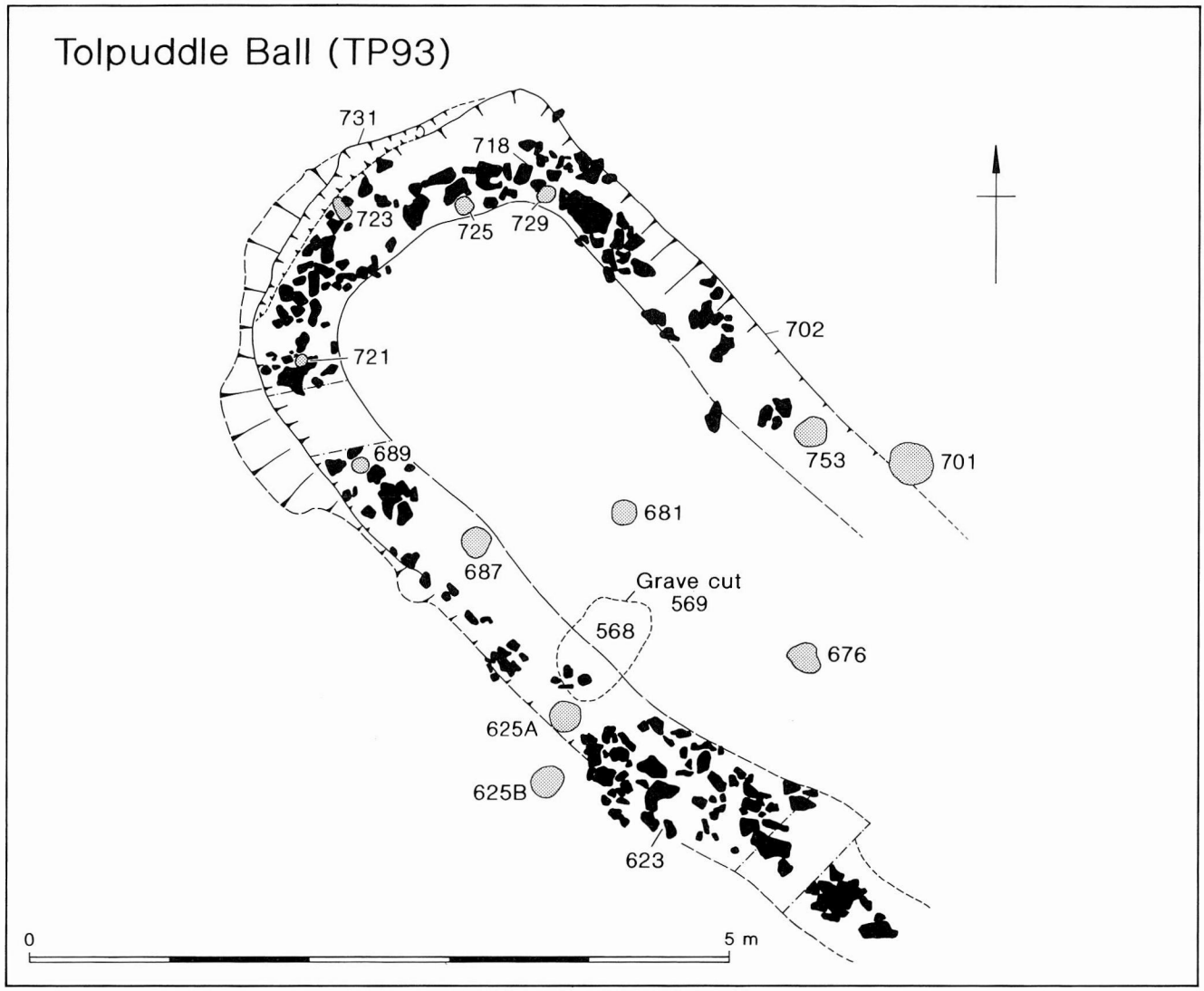


Figure 24 Phase 5: structure 702

sandstone and chalk blocks, appeared to run along the north-east, north-west and south-west sides of the terrace cut. Several objects were recovered from wall 718 including an incomplete loomweight (Fig. 57, 7) and fragments of two stone mortars (Fig. 57, 8 and 9). The wall may have continued along the south-eastern side of the building since a layer of unmortared flint nodules, ironstone, sandstone and chalk (622) was recorded in this area within a shallow linear depression (623). Overall a building in excess of 6 m long and approximately 3 m wide appears to be represented.

Five small postholes were located within the north-western end of the wall/wall footing (689, 721, 723, 725 and 729). A further five possible postholes were recorded within (625A, 687, 753) or adjacent to (625B and 701) the south-eastern half of the wall/wall footing. These features are interpreted as components of the structure. Two further postholes were noted within the possible structure (676 and 681) but it is uncertain if these represent elements of the structure or were unrelated. A small curvilinear gully (731) was recorded on the outside of wall/wall footing 718 around its north-western side. This may represent a small drainage gully associated with the structure. Sadly the graphic recording of this probable structure is poor. However, the photographs appear to show a fairly convincing terrace and other features (Plate 12).

Feature 569 was cut into the base of the terrace and apparently sealed below its basal fill (see Fig. 24 for location). It contained an infant burial (568) and a complete Late Iron Age/Early Roman pot (Fig. 50, 39; see below, Plate 24). The burial is very likely to pre-date the structure. Many other features were excavated in this area, at least some of which were probably postholes associated with the structure. From the available records it is not possible to establish the overall nature and form of the structure in any detail.

Layer 64/426 (TP93)

This extensive, irregular layer which contained large quantities of pottery, animal bone and metalwork appeared to be confined to a shallow irregular depression in the underlying chalk. It lay immediately to the south-west of the possible structure 702 (see Fig.

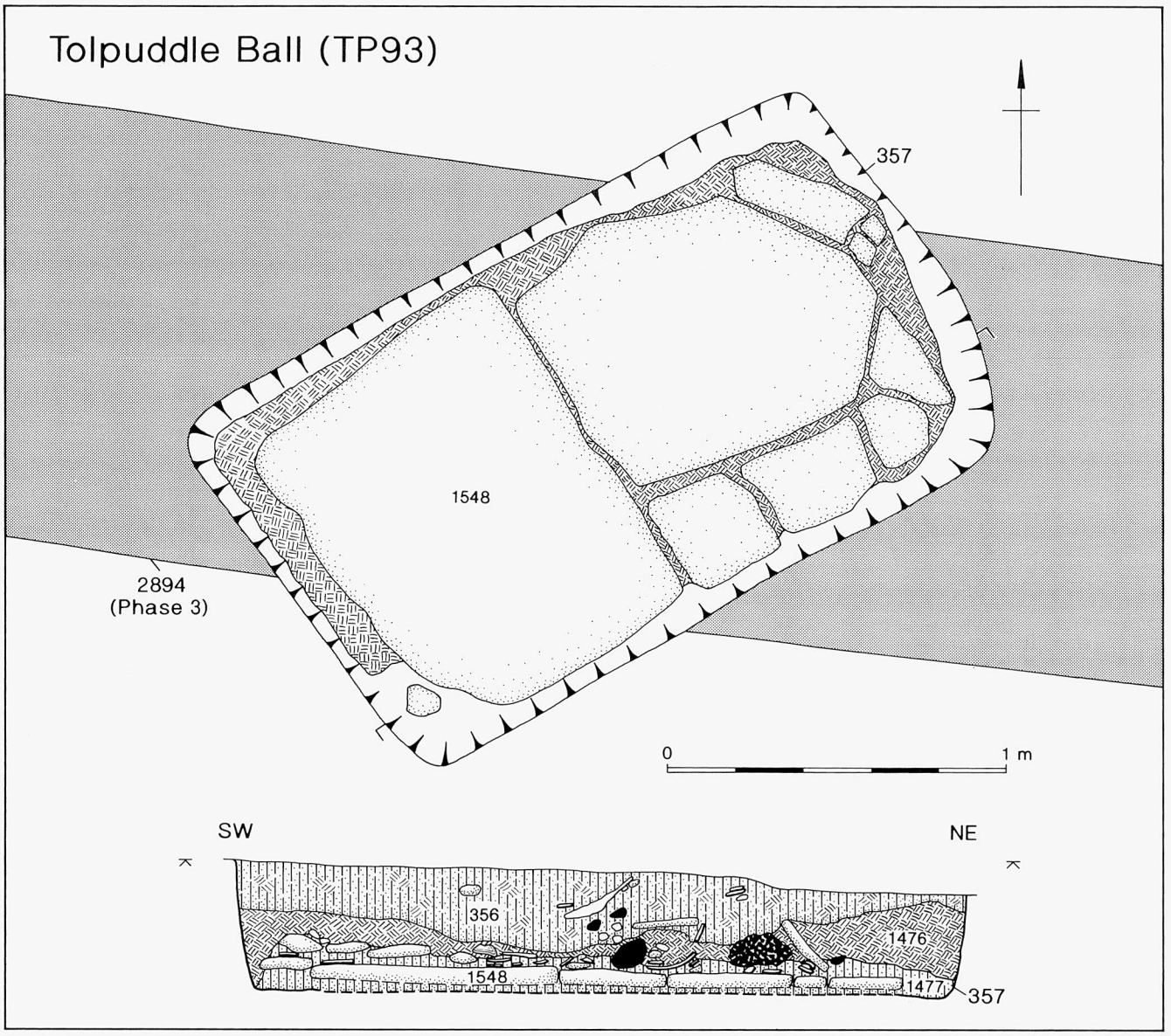


Figure 25 Phase 5: tank 357

23). Approximately 95 features were recorded sealed below this layer. Some of these were undoubtedly archaeological features, others appear to have been natural solution or root holes. It has not proved possible, from the records available, to discern which features were anthropogenic and which were of natural origin. The photographic record suggests the existence of further possible walls and/or wall footings in the area, similar to those associated with structure 702. It is possible that layer 64 represents occupation deposits within and around possible structures and some of the features may represent associated structural elements.

Tank 357 (TP93) (Fig. 25; Plate 13)

This regular rectangular feature, which was cut into the upper fill of the northern arm of the Phase 3 enclosure ditch (2894), was located approximately 10 m to the west of pit 5 (see below). It was 2.10 m by 1.30 m and 0.40 m deep with near-vertical sides and a flat base. Immediately above the base was a *'carefully laid floor of laminate limestone'* (probably Purbeck) set within a clay matrix (1548). The retained samples of this stone were only 10 mm thick. Immediately above the slabs was a thin (50 mm) layer of dark brown, silty loam (1477). This was overlain by a thin layer of yellowish–grey clay (1476) which also extended up the side of the feature. The remainder of the feature was filled with a yellowish–brown silty loam (356).

This feature was interpreted as a clay-lined water tank in the interim report (Higgins 1993, 157). The proximity of the feature to an apparent dump of animal bones (see below, Pit 5) suggests that it may have functioned as some sort of tank or bath utilised in the preparation of sheepskins to make leather. The finds, especially those from 1476, indicate a Late Romano-British date for this feature. Similar tanks have been



Plate 13 Tolpuddle Ball (TP93): tank 357 showing stone-lined base in situ (larger scale 2 m)

recorded on other local Roman sites. One, excavated at the Black Burnished ware (BB1) pottery production site at Worgret near Wareham, was interpreted as used during the preparation of quarried clay for potting (Hearne and Smith 1991, 71–2). At Fordington Bottom, Dorchester a similar tank may have been used for brewing (Smith *et al.* 1997, 216–7).

A number of layers (24, 248 and 333) which surrounded feature 357 contained quite large assemblages of 2nd to 4th century AD pottery and other finds of a similar date. Layers 24 and 248 appear to be occupation deposits, possibly associated with the activities represented by tank 357. The rectangular shape of layer 333 indicates that this may have represented a building terrace similar to structure 702 but due to the lack of records the nature of this deposit remains uncertain.

Pit 5 and associated features (TP93)

This small sub-circular pit, approximately 0.60 m by 0.45 m, lay approximately 10 m to the east of feature 357. The pit had a single, light yellowish–brown sandy clay fill which had a *'high bone content'*. Pottery, bones and metalwork were recovered from it. The photographs clearly show a small sub-circular feature with approximately 40 metapoidal bones scattered across its surface (Plate 14). The entire fill of the pit was removed as a bulk sample. Analysis has revealed that the bones



Plate 14 Tolpuddle Ball (TP93): Phase 5 pit 5 showing sheep bones in situ (Scale 0.5 m)

comprise almost entirely sheep feet (accounting for approximately 40% of the sheep bones from the entire Phase 5 assemblage). The bones do not appear to represent primary slaughter waste are interpreted as waste from processing sheepskins (Hamilton-Dyer, Section 4). The associated pottery is not closely datable within the Romano-British period.

Pit 1013 (TP93)
This shallow, sub-rectangular feature, approximately 1.90 m long, 1.00 m wide and 0.20 m deep, lay 15 m to the west of tank 357. In addition to a small assemblage of Romano-British coarseware pottery it also contained 33 sheep foot bones, representing at least six animals. It seems likely the deposit represents waste from preparing leather, similar to that in Pit 5.

Feature 871 (TP93)
Feature 871, a sub-rectangular feature 0.80 m long and 0.45 m wide, lay approximately 5 m to the north-east of tank 357. The depth of the feature and the amount of it excavated is unknown. Although no datable finds were recovered from the feature it produced ten sheep foot bones. This feature is included in Phase 5 since it appears, like pits 5 and 1013, to contain waste from preparing leather and may have been associated with tank 357.

Feature 865 (TP93)
This small, sub-rectangular feature, which lay approximately 8 m to the east of the possible occupation deposits (333 etc. described above.) and in the vicinity of tank 357 was 0.80 m long, 0.60 m wide and 0.35 m deep with near-vertical sides and a flat base. The primary fill (911) comprised a dark brown loam with abundant charcoal inclusions, The top fill (864) was a dark yellowish–brown silty loam and was only about 0.03 m

thick. Finds recovered from this feature include a large assemblage of Late Romano-British pottery and a small assemblage of fired clay, probably fragments of an oven base.

Terrace 2899 and Associated Features (TP93)

Towards the western end of the 1993 excavation trench partly truncating the western side of the Phase 3 enclosure was a large terrace. The terrace was approximately 20 m from east to west and 30 m from north to south with a maximum depth of approximately 0.90 m at its western edge (see Fig. 23). During excavation the distinct narrowing of the enclosure ditch at its western end was interpreted as representing the eastern edge of the terrace. The interim report states that the terrace was the location of a *'buried lynchet'* (Higgins 1993, 155). The fill of the terrace was excavated by machine but no sections through it were drawn and the only plans of this area show the western edge of the terrace and features/layers in the base of it. It is possible that the feature represents a very large negative lynchet but it is considered more likely to represent a building terrace similar to, but considerably larger than, other possible building terraces recorded on the site.

Gully 1050 (TP93)
At the western edge of terrace 2899 was a shallow curvilinear gully (1050/1427) which varied between 0.70 m and 1.30 m in width and between 0.10 m and 0.20 m in depth. In addition to a small assemblage of Romano-British pottery and a small quantity of animal bone, a probable neonate burial was identified from this feature during post-excavation (1387, see below Phase 3–5). A small quantity of disarticulated human bone (1078) was also recovered from the feature. Gully 1050 was cut by a small circular feature, approximately 0.45 m in diameter and 0.30 m deep, which contained a second neonate burial (1413).

Layer 1060 (TP93)
To the east of gully 1050 was a shallow depression, approximately 4.00 m long, 2.50 m wide and up to 0.26 m deep. This contained layer of yellowish–brown silty loam (1060) from which a large assemblage of Late Romano-British pottery, Late 4th century AD coins and several metal objects were recovered. It is possible that this represents the base of a large, truncated pit, or an occupation deposit surviving in a natural hollow in the chalk.

Grain Drier 1100 (TP93) (Plates 15 and 16)

This feature lay approximately 2 m to the west of the south-western corner of the Phase 3 enclosure. The stokehole and/or an earlier pit and part of the central flue was excavated but was recorded as two intercutting pits. It is probable that this area of the site was



Plate 15 Tolpuddle Ball (TP93): Phase 5 grain drier 1100 (scales 2 m)

truncated, either by the terrace/negative lynchet (see above) or perhaps by over-machining. The grain drier survived to a maximum depth of 0.32 m.

The drier was constructed in a sub-rectangular cut approximately 3 m long and 1 m wide. It incorporated a 0.30 m wide and 1.70 m long extension to form the head of the 'T' at the western end and a sub-circular extension 1.30 m in diameter at the eastern end to form the stokehole. The central flue between the stokehole and the head of the 'T' was lined with flint nodules, sandstone blocks and re-used quern fragments (1528) in a silty clay matrix (1529) to form a 0.50 m wide flue. The base of the stokehole was lined with chalk (1183) where it overlay the top fill of the earlier pit and the head of the 'T' was not lined. A roof/drying floor was constructed over the central flue and a single piece of this, described as *'dressed limestone'* (SF 242) survived *in situ*. After falling into disuse, or possibly as a result of its final use, a layer of black silty clay (1526) was deposited in the base of the central flue. The remainder of the feature was filled with a yellowish–brown slightly sandy clay loam (1100, 1102, 1527, 1530).

As noted above, the stokehole partly overlay an earlier feature (1103) which appears to have been a sub-circular pit approximately 1.50 m in diameter and 1.15 m deep with vertical sides and a flat base. The primary fill (1195), a dark yellowish–brown silty loam, was overlain by a chalk rubble deposit (1184) which was in turn overlain by a layer of dark yellowish–brown sandy clay (1194). This was sealed below a second chalk rubble deposit (1193). The remainder of the feature was filled with a yellowish–brown silty loam deposit (1148) which contained Romano-British pottery.

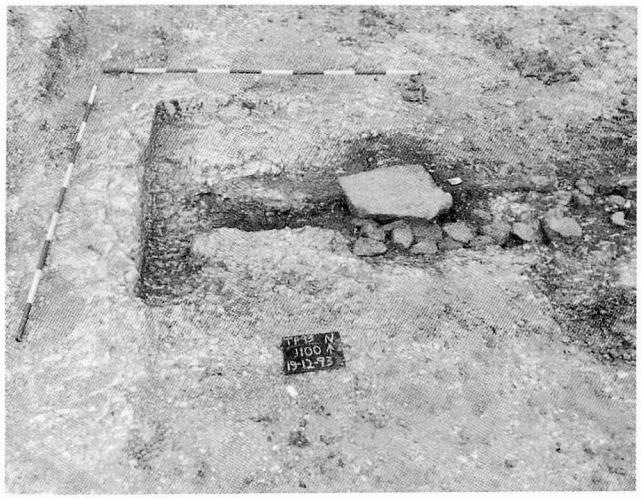


Plate 16 Tolpuddle Ball (TP93): Phase 5 grain drier 1100 (scales 2 m)

Ditches

Ditch 47 (TP93)
This small linear feature, approximately 20 m long, 0.50 m wide and 0.30 m deep, ran between the possible occupation layer 333 (which obscured its north-western terminal) and the eastern side of the Phase 3 enclosure ditch, where it appeared to terminate. The function of this feature is uncertain.

Ditch 243 (TP93)
This shallow ditch appeared to form the western and southern side of a rectangular enclosure with an open eastern side. It measured approximately 15 m east–west and a minimum of 12 m north–south, continuing beyond the northern limit of excavation. Ditch 243 was recorded as cut by ditch 192. However the pottery recovered from these two features suggests the opposite stratigraphic sequence: ditch 192 contained Early/Middle Bronze Age pottery (Phase 1) while ditch 243 contained Late Roman material.

Ditch 243 was generally 0.50 m wide and 0.25 m deep with steep, straight sides and a flat base. It appears that there were two separate fills, the upper fill being a dark brown silty loam and the lower comprising chalk fragments in a silty clay matrix. Some 49 postholes and stake holes are recorded within the possible enclosure on the context index and are assumed to be contemporaneous but no coherent structure is recognisable.

Ditch 5031 (W2405)
This 75 m+ long ditch, on an approximately north–south alignment, lay to the south–east of the Romano-British settlement recorded in 1993 (see Fig. 23). It was exposed during the watching brief and traced from where it appeared below the road embankment (as existing in 1997) south until it disappeared into a thick subsoil deposit. Sondages were dug in the subsoil to try and locate the ditch within this deposit but were unsuccessful. The five slots excavated through this feature demonstrated that it varied considerably in width (between 0.70 m and 1.70 m), depth (between 0.25 m and 0.55 m) and profile (from a regular V-shape with a small 'ankle breaker' in the base to a shallow irregular U-shape).

The fill of the ditch comprised a sandy clay loam (see Fig. 22, section, context 5037) from which a small assemblage of Romano-British pottery, worked flint and burnt flint were recovered. In one of the deeper slots a thin deposit of coarse chalk rubble (5035) was found in the lower 0.05m of the ditch directly above the base. Towards its northern end the ditch cut the upper fill of an Iron Age pit (5039) containing a complete horse burial (above, Phase 3/4).

Pits

A small group of pits were assigned to Phase 5, all recorded during the 1993 excavation. Pit 704 (TP93) was small and sub-circular, approximately 1.30 m in diameter and 0.30 m deep with steep irregular sides and a flat base. It was located approximately 10 m to the south-east of the entrance to the Phase 3 enclosure and 6 m to the east of structure 702 in an apparently isolated position. The two fills recorded for this feature (703 and 737) appear to be an homogeneous dark brown silty loam. Pottery recovered from the pit dates to both the Late Iron Age and Romano-British period.

Pit 1054 (TP93) was a large, irregular feature approximately 2.00 m long, 1.50 m wide and 0.30 m deep with very irregular sides and base which cut the western ditch of the Phase 3 enclosure. A large assemblage of Romano-British pottery and a late 4th century AD coin (SF 213) were recovered from the pit.

Pit 1056 (TP93) was large and sub-rectangular, approximately 2.00 m long, 1.00 m wide and 0.90 m deep with steep sides and a flat base. It lay 1.00 m to the east of pit 1054. A small assemblage of Romano-British coarseware pottery and a large fragment of dressed limestone, probably an architectural fragment (SF 238, Fig. 57, 13) were recovered from this pit.

Pit 1078 (TP93) appears to have been sub-circular, approximately 1.20 m in diameter and 0.62 m deep with vertical sides and a flat base. The single fill (1078) was a yellowish–brown silty loam from which a small assemblage of Romano-British pottery was recovered.

Other features

Hollow 178 (TP93), a sub-rectangular feature, lay some 10 m west of the extensive ?occupation deposit(s) 64. It was up to 0.25 m deep, approximately 8 m long and 3.80 m wide. It was associated with a curvilinear drainage ditch or gully (205/715) 9 m long, 1 m wide and 0.25 m deep with straight sloping sides and a flat base. This gully ran along the eastern (downslope) side of the hollow. The fill of the hollow (177) and the fill of the gully (204/714/790) were virtually indistinguishable and it is probable that they represent a single deposit. A fairly large assemblage of finds, mainly Late Romano-British, was recovered from this feature(s).

Several irregular features, probably tree throws, contained Romano-British finds (e.g. 170, 201, 425). While some of the finds recovered from these features

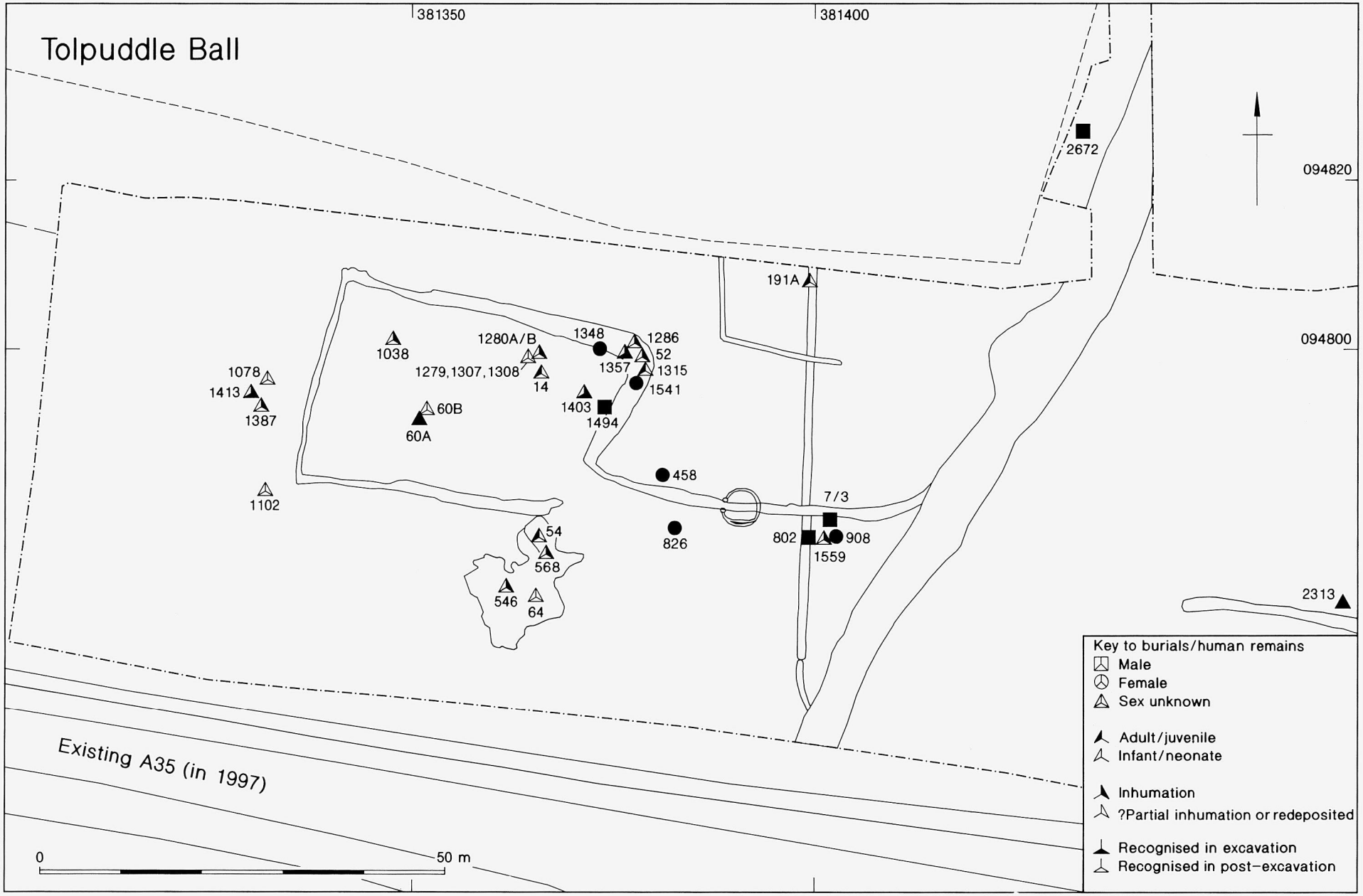


Figure 26 Burials and human remains: location and types (Phases 3–5)

are of interest, the features themselves do no merit detailed description (details in archive).

Phases 3–5: Iron Age and Romano-British Burials

Introduction: Recovery of Data

The evidence for human burials on the site (including partial inhumations or redeposited bone) is summarised on Figure 26 and also below in Table 28 (McKinley, Section 3). These summaries collate a range of data generated by both Liverpool University (1991 evaluation, 1993 excavation and post-excavation assessment) and Wessex Archaeology (1996/7 excavation, post-excavation analysis of both excavations and 1998 watching brief).

An adult inhumation burial was identified in one of the evaluation trial trenches (TP91). The interim report on the 1993 excavations (TP93) suggests that eleven burials were identified during the excavation, comprising both adult and infants (Higgins 1993, 158). The post-excavation assessment undertaken by Liverpool University (White n.d) summarises the burials from the project as 16 individuals: nine adults (including the evaluation burial) and seven infants – one infant being buried with an adult. Wessex Archaeology excavated two inhumation burials in 1996/7 (W2402.13). This provides an overall total of 11 adults and seven infants.

During post-excavation assessment and analysis, Wessex Archaeology identified a significant amount of additional human bone from the 1993 excavations, including from contexts which were not previously known to include human bone. The additional bone was recovered during processing of the soil samples and also from the animal bone assemblage. This collection included the partial remains of five neonates which were not recorded on site and which are likely to represent further burials (see below Table 28, McKinley Section 3). The final total from the site (1991 to 1997) amounts to 23 individuals: eleven adults and 12 neonates/infants.

Two bulk soil samples (one being the contents of a pot) were identified by the excavators as possible human cremation deposits. Processing and assessment by Wessex Archaeology discounted this interpretation since the only bone recovered was a small quantity of animal bone. Where they existed, soil samples associated with the burials and grave fillings were processed. This produced additional bone but no grave goods or small artefacts.

In addition, a Late Romano-British burial of an adult female (5067) was discovered during the watching brief in June 1998. This burial lay approximately 100 m north of the main 1993 and 1996/7 excavation areas (see Fig. 8 for location). The burials associated with the Late Roman/Post-Roman cemetery are reported separately below (W2405.17) and the term 'cemetery' is only used in connection with that site.

Dating and Phasing

Some of the burials and contexts containing human bone can be phased or dated with confidence on the basis of stratigraphy, artefactual evidence and/or grave form. Others may be dated with a reasonable level of confidence based on their location. Like many other features on the site, the remainder cannot be dated more securely than Middle/Late Iron Age or Late Iron Age to Romano-British. The burials are therefore described together here as a group. The well-recorded burials have been illustrated. Plates are provided for some of the others. Due to the nature of their recovery, plans and records for five of the 1993 neonate burials are not available. All burials are from the TP93 excavation unless stated otherwise. The descriptions below are ordered as follows: TP91 burial – excavated adult; TP93 burials – excavated adult burials, including partial burials (ordered by context); W2402.13 burials – excavated adult burials; W2405 burial (watching brief) – excavated adult burial; TP93 neonate burials/probable burials; TP93 – note on the occurrence of disarticulated human bone.

Adult Burials

Adult burial 7/3 (TP91), Phase 5 (Plate 17)
This skeleton, that of a probable male, was excavated in an evaluation trial pit. The evaluation report states that the grave cut was rectangular, measured 1.60 m long and 0.60 m to 0.70 m wide and was aligned approximately north-east to south-west. The grave cut into the chalk to a depth of only 0.14 m. The skeleton appeared to be in a slightly flexed, supine position with the head pointing towards the north-east. The very shallow depth of the grave had led to plough damage to the skull. A few small sherds of Iron Age pottery were recovered from the surrounding fill. The grave cuts a ditch of Late Iron Age date.

Adult partial skeleton 60A (TP93), Phase 3/4 (Plate 18)
This partial skeleton (approximately 40% represented, recorded as SF 165) was found in a large sub-circular pit of Iron Age date. It cannot be determined whether the



Plate 17 Tolpuddle Ball (TP91): Phase 5 burial 7/3 (scale 1 m)



Plate 18 Tolpuddle Ball (TP93): Phase 3/4 partial Skeleton 60A (scales 0.5 m)

skeleton was found in the base of Pit 61 or simply within the fill (60).

Adult burial 458 (TP93), Phase 3/4 (Fig. 27)
This skeleton was badly plough damaged. It was in a very shallow (0.06 m deep) sub-rectangular cut (49), 1.15 m long, 0.50 to 0.60 m wide and aligned north–south. The plan of an unidentified skeleton in the archive (Plan A) appears to be that of skeleton 458 since it matches the description on the context sheet which states that the skeleton was buried face down with the head at the south end of the grave. A few small sherds of Late Iron Age pottery were recovered from the grave fill.

Adult burial 802 (TP93), Phase 5 (Fig. 27)
This individual appears to have been buried within a large (2.0 m x 1.0 m) sub-rectangular cut (803), approximately 0.50 m deep, in a slightly flexed position, laid on the left side. The grave was aligned west–east with the head towards the western end. Several iron nails were recovered from the fill, suggesting that the burial may have been in a coffin. Several large lumps of chalk were found along either side of the burial, it is possible that they represented some kind of internal structure but this is considered unlikely. The grave cuts a small Bronze Age ditch (192, Phase 1). During excavation finds from within the fill of the grave (802) were mixed with finds from an unrelated feature. A flint arrowhead which was suggested by the excavator to be a deliberate deposition within the grave is more likely to be residual.

Young adult burial 826 (TP93), Phase 3/4 or 5 (Plate 19)
Skeleton 826, that of a female aged 19–25 years, was in a crouched position laid on the left side. It was within a large sub-rectangular grave (740), 2.70 m x 1.40 m and approximately 0.80 m deep. The grave was aligned north–south. The context sheets describe what may be some form of internal structure but this is considered unlikely. No datable finds were recovered from this feature.

Adult and infant burial 908 and 1559 (TP93), Phase 5 (Fig. 27)
Female skeleton 908 and infant skeleton 1559 (the latter recorded by Liverpool University during the post-excavation assessment) were found in a large (2.07 m x

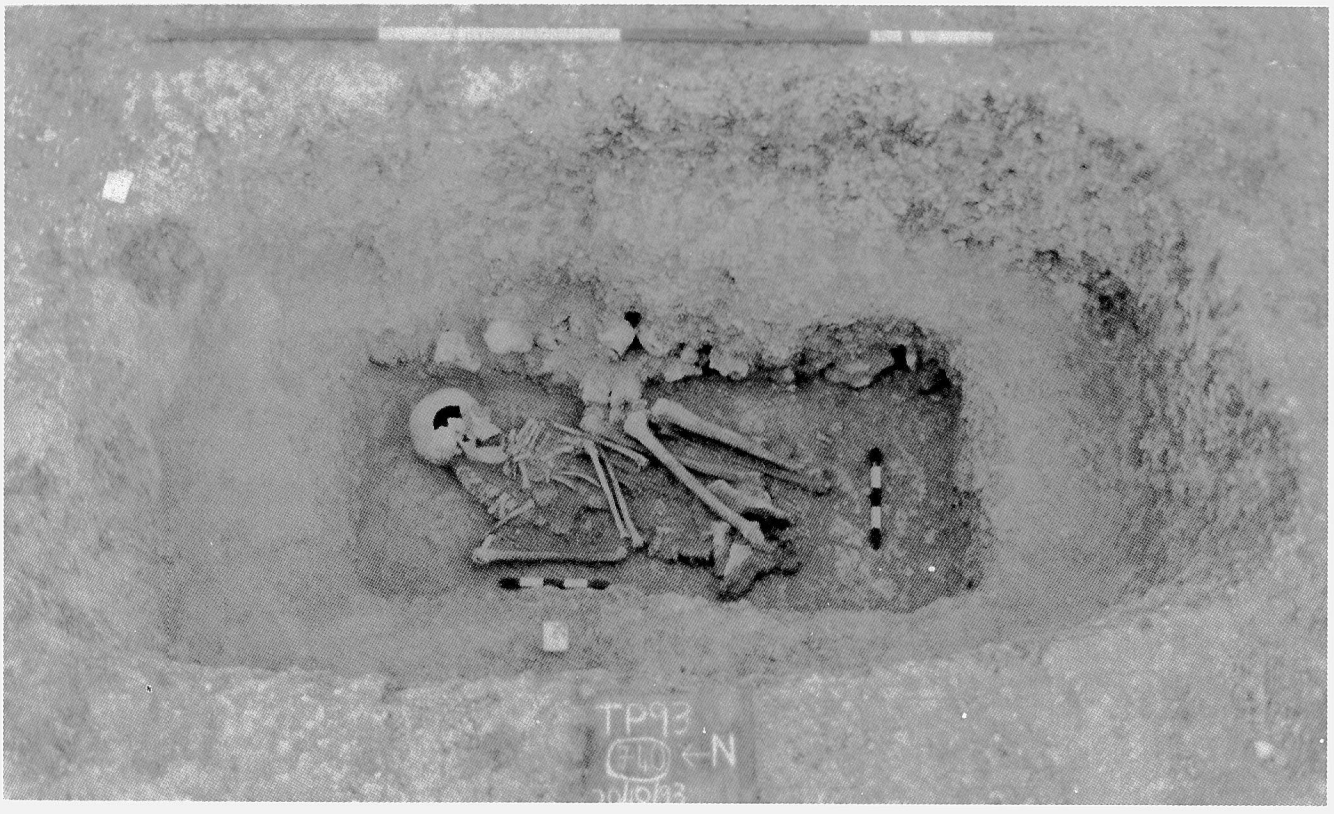


Plate 19 Tolpuddle Ball (TP93): Phase 3/4 or 5 burial 826 (larger scale 2 m)

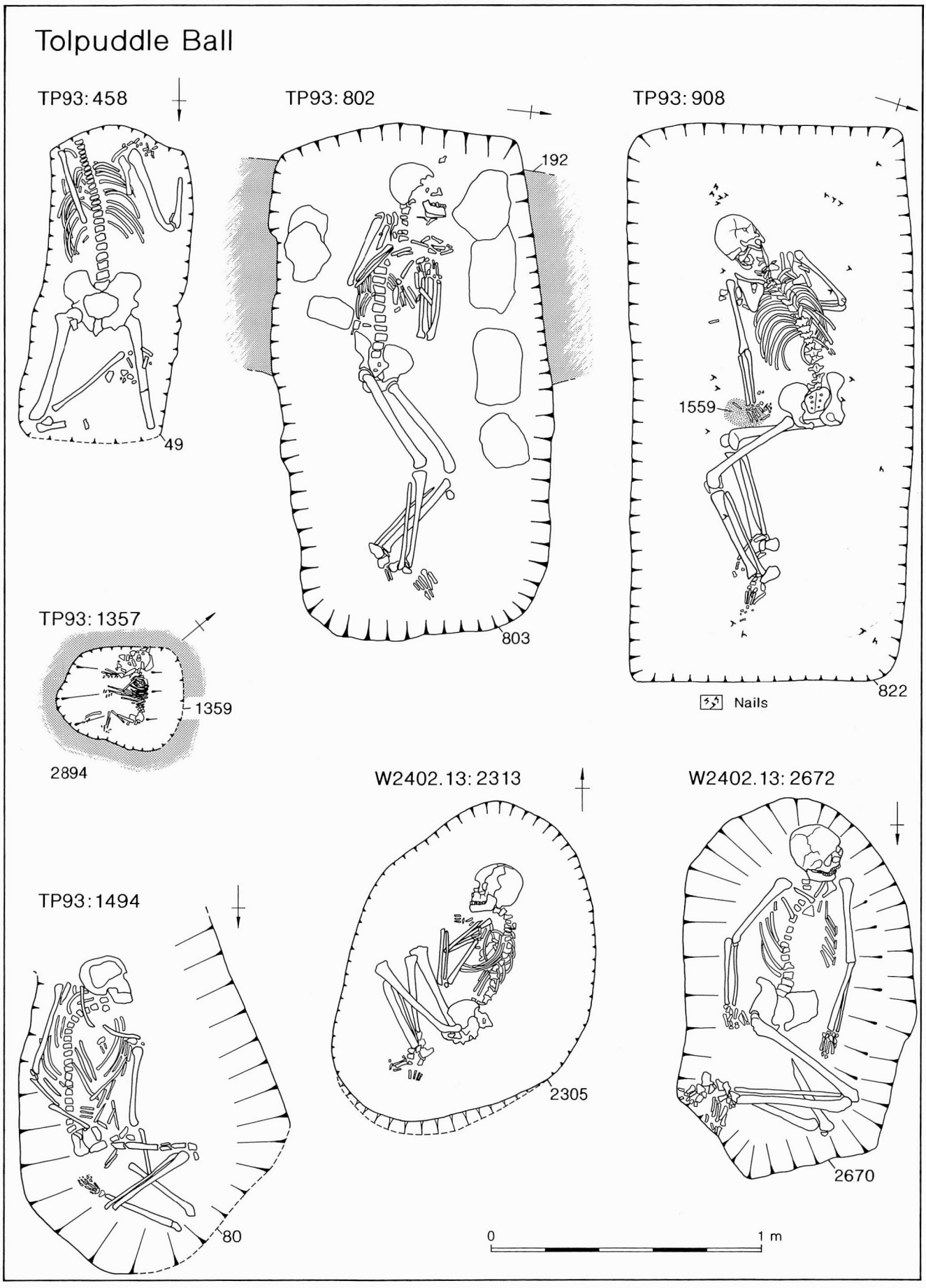


Figure 27 Phases 3–5: plans of burials and graves



Plate 20 Tolpuddle Ball (TP93): Phase 4 burial 1348 (scales 1 m)



Plate 21 Tolpuddle Ball (TP93): Phase 4 burial 1348: detail of toe-ring (scale 0.10 m)

0.95 m) rectangular grave cut (822) approximately 0.90 m deep and aligned roughly west–east. Skeleton 908 was in a slightly flexed position with the head towards the west. Thirty-five iron nails were recovered around the skeleton (of which 17 were recorded on the plan of the burial) suggesting that the burial was in a coffin. No on-site records were made of the infant but examination of the photographs locates it adjacent to the adult's left hand (see Fig. 27). The infant's age is estimated at 6–12 months. Pottery of Late Iron Age/Early Romano-British date was recovered from the grave fills. The grave cut a feature of probable Iron Age date. Tip lines within the grave fills suggest that it was backfilled from the southern side.

Adult burial 1348 (TP93), Phase 4 (Plates 20 and 21)
Skeleton 1348, that of a female, was found in a small irregular grave (7) approximately 1.15 m x 0.60 m and 0.08 m deep. The burial was in a tight crouched position, laid on the right side. The grave was aligned approximately north–south with the head towards the north. The grave cut the upper fill of the Phase 3 enclosure ditch. A bronze ring was found around two of the toes of the left foot (detail, Plate 21; object, Fig. 42, 11) and a few sherds of Late Iron Age/Early Romano-British pottery were recovered from the fill.

Adult burial 1494 (TP93), Phase 3/4 or 5 (Fig. 27)
This male adult appears to have been buried in a crouched position on his left side with the head towards the south. The burial was within a sub-rectangular cut (80) approximately 1.60 m long, 0.90 m wide and 0.30 m deep. The grave appears to intersect a small Phase 4 ditch but the stratigraphic relationship between the two features is uncertain.

Adult burial 1541 (TP93), Phase 4 (Plate 22)
This burial was discovered several months after the main excavation had finished when human bone was noticed in the spoil from a collapsed (weathered) section of the Phase 3 enclosure ditch 2894. Cleaning back the section revealed human limb bones *in situ*. The grave and its contents were excavated at the request of Liverpool University by Mr P. and Mrs M. Roberts of the East Dorset Antiquarian Society. The female represented by skeleton 1541 (SF 243) appears to have been buried in a sub-rectangular grave (fill 1540) cut into the top fill of the enclosure ditch 2894. The grave was approximately 0.75 m wide and 0.35 m deep and was aligned roughly north-east to south-west with the head towards the southern end. The estimated length of the grave was 1.10 m. The skeleton was in a crouched position, laid on the right side. A bronze Colchester type brooch (Fig. 42, 5) and a Maiden Castle 'war cemetery' type bowl (Fig. 50, 52) were found with the burial. The position of the grave goods has been superimposed in Plate 22 using various photographs. Although the brooch was found in the area of the jaw it was very likely originally placed at the right shoulder (see McKinley, Section 3).

Young adult burial 2313 (W2401.13), Phase 3/4 (Fig. 27)
Skeleton 2313, that of a young adult aged 13–18 years, was found in the base of a small sub-circular pit (2305), approximately 1.30 m x 0.90 m and 0.70 m deep. It was in a tightly crouched position, laid on the right side and with the head to the north-east. The skull was damaged during excavation and the bones were poorly preserved. A single small sherd of Early/Middle Bronze Age pottery was recovered from the uppermost fill (2306) but this is

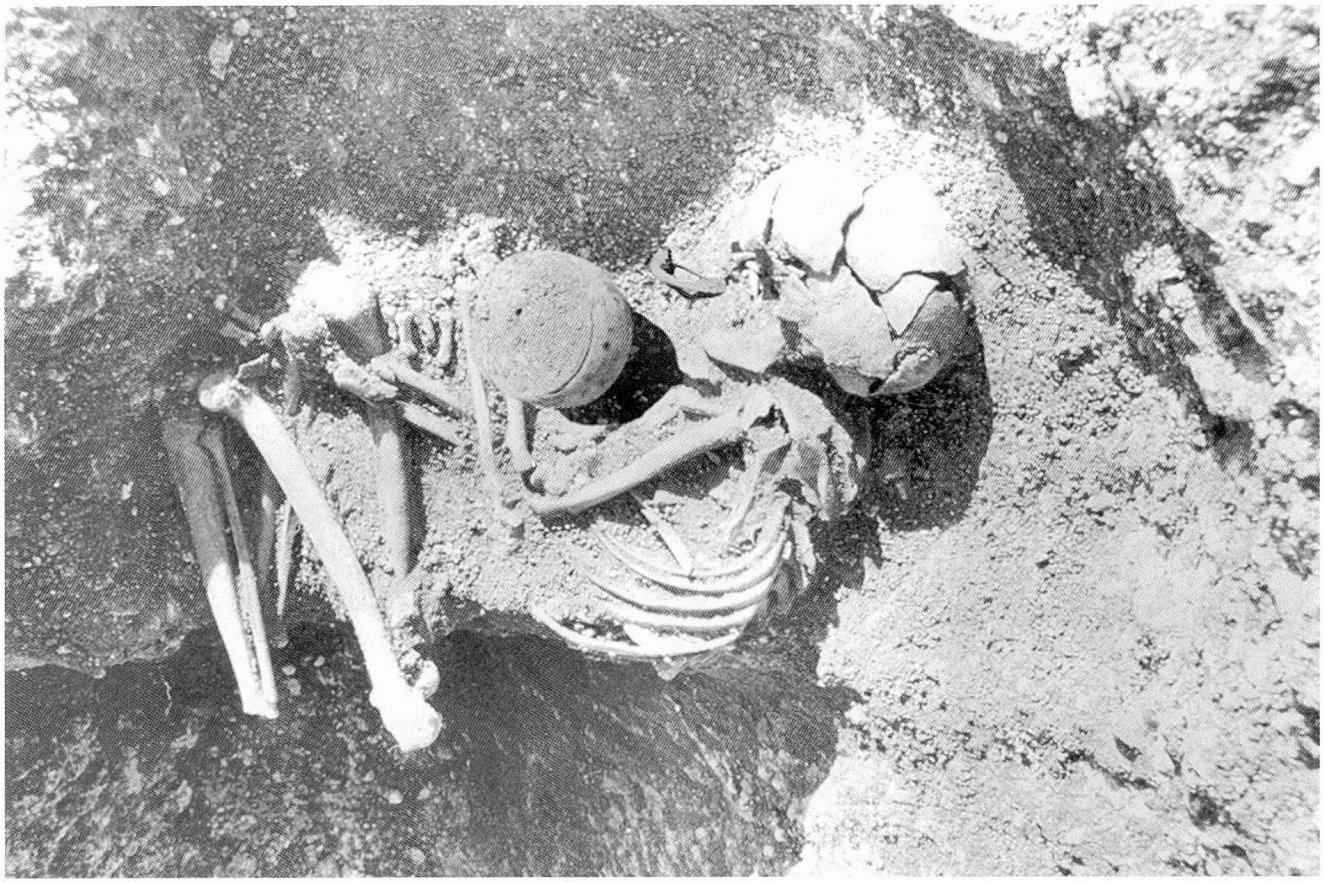


Plate 22 Tolpuddle Ball (TP93): Phase 4 burial 1541 with grave goods (positions superimposed)

likely to be residual. An Iron Age date is suggested for the burial.

Adult burial 2672 (W2402.13), Phase 3/4 (Fig. 27)
Skeleton 2672, that of a male, was found in a small, shallow cut (2670), measuring 1.43 m x 0.85 m and 0.35 m deep, in a crouched position laid on the left side. The grave appeared too small to accommodate the skeleton and the head and feet were forced against the sides of the cut. Three small sherds of Late Iron Age pottery were recovered from the fill of the grave.

Adult burial 5067 (W2405), Phase 5 (Plate 23)
This burial was discovered in June 1998 during machining for drainage works (intersection PI13). The burial lies some 100 m north of the main excavation areas (see Fig. 8 for location). The remains of a sub-rectangular grave (5066), aligned south–north, contained an adult female buried in a supine position with extended legs and arms. Machine truncation had removed the upper torso and skull and only a few of these bones were recovered; the head was located at the southern end of the grave. The original dimensions of the grave could not be ascertained due to machine truncation. A copper alloy Costantinian coin, dated AD 330–345 was placed on the base of the grave between the knees (Obj. 750). Fragments of at least four hobnails were also found beneath the sole of the right foot (Obj. 751), indicating the presence of shoes. There was no evidence for the presence of a coffin in the form of coffin nails or wood staining.

Neonate Burials

Neonate burial 52 (TP93), Phase 4 or 5
This partial skeleton (*c.* 12%) was recovered from the animal bone assemblage. The context represents the top fill of the north-eastern corner of the Phase 3 enclosure ditch. It is considered likely to represent an *in situ* burial which was not recognised during the excavation. The position of the bone within the corner of the enclosure is unknown.

Neonate burial 546 (TP93), Phase 5
This partial skeleton (*c.* 56%) was one of the probable burials recorded during post-excavation assessment by Liverpool University. The presence of bones was noted on the context sheet (546) but no other records were made on site. The feature (?grave) was sealed below layer 64. It was described on the context sheets as a circular pit/posthole 0.40 m in diameter and 0.20 m deep. The post-excavation plans indicate a sub-rectangular feature 0.44 m x 0.32 m.

Neonate burial 568 (TP93), Phase 4
This partial skeleton (25%) was one of the probable burials recorded during post-excavation assessment by Liverpool University. The presence of bones was noted on the context sheet (568) but no records were made on



Plate 23 Tolpuddle Ball watching brief: Phase 5 burial 5067 looking south (larger scale 1 m)



Plate 24 Tolpuddle Ball (TP93): Phase 4 cut 569 (?neonate grave), showing associated vessel (scale 0.10 m)

site. The feature (possible grave) was sealed below layer 54/64 and pre-dates Phase 5 structure 702. Post-excavation plans show a small sub-rectangular feature (569) 0.82 m x 0.50 m whose depth was probably 0.21 m. A small complete vessel was also found within the feature (Plate 24; see Fig. 50, 39).

Neonate burial 1038 (TP93), Phase 5
This partial skeleton (*c.* 15%) was recovered from the animal bone assemblage. The pre-excavation plan shows a small sub-circular feature in the north-western corner of the Phase 3 enclosure but no other records exist. Nine sherds of Roman pottery were recovered from this feature. Parts of the skull and lower limbs are present and the skeleton is interpreted as part of a probable *in situ* burial not recognised during excavation.

Neonate burials 1280A/B (TP93), Phase 4
Partial skeletons of two neonates (60% and 40%) were recovered from the animal bone assemblage during post-excavation. The high proportion of the skeletons retrieved indicates the likelihood that both were *in situ* burials which were not recognised during the excavation. Both appear to have been deposited within the same layer of chalk rubble near to the base of the large bell pit 9 in the north-eastern corner of the Phase 3 enclosure. Twenty-four sherds of Late Iron Age pottery were also recovered from the context.

Neonate burial 1286 (TP93), Phase 3/4
This partial skeleton (*c.* 55%) was not recorded on site but identified during post-excavation assessment by Liverpool University. Its position coincides with a dump of fired clay (1286) within the Phase 3 enclosure ditch. It may have been in a grave cut into the clay dump, but this cannot be proven. It lies very close to excavated infant burial 1357 but analysis of the bone has demonstrated that two separate individuals are represented.

Neonate burial 1357 (TP93), Phase 3 (Fig. 27)
This neonate skeleton was found within the fill of the Phase 3 enclosure ditch (2894). It appears to have been in a small sub-rectangular cut (1359), measuring 0.50 m x 0.40 m (depth unknown) which cut into the lower fills of the ditch and was sealed below the upper fills, but this is uncertain. The skeleton was in a crouched position on its right side with the head to the west.

Neonate burial 1387 (TP93), Phase 5
This partial skeleton (*c.* 40%) was recovered from the animal bone assemblage during post-excavation. The feature in which it occurred (1050) appeared to be a small gully with a single fill. The position of the bones lies close to the excavated partial skeleton 1413 (see below) but they do not represent the same individual. The quantity of bones recovered suggest that this is part of an *in situ* burial which was not recognised during excavation. A small assemblage of Roman pottery was also recovered from this feature.

Neonate burial 1403 (TP93 soil sample), Phase 3
This partial skeleton (*c.* 35%) was identified on site in the remains of a collapsed section in the large Iron Age

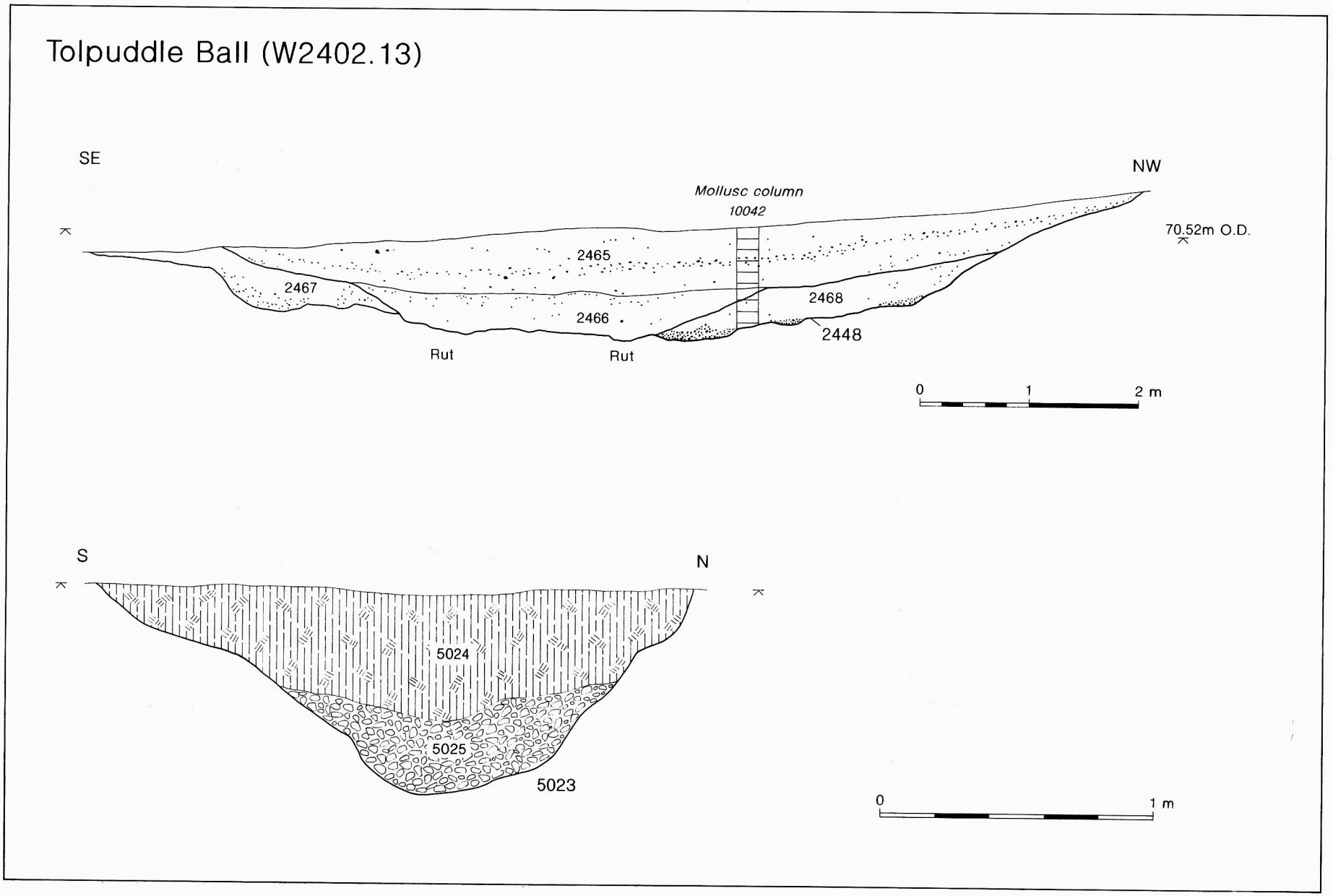


Figure 28 *Phases 6 and 7: section of hollow way and parish boundary*

pit 45. The bones were collected and a sample of the collapsed fill (context 1403, sample 126) was taken in order to retrieve further associated bones. The precise position of the skeleton within the pit is unknown.

Neonate burial 1413 (TP93), Phase 5
Skeleton 1413 was recorded as an infant burial within a small sub-circular cut (1414), approximately 0.45 m in diameter and 0.30 m deep. Few records were made of the feature and the actual position of the skeleton is uncertain. No datable finds were recovered from the feature but since it cuts the fill of the Romano-British ditch/gully 1051/1427 it is interpreted as of Roman (or later) date.

Disarticulated Human Bone (TP93)

Apart from the probable neonate burials identified during post-excavation, small quantities of disarticulated human bone were also recovered within the animal bone assemblages from a range of other contexts (see Fig. 26 and Table 28 below). These contexts include the fill of a Phase 1 ditch (191), various fills of the large bell pit 9 (1279, 1307, 1308 and 1309), the fill of Phase 5 structure 702 (54, 64) and the fill of the Phase 5 grain drier (1102). Some of these contexts, (e.g. the fills of pit 9) may be components of the probable *in situ* burials which were unrecognised, that is from adjacent excavated contexts. Further comment on the disarticulated bone is provided in the specialist report below (McKinley, Section 3).

Phases 6 and 7: Medieval and Post-Medieval

The later phases of activity represented at Tolpuddle Ball (1993–7 excavations) comprise three features. A hollow way, dated to the medieval period or later, a small trackway of post-medieval date and a parish boundary ditch.

Phase 6: Hollow Way 2448 (W2402.13)

This large, very irregular, linear feature ran roughly north–south across the site and was recorded in both the 1993 and the 1996/7 excavations (for location see Fig. 64). The feature varied from 5 m to 10 m in width and was between 0.30 m and 1.00 m deep with irregular sides and wheel ruts in the base. The fills of the hollow way consisted entirely of silty clay loam deposits, presumably derived from the gradual accumulation of colluvial material within the feature (Fig. 28, section). The alignment of the hollow way links the road to Affpuddle with that to Milborne St Andrew (i.e. the line prior to the construction of the present staggered junction). A road or track on this alignment appears to be shown on the Affpuddle Tithe Map (1839).

A single sherd of medieval pottery, along with much larger quantities of Bronze Age, Iron Age and Romano-British material was recovered from the hollow way. A column of samples for land snail analysis was taken (Fig. 28, column 10042). Analysis provided evidence for snail shells of a species introduced during the medieval period from the basal fill (Allen, Section 4).

Phase 7: Trackway 58 (W2402.13)

This shallow irregular trackway was aligned approximately north-east to south-west and was recorded in both the 1993 and 1996/7 excavations (for location see Fig. 64). The trackway cut the upper fills of the hollow way 2448 and therefore post-dates it. The alignment appears to link the A35 south of Tolpuddle Ball (as existed in 1997) and Roger's Hill Farm but does not appear on the Tithe Map.

Phase 7: Parish Boundary Ditch 5023 (W2402.13)

A large ditch with a V-shaped profile was located during the watching brief to the north of W2402.13 (see Fig. 8). The line of the ditch is not visible on the ground today but its position and alignment coincides with the Affpuddle/Tolpuddle parish boundary, as shown on both the Tithe Maps (1839 and 1843 respectively) and on current Ordnance Survey maps.

The ditch was traced for 12 m between the limit of the bypass construction area and the B3390 to Milborne St Andrew. It was between 1.90 and 2.10 m wide and up to 0.75 m deep (Fig. 28, section). Pottery and bottle glass of 18th-/ 19th-century date were recovered from the fills of the ditch (5024 and 5025), along with burnt and worked flint. Further south, the parish boundary ditch was exposed during the excavation of the Tolpuddle Ball Late Roman/post-Roman cemetery (see site report below).

Undated Features

Eleven pits, varying between 1.00 m and 2.00 m in diameter and between 0.30 m and 1.20 m in depth were excavated during 1996/7 in the area around the Phase 3/4 ditch 2334 (see below, Fig. 64). No datable material was recovered from these features, however, finds of burnt flint, undiagnostic worked flint and animal bone, including red deer, cattle and sheep bones, may indicate a prehistoric date.

A short length of shallow ditch, a small hearth and a crescent-shaped gully were excavated approximately 60 m to the south of Phase 3/4 ditch 2334 during the watching brief . The only finds recovered from these features comprised a small number of undiagnostic worked flints and large quantities of burnt flint, mostly from the area around the hearth. The crescent-shaped gully was similar to a Late Bronze Age feature excavated at Lower Eweleaze, Puddletown (see site report below). Although no datable material was recovered from any of these features it is possible that these are also of prehistoric date.

Numerous undated features were excavated during the 1993 excavations. Where possible they were assigned to various phases on the basis of their form, location etc. A large number of undated natural features, mostly solution features and tree throws, were also excavated (details in archive).

TOLPUDDLE BALL CEMETERY (PHASE 5A): W2405.17 (Figs 29–32) SY 8122 9479

Emma Loader and Carrie M. Hearne

Introduction and Methods

In late June 1998 topsoil stripping of an additional area near Tolpuddle Ball was undertaken along the route of a temporary diversion which was required during the construction works. The area lay immediately north of the A35 (as it existed in 1998) and west of the 1993 Liverpool University excavation area (TP93) and was approximately 150 m east–west by 50 m north–south (see Fig. 8). The area was initially stripped using a bulldozer and/or a mechanical excavator with a toothed bucket but this was subsequently replaced with a toothless bucket when it became clear that archaeological features were preserved within the route of the temporary diversion. The area of land for the temporary diversion fell within that originally evaluated by fieldwalking by Liverpool University (EAU 1992, Area G2). Although the survey did produce worked flint and Roman and later pottery no concentrations of finds were evident, nor were there any indications of the existence of a burial ground.

The first archaeological discoveries comprised several insubstantial linear features within the eastern half of the temporary diversion, a shallow grave (burial 5070) and the Affpuddle/Tolpuddle parish boundary ditch (alignment shown on Fig. 8). Following hand-cleaning approximately 19 other west–east aligned graves were recognised in the vicinity but some were difficult to identify and it seemed likely that further graves were preserved. The area was therefore carefully re-cleaned with a mechanical excavator under close archaeological supervision (a spit of *c.* 0.10 m being removed). This re-cleaning revealed another 27 graves, many closely-spaced and apparently in north–south rows (Plate 25). At this point the engineering design of the temporary diversion was reviewed but unfortunately it was not possible to avoid the cemetery site. The cemetery was excavated between 1 and 30 July 1998 and the final number of graves revealed was 50 (Plate 26).

All the graves were 100% excavated following the guidelines in McKinley and Roberts (1993). Whole earth

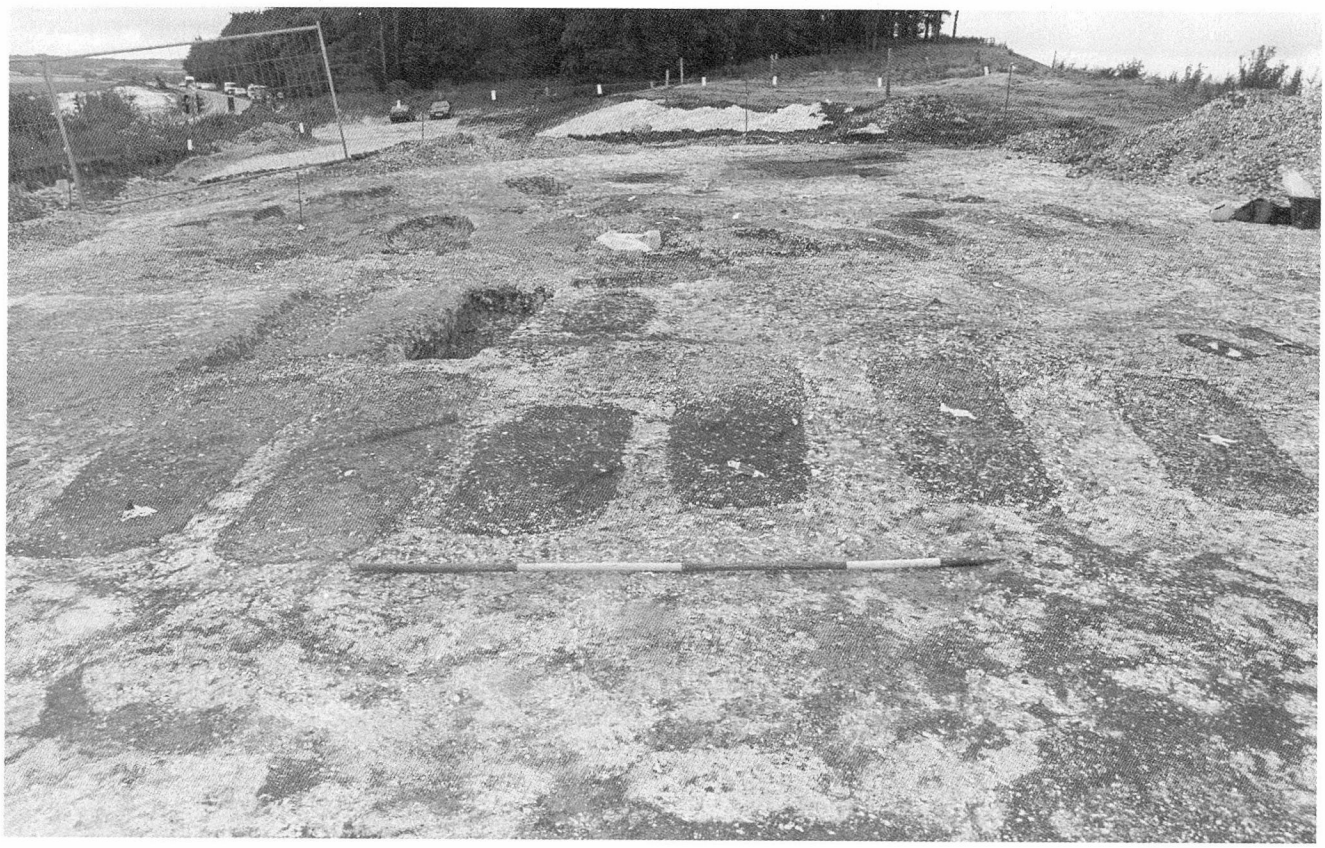


Plate 25 Tolpuddle Ball Cemetery (W2405.17): exposure of graves during re-cleaning of the site after its initial discovery, looking west (scale 2 m)

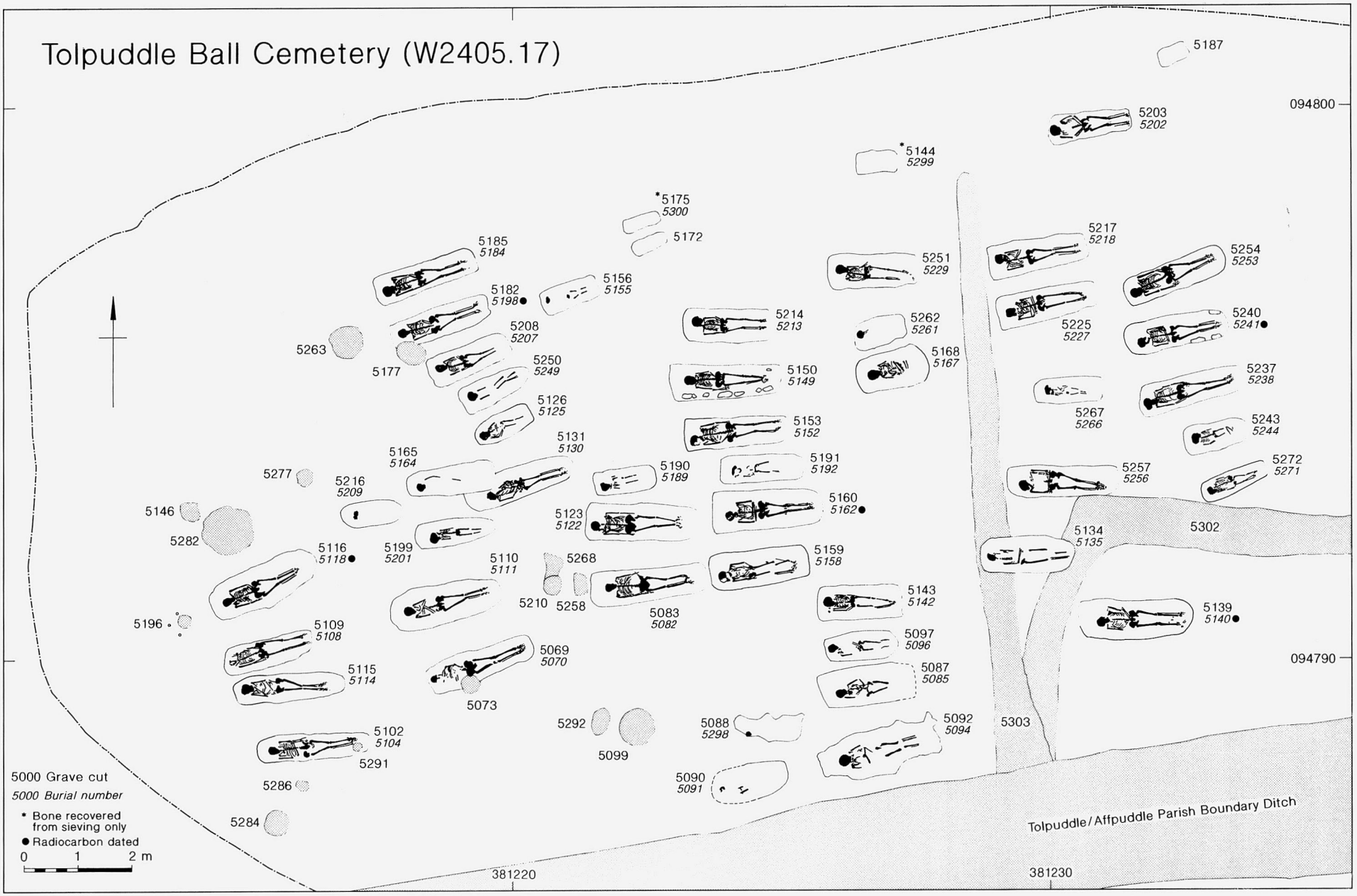


Figure 29 Plan of cemetery



Plate 26 Tolpuddle Ball cemetery (W2405.17): the completed excavation, looking west from the easternmost row of graves (scales 2 m)

recovery was made of areas of the skeleton such as hands, feet, pelvis, thorax and abdomen to ensure that any fragments of ossified tissue or small bones were retrieved. Four very small grave-shaped features produced no skeletal remains during excavation. The fills of these features were 100% recovered as bulk soil samples and infant bones were recovered from two of them. The non-grave features were generally 100% excavated with the exception of pit 5282 (50% excavated) and the linear features.

Features Pre-dating the Cemetery

Various subsoil features were recorded which were not associated with the cemetery and most of these may be assigned to the prehistoric period (Phases 1 and 3). Full details of these features are held in the project archive. Those features located within the cemetery area are included on Fig. 29.

The earliest feature was a posthole of Neolithic date (5146) which lay on the western edge of the cemetery (Phase 1). The posthole was 0.45 m in diameter and 0.52 m deep with vertical sides. There was evidence for a post-pipe with flint and chalk packing. The feature is dated by a Neolithic flint axe roughout (Fig. 55) lying on the base of the posthole. The roughout appears to have been broken at the time of its manufacture. It may have served as a post-pad or as a deliberate deposit prior to setting the timber. A mixed assemblage of charcoal comprising hawthorn group, juvenile oak and ash was recovered from the posthole.

Features dated to the Bronze Age (Phase 1) comprised two ditches, 5302 and 5303. Both lay within the eastern half of the cemetery. The corner of ditch 5302 was observed within the cemetery area and the ditch extended eastwards for 30 m, terminating just short of the parish boundary. Excavation of ditch 5302 showed it to be on average 1 m wide and 0.42 m deep with an irregular V-shaped profile and flat base. A primary fill of chalk rubble within a silty matrix and a secondary fill of brown silty loam were recorded; the latter contained a discrete lens of charcoal. Forty-eight sherds of Middle Bronze Age pottery and three of Late Bronze Age date were recovered from the ditch. Soil samples from the ditch produced a few cereal fragments including wheat and possibly barley. The ditch appears to form part of a fairly large enclosure and may be part of a wider system of Middle Bronze Age land division around Tolpuddle Ball, probably associated with similarly-dated features recorded 200 m further south (see Fig. 8; South of Tolpuddle Ball report below).

Ditch 5302 was cut by a north–south aligned ditch 5303 which was observed over a distance of 11 m. The ditch was 0.75 m wide and up to 0.42 m deep with a shallow V-shaped profile and flat base. The ditch became shallower and narrower towards the north of the site and terminated within the excavation area. The southern end of the ditch was truncated by the parish boundary and no continuation of it was observed to the

south. The ditch contained two loamy fills and had been recut. It produced a mixed group of Late Bronze Age and Middle/Late Iron Age pottery. The only other linear features recorded were three insubstantial and poorly-preserved north-west to south-east aligned gullies (Group 5076) observed in the eastern half of the temporary diversion. These gullies were a maximum of 0.50 m wide and 0.14 m deep and were cut by the parish boundary ditch.

A small Iron Age pit (5282) was recorded in the western part of the cemetery. It was 1.22 m in diameter and 0.70 m deep with near-vertical sides. The base of the pit was generally flat but it incorporated a small pit or posthole (5296) on its south side. Two fills were recorded, both containing discrete lenses of charcoal: a primary fill of white sandy silt and a main fill of brown silty sand. The pit produced two sherds of Middle/Late Iron Age pottery and was therefore assigned to Phase 3. The dimensions and shape of pit 5282 are comparable with the cylindrical Iron Age pits (Type C) excavated during the 1993 Tolpuddle Ball excavations (see site report above).

Pit 5099 was located 8 m south-east of pit 5282 and 2 m south of grave 5083. This feature was 0.75 m in diameter and only 0.11 m deep with a flat base. The fill comprised a charcoal-rich loam and five large unworked flint nodules were noted on the upper surface of the feature. The pit seems likely to represent a fire pit or hearth. It lies in an area devoid of graves and could therefore be associated with the cemetery itself. Unfortunately no dating evidence was recovered from the pit.

In addition to Neolithic posthole 5146, 11 other postholes were recorded within the western half of the cemetery. The diameter of the postholes ranged from 0.20 m to 0.56 m and the depths from 0.22 m to 0.52 m. Postholes 5196, 5277 and 5291 contained post-pipes with flint and/or chalk rubble, as observed for Neolithic posthole 5146. The post-pipe within 5196 was triangular indicating that it held a radially-split post. Posthole 5196 was also associated with three small stakeholes (diameter 50 mm) equally spaced around its western side (see Fig. 29). No obvious structure is evident among the postholes although the similarity and triangular arrangement of postholes 5146, 5196 and 5277 is notable and they may possibly have formed part of a structure.

The postholes are generally undated, the only finds being a single sherd of Middle/Late Iron Age pottery from posthole 5210 and fragments of fired clay from 5177 and 5196. Postholes 5073 and 5291 were cut by graves 5069 and 5102 respectively. Overall it is reasonable to assign them all a prehistoric date. Finally, an undated posthole 5258 may be noted. It was only 0.11 m deep and was located immediately adjacent to the western (head end) of grave 5083. It cannot be entirely ruled out that this feature was associated with the grave itself and was some form of grave marker. Its position in relation to the grave is considered more likely to be coincidental, however, given the lack of similar features on the site.

The Cemetery

The cemetery lay immediately north of the Affpuddle/Tolpuddle parish boundary (in Tolpuddle parish) at a point where the boundary changes direction (see Fig. 8). The topography of the site was a gentle south-facing slope on the edge of a small spur. The southern edge of the cemetery coincided with a break in slope where the land fell away more sharply away and part of the parish boundary follows the line of this break in slope. The cemetery was located approximately 75 m west of the Liverpool University 1993 excavation area.

The cemetery consisted of 50 inhumation burials all aligned west-east or west-south-west to east-north-east. It lay within an area measuring only 20 m east–west by 13 m north–south. No burials were observed on the line of, or south of, the parish boundary and combined with

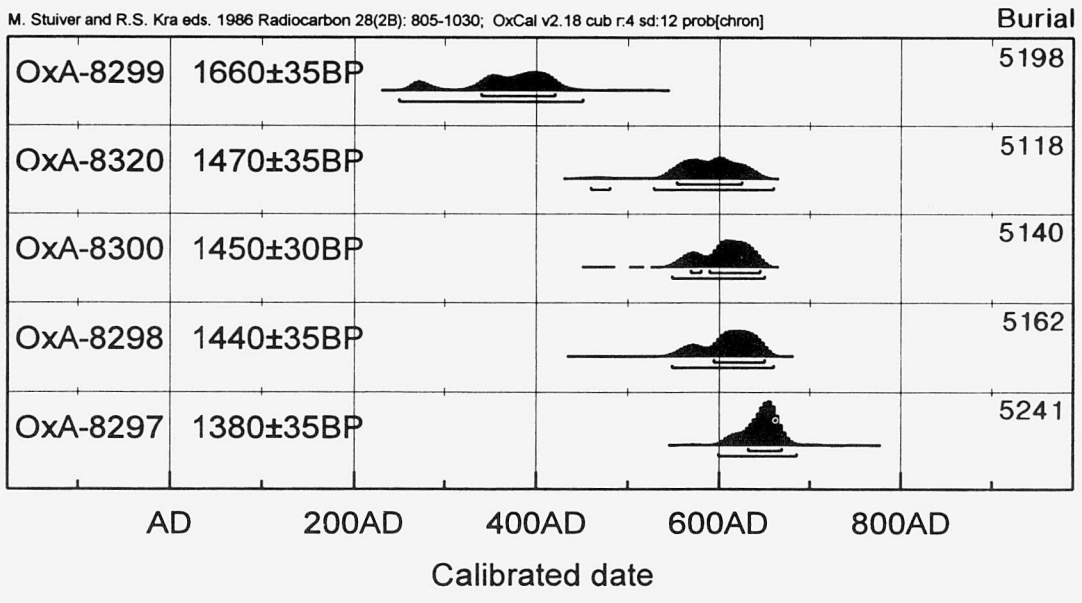


Figure 30 Tolpuddle Ball Cemetery (W2405.17): summary of radiocarbon dates

W2405.17 Tolpuddle Ball Cemetery: radiocarbon dates (all on human bone)

Burial	*Sampled bone*	*Sample ref.*	*BP Determination*	$\delta^{13}C$	*Calibrated date (cal AD) Confidence level*	
					68% (1σ)	*95% (2σ)*
5198	r. femur	OxA–8299	1660±35	20.1	340–420	250–450
5118	r. femur	OxA–8320	1470±35	19.9	550–630	530–660
5140	r. femur	OxA–8300	1450±30	19.9	590–650	550–650
5162	r. femur	OxA–8298	1440±35	19.9	590–650	550–660
5241	l. tibia	OxA–8297	1380±35	19.7	630–670	600–690

the negative evidence for burials to the west, north and east, the excavated group appears to represent the whole cemetery. Only two graves were intercutting at their corners (5131 and 5165). Approximately half the graves were disturbed or truncated through a combination of ploughing, animal activity and machining.

The description below provides an overview of the cemetery and its attributes. A detailed report on the skeletal material is presented in Section 3 (McKinley) and the burials are summarised individually in Appendix 3. A full discussion of the cemetery is included in Section 5.

Radiocarbon Dating, by P. Pettitt

Five human bone samples were submitted to the Oxford University Radiocarbon Accelerator Unit, Research Laboratory for Archaeology and the History of Art. The results are presented above and on Fig. 30. The dates were calibrated using the Oxcal computer programme of Bronk Ramsey (1995) and the 1986 bi-decadal calibration curve (Stuiver and Kra 1986). The end points of the calibrated dates have been rounded outwards to ten years in accordance with Mook (1986).

Graves and Coffins

All the graves were rectangular in plan with rounded corners, near-vertical sides and flat bases. The length of the graves ranged from 0.56 m to 2.45 m, the longest being grave 5203 (an adult male). Twelve graves were over 2.00 m long. The two smallest graves containing infant inhumations (5175 and 5144) measured 0.56 m and 0.97 m in length respectively. The width of the graves varied from 0.20 m to 0.85 m, the widest (grave 5110) being that of an adult female.

The maximum grave depth was 0.51 m (burial 5227, young adult female). The shallowest graves were between 0.05 m and 0.15 m deep but these were generally disturbed or truncated graves. Examination of grave depths across the site shows that in general the deeper graves (0.24 m to 0.52 m) occurred within the northern part of the site and the shallower graves (0.05 m to 0.23 m) were located in the southern part. This may, however, reflect the fact that there was heavier truncation of graves along the southern side of the cemetery (on the break of slope) due to agricultural activity and machining.

Two graves (5144 and 5175) were very small, both being less than 0.73 m long. No human remains were recovered during excavation but bone was retrieved from the sampled grave fills. Two other features (5172 and 5187) had the appearance of graves and were comparable with the two very small graves in terms of size and fill. Although the samples from these two features did not produce any bone it is likely that both represent infant graves, especially 5172, since it lies alongside infant grave 5175 (see Fig. 29). Grave 5168, which contained the remains of a flexed infant inhumation (Fig. 31), measured 1.40 m by 0.70 m and was 0.48 m deep; notably wider and deeper than the other infant inhumations on the site.

Two of the graves included possible evidence for a timber coffin and two others included large stone nodules around the inner edge(s) of the grave which may denote the former presence of a timber coffin. Grave 5150 contained seven large unworked flint nodules placed along the southern inner edge of the grave (Fig. 31). Grave 5240 contained three similar stones around the eastern edges of the grave. The stones may have helped support or wedge a timber coffin or acted as packing.

The nature of the fill of grave 5139 also appears to suggest the presence of a timber coffin. The fill was characterised by a chalk rubble fill around the edge of the grave, with a darker, loamy fill around and above skeleton 5140 (Fig. 31, plan). Differential fills were also observed within graves 5150 and 5217. No coffin nails were recovered from any of the graves. If coffins were used, therefore, they must have been of simple, jointed construction. Alternatively the burials may simply have been shrouded.

Burial Position and Spatial Arrangement

All the burials in the cemetery were supine and all were extended with the exception of infant burial 5167 whose lower limbs were flexed. All heads were placed at the western end of the grave. The only real variation in the attitude of the extended burials was in the position of the arms. Five main types of arm position were defined, as listed below. Within these types the positions of the arms varied slightly and more detailed positions are included in Appendix 3.

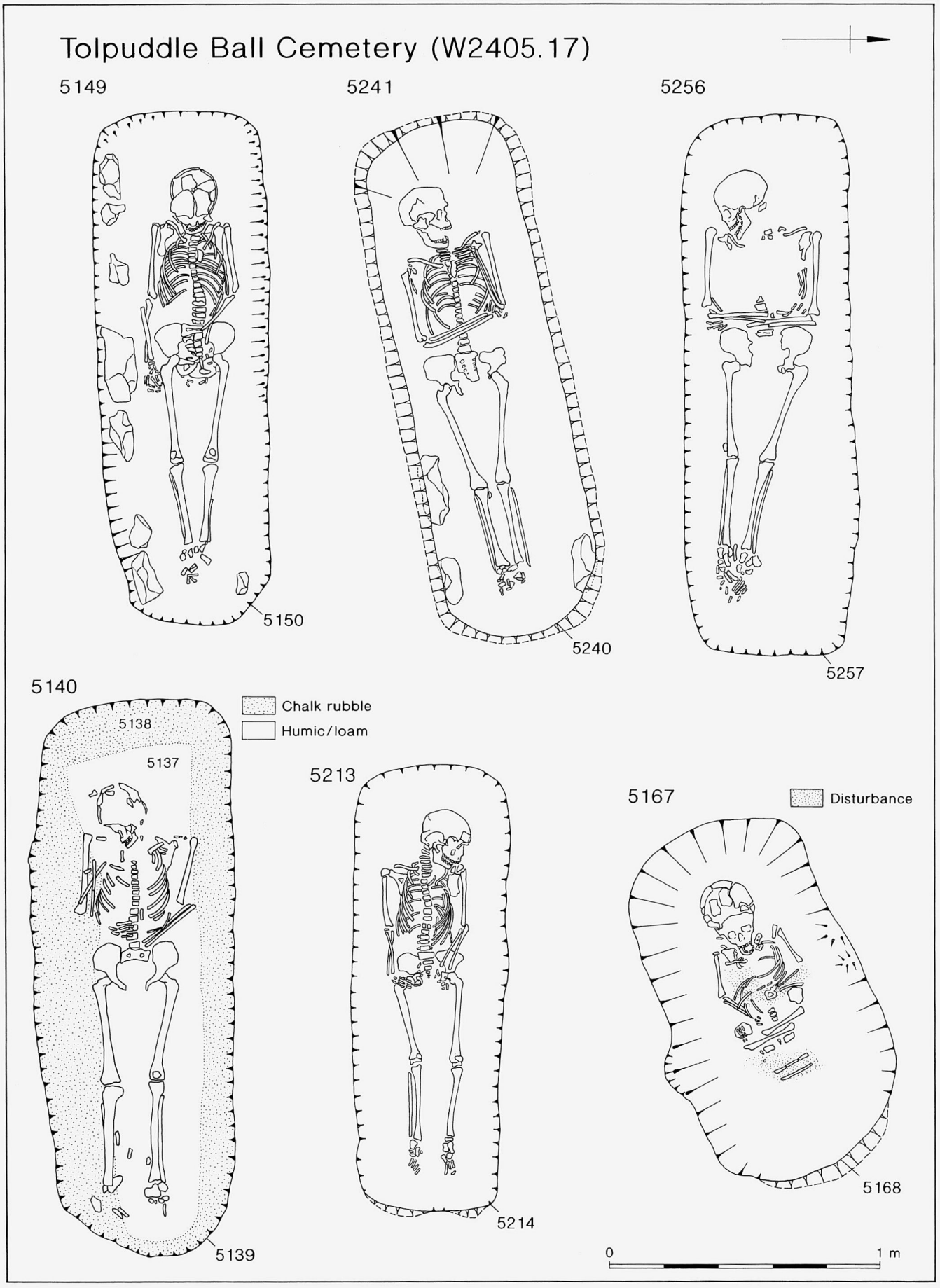


Figure 31 Plans of burials and graves



Plate 27 Tolpuddle Ball cemetery (W2405.17): burial 5152 (mature adult, male), detail of lower arm and hand position (scale 0.10 m)

1. Both arms extended by sides, sometimes with one or both hands resting on respective hips, thighs or pelvis – 23 examples (e.g. Fig. 31, burials 5149, 5213).
2. One arm extended, the other flexed on the abdomen or stomach – six examples (e.g. Plate 27, burial 5152)
3. Folded arms – both flexed at elbows across waist (or adjacent area) – four examples (e.g. Plate 28, burial 5162; Fig. 31, burial 5256)
4. Both arms flexed in different positions, generally with one towards the head or shoulder – four examples (e.g. Fig. 31, burial 5241, 5140)
5. Arms across the chest – two examples (e.g. Plate 29, burial 5218)

It may be noted that the two examples of arms across the chest (burials 5111 and 5218) and the four examples of folded arms (burials 5094, 5162, 5227, 5256) were all female adults. All but one of the type 4 arm positions were also adult females. These arm positions could represent differing burial rites for women but the evidence is not conclusive. The differing arm positions appear to be spread randomly across the cemetery, the only possible exception being that the four examples of folded arms are confined to the eastern half of the cemetery. Overall, it is considered unlikely that there is any significance in the positioning of arms.



Plate 28 Tolpuddle Ball cemetery (W2405.17): burial 5162 (young adult, probable female), detail of arm position (scale 0.10 m)



Plate 29 Tolpuddle Ball cemetery (W2405.17): burial 5218 (mature adult female), detail of arm position (scale 0.50 m)

The spatial distribution of sex and age groups was examined to establish whether there was any obvious patterning or evidence for family groups (see Fig. 32). It is clear that infants and juveniles were buried in the same areas as younger and older adults. The distribution of male and female burials was also relatively even throughout the cemetery apart from the westernmost row of graves, all four of which were females. Although there are no clear pairings of males and females with adjacent children which might indicate family groups, this cannot be ruled out entirely.

The cemetery appears to have been well planned, which has implications for its management and development over time. The graves are located in orderly rows, and the distance between graves in each row is often as little as one metre. Some form of visible grave marking such as an earthen mound or kerb-stones must have existed over the graves so that when a new

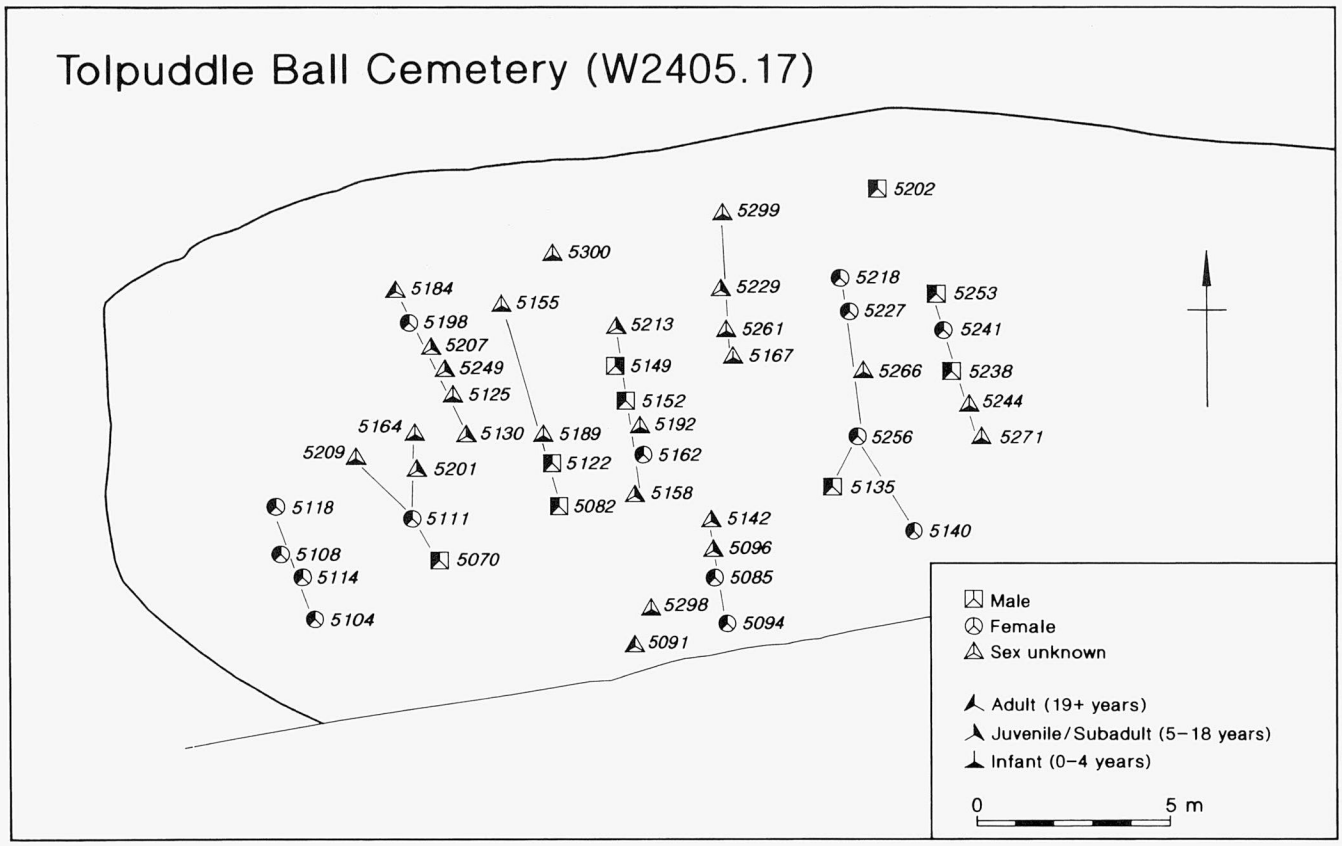


Figure 32 Diagram of sex and age of burials

grave was dug, it did not disturb the neighbouring grave. Further discussion on the arrangement of the cemetery is provided below (Section 5).

Finds from Graves

As noted above, no coffin nails were recovered from any of the graves. There were also no examples of *in situ* grave goods such as coins, weapons or personal ornaments. The only item which might conceivably have been a grave good was a single tiny (3 mm diameter) annular blue glass bead from the fill of grave 5159 (context 5157, Obj. 520), the burial of a 12-/13-year old. Blue annular beads have a long currency in this country, at least from the 5th century BC to the 8th century AD (Guido 1978, 68). By itself, therefore, the bead cannot be closely dated but it seems likely to be contemporary with the cemetery. Given the tiny size of the bead and the fact that only one was present it is considered unlikely to be a 'grave good' and far more likely to represent an accidental inclusion in the grave (e.g. from clothing), or a redeposited item.

Small quantities of pottery were recovered from 15 of the graves, comprising 72 sherds in total. These sherds are mostly small and abraded and represent a mixed group ranging in date from Early/Middle Bronze Age to Late Roman. The largest total from a single grave was 13 sherds from grave 5083 but this was also of mixed date range. The small amount of diagnostic material included sherds from a Middle Bronze Age globular urn from grave 5257 (which lies adjacent to the two Bronze Age ditches 5302 and 5303). All the pottery from the graves is interpreted as residual or redeposited material. Small quantities of worked flint, mostly small waste flakes, from eight of the grave fills are also interpreted as residual material.

Graves 5087, 5090, 5092, 5134 and 5160 contained small quantities of animal bone, 35 fragments in total. The single fragment from grave 5160, a pig jaw, was recovered from the burial context itself (skeleton 5162). It is possible that this represents a deliberate deposit but this seems somewhat unlikely. The material from the other graves was all from the grave fills. It comprises cattle, sheep/goat, fox and rabbit and represents incidental pieces incorporated into the graves, as with the pottery and flint. The presence of finds in individual grave is summarised in Appendix 3.

Small quantities of apparently redeposited human bone were recorded during post-excavation analysis from seven graves. In at least two of these (burials 5122 and 5261) the redeposited bones do not appear to represent contamination or mixing from adjacent, shallow disturbed graves. This may suggest that these two graves had secondary burials inserted into them, disturbing and largely removing the previous burial. This is discussed in more detail in the human bone report (McKinley, Section 3).

Other Features Associated with the Cemetery

As described above, many of the other subsoil features recorded within the area of the cemetery can be demonstrated to pre-date the cemetery, the overall date range being Neolithic to Middle/Late Iron Age. It is worth noting here those few features which were possibly contemporaneous with the cemetery. In each case the possible connection is made on spatial grounds since none of the features is dated.

A shallow pit, 5099, apparently a fire pit, lies in the southern part of the site in an area notably devoid of graves. It may conceivably have been associated with ceremonies at the cemetery. Other spaces within and between groups of graves may also have been 'features', affording accessible areas within the cemetery and/or providing vacant plots for future use. The most notable and regular space is that to the south of the flexed infant burial 5167 where a roughly square area (3 m x 3 m) exists, devoid of graves but surrounded by them.

The close proximity of the graves to one another and the virtual absence of intercutting graves indicates that the graves were originally marked in some way above the ground. It is highly likely that such markers have not left any traces in the archaeological record (e.g. earth markers or stones/objects placed on the ground surface). The only possible archaeological evidence on the site for grave markers is posthole 5258 which lay 0.10 m west of grave 5083. Posthole 5196, 0.50 m west of grave 5116, is also aligned with the grave but is almost certainly prehistoric. Overall, the lack of similar features at the head of other graves suggests these postholes were not grave marker posts but part of the pre-cemetery activity on the site.

The final feature on the site which appears to be associated with the cemetery is the Tolpuddle/Affpuddle parish boundary ditch. As already noted, the cemetery lies immediately north of the boundary at a point where it changes alignment (see Fig. 8). The parish boundary ditch was 2–3 m wide in the area of the cemetery. It was not excavated since it had already been investigated during the watching brief (see above, Tolpuddle Ball report Phase 6/7, Fig. 28). The position of the cemetery in relation to the parish boundary is discussed further below (Section 5).

BURLESTON DOWN, TOLPUDDLE: W2402.8 (Fig. 33) SY 7800 0949 to 7830 0949

Evaluation Background (Site O/R/AP5)

This site incorporates three separate evaluation components: 'lynchets' (Site O), crop/soilmarks (Site AP5) and a spread of material from fieldwalking (Site R). These three 'sites' lie between 68 m and 83 m OD within a large dry valley, which runs approximately north–south. The underlying geology comprises Upper Chalk which is overlain by Reading Beds gravels on the plateau to the east of the dry valley. The majority of the site lay in an arable field with a small part extending into a field under pasture to the west. The assessment and evaluation reports summarise the three elements as follows:

Site O (Lynchet) – Fig. 6
'A massive lynchet some 150 m long and up to 6 m high runs from SY 78109491 to SY 78179505. A smaller, almost parallel feature, underlies the northern part of the modern field boundary about 50 m further west. Both appear to be relics of a 'Celtic Field' system.'

Site AP5 (Crop / Soil Marks) – Fig. 6
'A series of rectangular or sub-rectangular soil mark features 700 m east of Burleston Drove. They appear to form part of a 'Celtic field' system which is also represented by upstanding lynchets ... directly affected by the road.'

Site R (Fieldwalking Data)
This site was identified during the field evaluation stage. There were three collection units: R1 (east side of the dry valley); R2 (centre of the dry valley); R3 (west side of the dry valley). A concentration of flint work including a barbed and tanged arrowhead was identified on the boundary of R1 and R2, covering an area about 50–60 m east–west, and extending across the width of the road (80 m). Table 5 summarises the total assemblage from Site R which was assessed in the report as *'... the best collection of flint work recovered from the line of the proposed road, implies some prehistoric activity in the area. It appears too diffuse and to cover too long a time range for a settlement site to be located actually on the road line.'* The worked flint was assigned a date range of Late Neolithic/Early Bronze Age.

Excavation Methods

Prior to machine stripping, an earthwork survey was undertaken across the possible lynchets and the profile of the dry valley by means of a series of traverses (see earthwork survey report below). *Site O* was investigated by three separate machine trenches (Fig. 33, trenches 1–3). Trench 3 was excavated at the northern limit of the road corridor, across the southern end of the *'massive lynchet'*. The feature proved to be of natural origin.

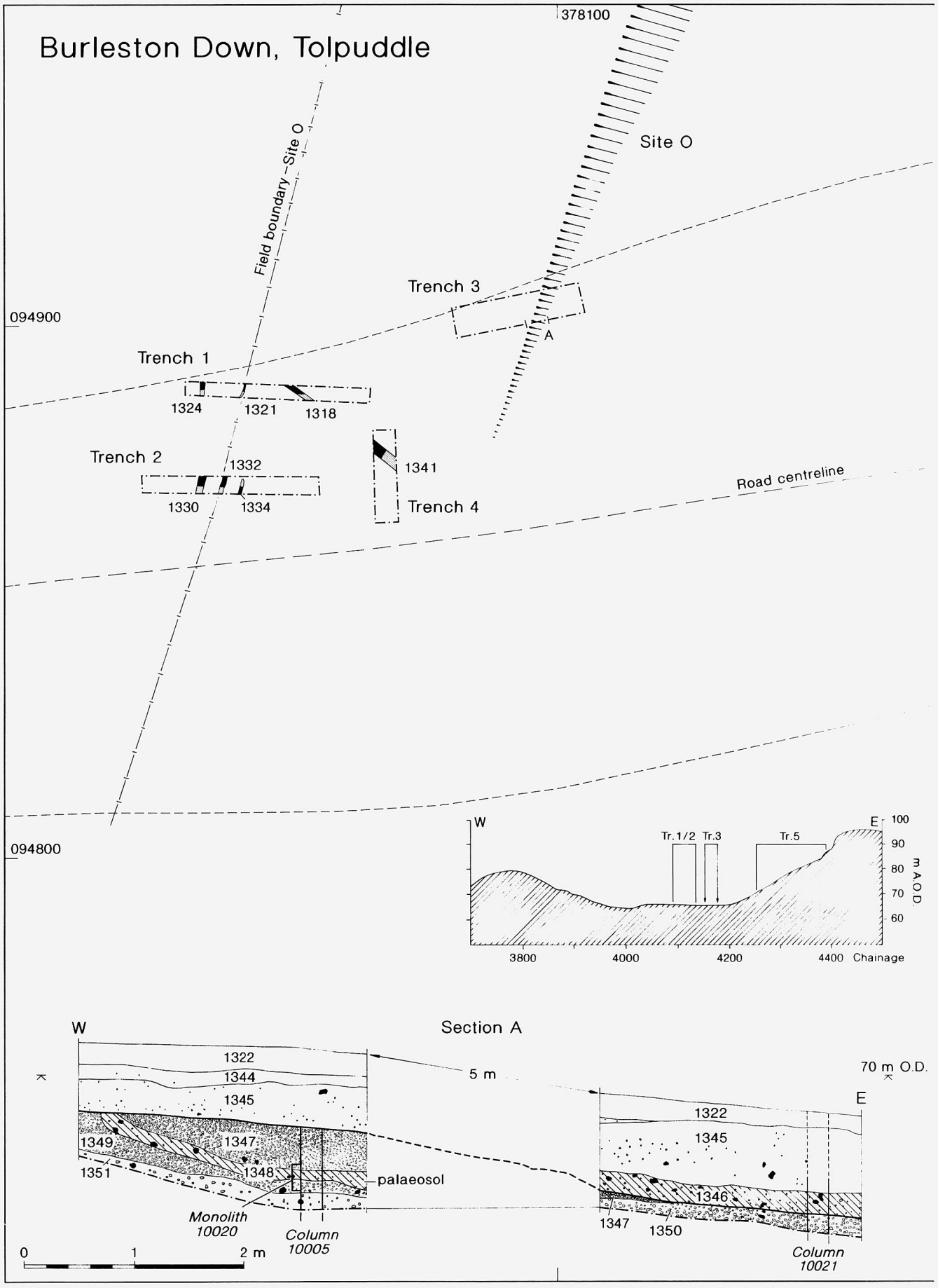


Figure 33 Burleston Down, Tolpuddle: plan and sections

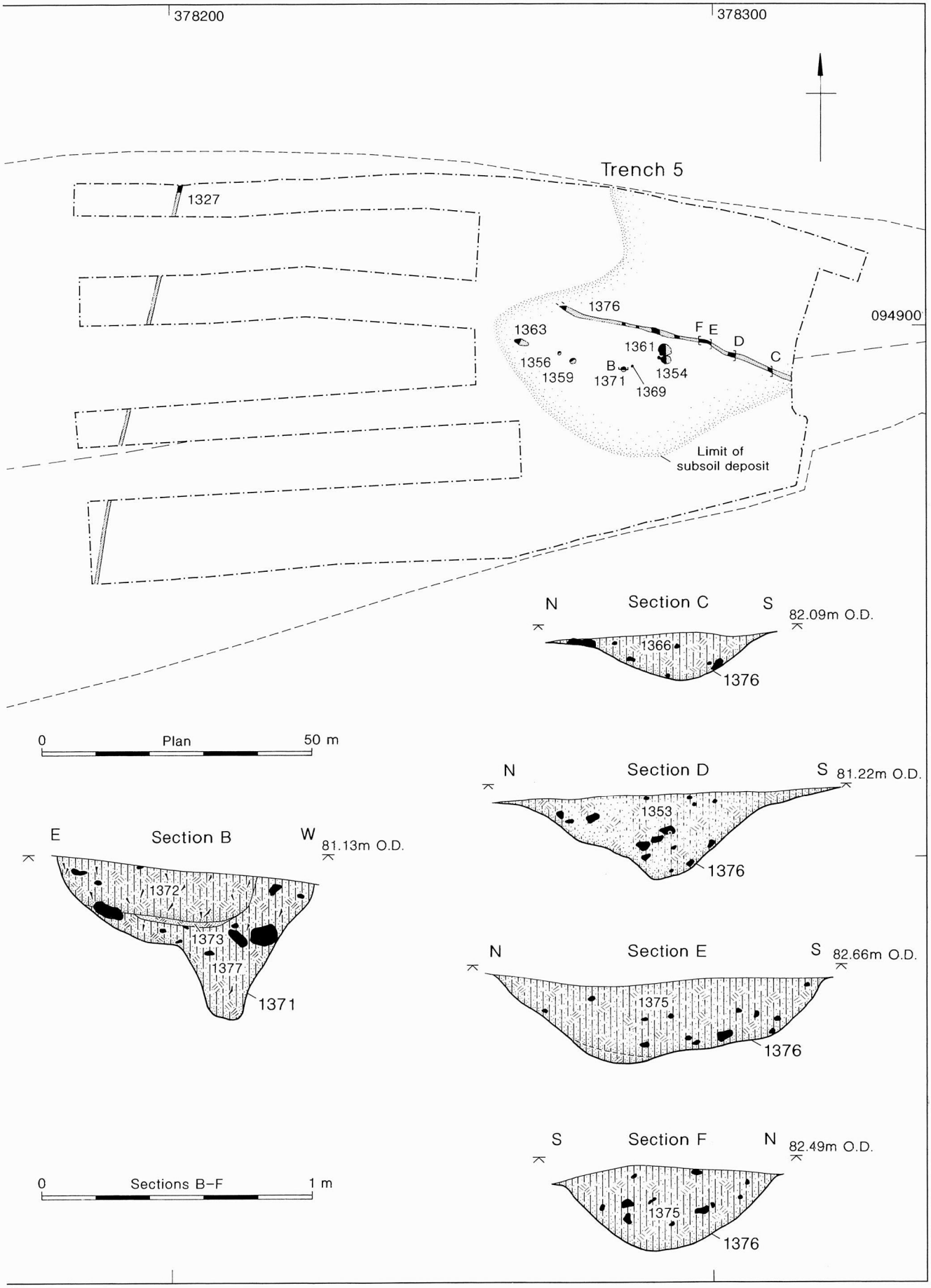

378200
378300
Trench 5
1327
1376
1363
1361
1356
1359
1371
1354
1369
094900
F
E
D
C
B
Limit of subsoil deposit
N
Section C
S
82.09m O.D.
1366
1376
0
Plan
50 m
N
Section D
S
81.22m O.D.
1353
1376
E
Section B
W
81.13m O.D.
1372
1373
1377
1371
N
Section E
S
82.66m O.D.
1375
1376
0
Sections B–F
1 m
S
Section F
N
82.49m O.D.
1375
1376

Table 5: Burleston Down, fieldwalking assemblage from Site R (evaluation)

Finds category		*Collection Area R1*	*R2*	*R3*
Flint	Tools	10	10	–
	Flakes	45	23	5
	Cores	2	3	–
	Burnt	12	4	5
	Debitage	28	47	9
	Total	*97*	*87*	*19*
Pottery	RB	–	–	1
	Med	3	–	14
	Post-med	24	17	63
	Modern	–	–	1
Brick/tile		2	6	5
Iron		–	1	–
Glass	Modern	–	3	–
Shell		7	34	–
Animal bone		–	2	–
Stone		–	–	1

Trenches 1 and 2 were excavated across the smaller lynchet, which proved to be a modern field boundary. Subsequent discoveries in trenches 1 and 2 led to the opening of trench 4 nearby, to investigate the possible continuation of a shallow linear feature observed in trench 1.

Sites AP5 and R were initially investigated by the excavation of four large machine trenches down the west-facing slope, each approximately 130 m long and 5 m to 15 m wide. These trenches revealed a subsoil deposit on the upper part of the slope. The deposit was investigated by six hand-dug test pits through the top- and subsoil (TP 1–6). As the subsoil appeared to be the source of the artefact scatter recognised during the evaluation fieldwalking, the four machine trenches were subsequently joined together on the higher part of the slope to expose the full extent of the subsoil deposit within the bypass corridor (Fig. 33, trench 5).

Results

Excavations showed that neither of the two possible lynchets identified during the evaluation (Site O) were in fact the result of ploughing. The very large (eastern) feature is almost certainly of periglacial origin and the smaller (western) feature appeared to be associated with a field boundary. The scatter of flint work identified during fieldwalking (Site R) appeared to be confined to the present topsoil and subsoil. No features were found to correspond with the crop/soil marks (Site AP5) identified during the evaluation.

Trenches 1, 2 and 4

Several ditches located in trenches 1 and 2 are interpreted, on the basis of their alignments and similarity of form, as representing the same features. The low bank which was described in the evaluation as a lynchet and a relic of a Celtic field system proved to be composed of topsoil and appeared to be the result of upcast material from a ditch (1321 and 1332) which runs along the present field boundary. The ditch was cut through a thin (0.14 m) layer of light yellowish–brown silt subsoil (1338). Although no finds were recovered from the fill of the ditch it is assumed to be of relatively recent date. The subsoil occurred on the west side of the modern field boundary but not on the east side. Land use on the west side was rough pasture whilst on the east side it was arable (ploughed). The subsoil on the eastern side of the boundary is likely therefore to have been removed by ploughing in recent years.

Another linear feature (1334) was located in the centre of trench 2 and ran parallel to the modern field boundary but terminated before the north edge of the trench. It was 0.75 m wide and 0.15 m deep with a single yellowish–brown silty loam fill from which no finds were recovered.

Sealed beneath the subsoil was a further ditch (1324 and 1330), aligned roughly north–south and at a slight angle to the present field boundary. The ditch was between 0.90 m and 1.05 m wide and between 0.30 m and 0.40 m deep with a U-shaped profile and a flat base. The two fills comprised light yellowish brown silts with a higher frequency of chalk fragments in the lower fill, from which a single small sherd of Iron Age pottery was recovered. This ditch pre-dates the current field boundary and is likely to represent an earlier alignment of it, possibly even of later prehistoric origin.

A shallow, irregular linear feature on a north–west to south–east alignment was located in trench 1 (1318). This was subsequently traced in trench 4 (1341). It was on average 1.20 m wide and varied between 0.05 m and 0.15 m in depth. The single very pale brown silty loam fill contained a few pieces of abraded Late Bronze Age pottery. This ditch is tentatively interpreted as the heavily plough-damaged remains of a small negative lynchet of Late Bronze Age or later date.

Trench 3

This trench, 37 m long and 5 m wide, revealed a large depth of deposits above natural chalk (which occurred at 1.48 m below ground level). Fig. 33, Section A shows the main sequence of deposits observed. Immediately above the natural chalk bedrock was a 0.14 m thick layer of pale brown silty clay (1351) which was sealed below a 0.32 m thick deposit of very pale yellow chalky marl (1349). Above this was a 0.18 m thick layer of mid-brown silty loam (1348), which was in turn sealed below a thick chalk marl deposit (1347). This sequence of deposits was interpreted in the field as almost certainly a Lateglacial palaeosol (humic deposit 1348) sandwiched between periglacial meltwater (Coombe) deposits (non-humic chalky layers 1349, 1347). Underlying 1347 was also a 0.10 m thick yellowish–brown sandy clay layer (1350) and overlying it was a 0.32 m thick dark yellowish–brown sandy clay loam (1346), possibly representing a second buried soil. Sealing 1346 was a 0.5 6m thick light yellowish–brown clay loam (1345) which was sealed by

a 0.12 m thick yellowish–brown sandy clay (1344) which was in turn below a 0.30 m thick greyish–brown silty clay loam topsoil (1322).

It was clear from the excavation that the large north–south feature identified during the evaluation did not represent a very large lynchet, but a 'river cliff' of glacial or periglacial date (see Plate 30). The two chalk marl deposits appear to represent distinct episodes of weathering of the cliff face causing a build up of frost-shattered natural chalk at the base of the cliff, the second episode sealing the Lateglacial palaeosol. Deposits 1344 and 1345 probably represent colluvial deposits of Neolithic or later date. Although no datable artefacts were recovered from any of the deposits (apart from the modern topsoil) the sequence of deposits does provide an important environmental sequence for the area from the Lateglacial period to the present. A series of specialist environmental samples was taken through the sequence of deposits for pollen and land snails. Analysis of the land snails has provided an important Lateglacial and Post-glacial sequence, that for the Lateglacial (Allerød Phase, *c.* 11,000 BP) appears to represent the first soil of this phase recorded from southern central England. Pollen was found to be virtually absent in the sequence. The palaeosol was also sampled and thin sectioned for micromorphological description. The results of the environmental analyses are described in detail below (Allen; Scaife, Section 4).

Trench 5 (Plate 30)

Below the topsoil (1300) the subsoil comprised a light yellowish–brown sandy clay loam with flint inclusions. The subsoil varied in depth between 0.05 m and 0.45 m and covered an area of approximately 1900 m^2 at the east (upslope) end of the trench. It contained large amounts of undiagnostic worked flint and some pottery. It was investigated with a series of 16 one metre square test pits at 10 m intervals. These test pits were dug in 0.05 m spits until the underlying Reading Beds was reached. Once the topsoil had been removed the area was also 'fieldwalked' in 10 m x 10 m units. Test pitting and surface collection recovered a relatively large assemblage of worked flint (171 and 453 pieces respectively) and smaller quantities of pottery dated to the Bronze Age, Iron Age and Romano-British periods. The 'fieldwalking' and test pitting demonstrated that the material was concentrated towards the western (downslope) extent of the subsoil deposit. The test pitting also demonstrated that the flint and pottery were concentrated in the upper 0.15 m of the subsoil deposit.

Beneath the subsoil deposit a single linear feature (1376) aligned approximately north-west to south-east was traced from the east end of the trench for 40 m where it petered out. It was variable in depth but where best defined was 0.92 m wide and 0.31 m deep (Fig 33, sections C–F). The single fill comprised a reddish–brown sandy clay which contained worked flint, Late Bronze Age pottery and charcoal fragments.

South of ditch 1376, also beneath the subsoil deposit, seven possible pits were cut into the gravel natural. The majority of these (1354, 1356, 1359, 1361 and 1363) contained no finds and their irregular forms suggest that these were probably natural features. Feature 1369 may be archaeological since it contained charcoal and burnt flint. The only securely-dated pit was 1371 which was sub-circular, 1.00 m long, 0.90 m wide and up to 0.50 m deep with steep, irregular sides and a concave base (Fig 28, Section B). The primary fill (1377) comprised a yellowish–brown sandy clay loam from which a small assemblage of burnt flint was recovered. The primary fill was partly overlain by a thin (0.02 m thick) layer of dark reddish–brown sandy clay (1373) which was in turn overlain by a dark greyish–brown sandy clay loam (1372) with abundant charcoal inclusions. The upper fill produced Late Bronze Age pottery, worked flint and burnt flint.

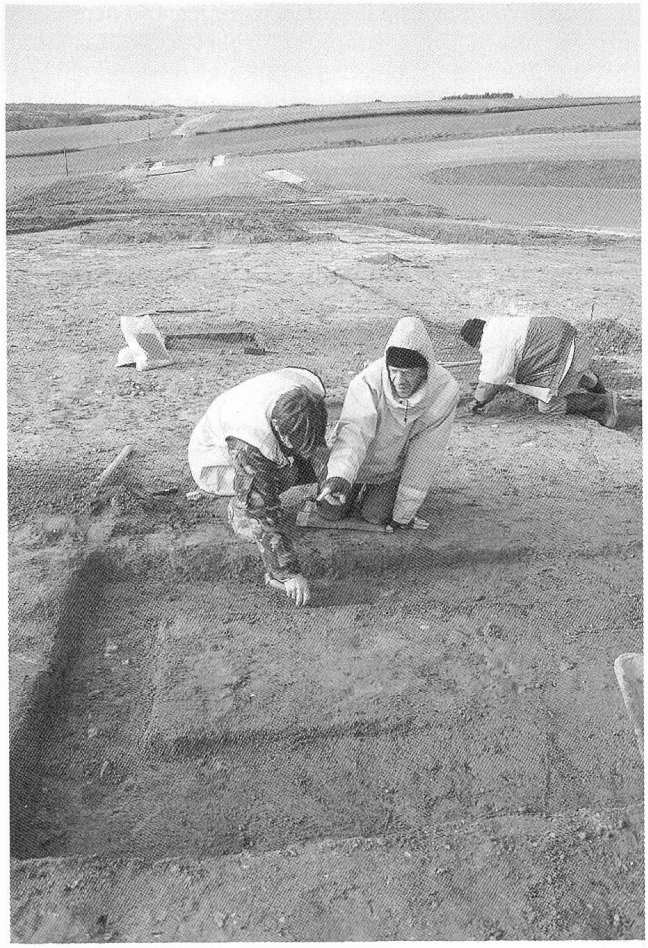


Plate 30 Burleston Down, Tolpuddle: trench 5, excavation of prehistoric features. River cliff visible in background (right-hand side)

At the western end of trench 5 a linear feature was recorded (1327), aligned north–south along the base of the valley. The ditch was 0.85 m wide, 0.22 m deep with a U-shaped profile. The fill (1328) was a reddish–brown sandy clay with no finds. This feature represents a former field boundary visible on recent Ordnance Survey maps.

Discussion

The ditch (1376) and pit (1371) in trench 5 indicate Late Bronze Age activity (Phase 2) but the steeply-sloping

ground on which these features were located seems an unlikely place for settlement or settlement-related activity. The large quantities of redeposited worked flint recovered from the topsoil and subsoil indicate prehistoric activity in the vicinity. Limited evidence for Bronze Age, Iron Age and Romano-British activity is also provided by pottery recovered from the subsoil, the possible lynchet recorded in trenches 1 and 4 and ditch 1330.

Although the finds from the subsoil deposit are redeposited they do suggest that an as yet undiscovered site (or sites) lies in the vicinity. The evaluation identified faint soil marks (AP7), possibly representing enclosures, some 600 m to the east of Burleston Down on a relatively flat plateau to the north of the road corridor. If these soilmarks do represent an archaeological site it is possible that they are the source of the material at Burleston Down and/or Hill Barn (see site report below). The plateau and the base of the dry valley are perhaps the most likely locations for prehistoric settlement in the local area.

HOME FARM, PUDDLETOWN: W2402.6 (Fig. 34) SY 7682 9501

Evaluation Background (Site AP4/J)

This site was identified on the basis of its proximity to, and possible association with, the deserted medieval village of Bardolfeston (RCHME 1970a, 229–30) which lies approximately 350 m south of the bypass (see Fig. 5). Two components of archaeological interest within the bypass route were defined from the desk-based assessment: an area of ridge and furrow (AP4) and a former hollow way (Site J). The area was subjected to a fieldwalking and geophysical (gradiometer) survey.

Fieldwalking produced a small mixed assemblage of worked flint (36 pieces) and pottery (45 sherds). The latter was mostly of post-medieval and modern date; earlier material consisting of a single Roman sherd and three sherds of medieval date. Geophysical survey produced ' ... *no anomalies consistent with either a continuation of the hollow way north of the village or of house platforms*'. The overall conclusion of the field evaluation results was that they ' ... *suggest very strongly that the northern extent of the village corresponds with the present field boundary and that no domestic structures are likely to survive on the route of the proposed new road*'.

The site lay in an arable field between 72.5 m and 75.5 m OD on a low spur of land between the valleys of the River Piddle and the Devil's Brook. The underlying Reading Beds comprise a mixture of reddish–brown silty clay, medium to fine gravels and coarse sands.

Excavation

Initially three trenches were excavated by machine parallel with the road corridor, designed to expose the soil marks identified during the evaluation. The trenches were each 5 m wide and 150 m long. An area of 23 m x 10 m between the northern and central trenches was subsequently excavated (see above, Fig. 5 and Plate 4). The shallow clay loam topsoil over the site varied in depth between 0.25 m in trench 1 and 0.30 m in trench 3. The only archaeological features encountered on the site comprised three small pits and a shallow subsoil deposit, all in the western half of the site. No features were encountered correlating with those identified by the evaluation.

Subsoil deposit

A subsoil deposit was originally noted in trench 1 where it partly overlay one pit (1207) and was cut by another pit (1205). An area between trenches 1 and 2 was subsequently exposed to allow a more detailed examination of the deposit: it was found to cover an area of approximately 220 m^2 and comprised reddish–yellow clay with sparse charcoal inclusions. Five 1.00 m x 1.00 m test pits excavated through the deposit demonstrated that it was a maximum of 0.15 m deep and filled a large irregular undulation in the underlying natural substratum. The only finds recovered from the subsoil deposit comprised a single large flint waste flake and one fragment of medieval hearth tile.

Archaeological Features

The three archaeological features found on the site comprised two shallow sub-circular pits and a small circular pit or posthole. All lay close to the northern limit of the road corridor, within the original northern trench and all appeared to have been truncated by ploughing.

Pit or posthole (1202) was 0.30 m in diameter and up to 0.10 m deep with a U-shaped profile. The single dark yellowish–brown silty loam fill with abundant charcoal inclusions (1201) contained a small assemblage of Late Bronze Age pottery and worked flint. It appears to be an isolated posthole of unknown function or the base of a very heavily-truncated pit and may be associated with the nearby feature (1207, see below) which contained pottery of the same general date.

Approximately 4 m to the south-west of pit 1202 lay pit 1207, a small oval pit approximately 0.90 m long, 0.80 m wide and up to 0.16 m deep with a U-shaped

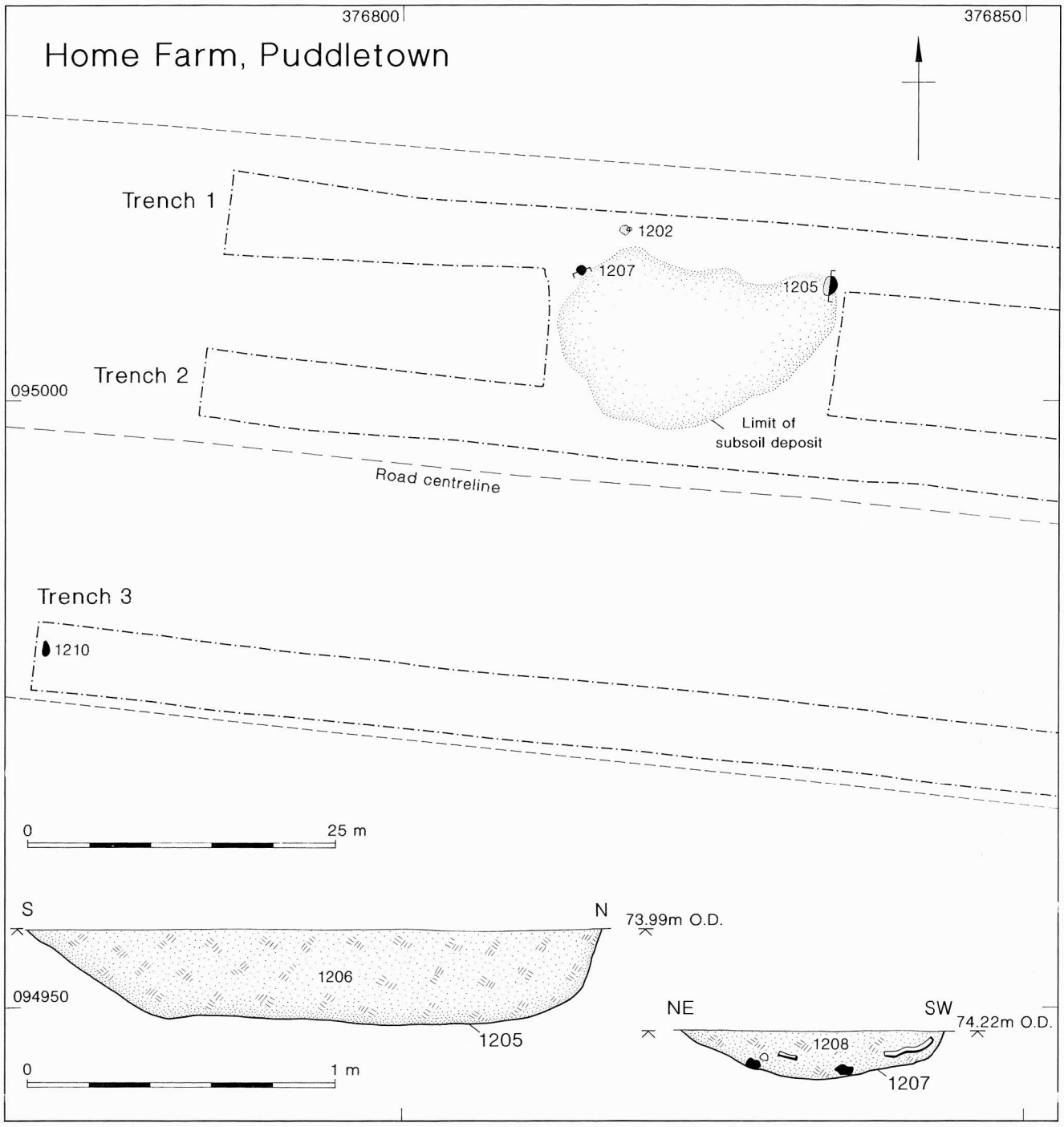


Figure 34 Home Farm, Puddletown: plan and sections

profile (Fig. 34, section). The single greyish–brown silty clay fill (1208) contained moderate quantities of Late Bronze Age pottery and worked flint. This feature is interpreted as the base of a heavily-truncated pit. The dating of the pit is somewhat problematic. The pit produced a quantity of Late Bronze Age pottery (48 sherds) which appears to derive from a single vessel and which seems unlikely to be intrusive. However, the worked flint assemblage includes diagnostic pieces of Neolithic date, including nine blades, a semi-biconical core and two axe sharpening flakes, and is in an unpatinated condition. The presence of small, fragile pieces of worked flint with fresh edges is not compatible with residual material. Pits 1202 and 1207 were bulk-sampled to assess their palaeo-environmental potential. Processing revealed poorly preserved charcoal and a lack of cereal remains (details in archive).

Cutting through the subsoil deposit was pit 1205, the largest of the group. This irregular, oval pit was approximately 2.0 m long, 1.6 m wide and 0.3 m (Fig. 34, section). The edges of the feature were extremely difficult to distinguish from the subsoil. The reddish–grey silty clay fill contained Romano-British and medieval pottery and small quantities of struck

flint. The only other feature recorded was at the western end of trench 3 (1210), examination of which proved it to be a tree throw.

Discussion

The three pits indicate a localised area of Late Bronze Age activity (Phase 2) near Home Farm. The group of features is heavily truncated and it is therefore possible that the activity represented by them was originally more extensive. The direct association in pit 1207 of Neolithic flint in mint condition and Late Bronze Age pottery is rather enigmatic since chronologically these two groups of artefacts appear to be separated by about 1,000 years. At the very least the evidence suggests Neolithic activity (Phase 1) in the same area. The Late Bronze Age activity may be directly associated with the small contemporaneous site which lies approximately 300 m further west (Lower Eweleaze, see site report below).

The small quantities of medieval pottery and tile recovered from the topsoil and subsoil presumably originate from manuring or disposal of domestic waste associated with the deserted village of Bardolfeston. No subsoil features were found to indicate the continuation of the hollow way observed in the evaluation or the apparent remnant ridge and furrow.

LOWER EWELEAZE (NEAR BARDOLF MANOR), PUDDLETOWN: W2402.5 (Fig. 35) SY 7643 9502

Evaluation Background (Site AP3)

This site was identified during the evaluation as ' ... a *linear crop mark to the west of a pair of chalk pits south of Bardolf Manor ...* '. The cropmark was aligned north–south and lies approximately 250 m south of Bardolf Manor (see Fig. 5). The evaluation report suggested that the cropmark could represent part of a 'Celtic field' system of local significance. No evaluation fieldwork appears to have been carried out in this area apart from a site inspection.

The site lay in an arable field between 64.5 m and 66.5 m OD in the base and lower slopes of a dry valley, aligned approximately north–south. The basal geology consists of Plateau Gravels in the bottom of the valley with underlying Upper Chalk exposed on the sides. The chalk showed evidence of degradation in the form of periglacial striations.

Excavation

Initially three trenches were excavated parallel with the road corridor, to locate the north–south crop mark. The trenches were initially each 4 m wide and *c.* 40 m long. These trenches were subsequently extended following the discovery of a small group of archaeological features. The final main excavation area was 25 m x 35 m.

Colluvial Deposits

The topography of the field suggested the likelihood of extensive colluvial deposits in the base of the valley. This proved to be the case and machining revealed colluvial deposits covering most of the excavation area, apart from the upper slope of the dry valley in the easternmost part of the site. The colluvial deposits varied in depth from 0.30 m to 1.05 m with an average depth of approximately 0.90 m.

The deepest colluvial sequence was on the southern edge of the site (Fig. 35, section A). Overlying the natural Plateau Gravels was a dark yellowish–brown compacted silty clay with rare small and medium flint gravel inclusions (1109). This layer was on average 0.50 m deep. A small assemblage of abraded Bronze Age and Romano-British pottery was recovered from this deposit along with worked flint of Neolithic and Late Bronze Age character. Layer 1109 was overlain by a light yellowish–brown silty clay with abundant flint inclusions with distinct gravel fans (1108) which had an average depth of 0.15 m and from which a small assemblage of prehistoric, medieval and post-medieval pottery and undiagnostic worked flint was recovered. Overlying layer 1108 was a 0.25 m thick humic ploughsoil (1140).

The colluvial sequence incorporates two main horizons: contexts 1108 and 1109. The lower colluvium (1109) represents erosion of finer soil material from the adjacent slopes. Erosion has washed the fine silt, clay and sand portions from the soils, but has not removed the stones. This indicates that the soils may have been relatively stone free argillic brown earths or brown earths, and/or that erosion was restricted to low-energy events (rilling), under arable or even pastoral conditions. The small assemblage of pottery recovered from the lower colluvium indicates a Romano-British or later date for its deposition. The gravel lenses in the upper colluvium (1108) indicate higher-energy erosion of thinner soils where the gravels have been stripped from subsurfaces upslope, presumably indicating soil thinning and arable activity. The medieval and post-medieval pottery recovered from the upper colluvium indicates a post-medieval/modern date for its deposition.



Figure 35 Lower Eweleaze, Puddletown: plan and sections

Archaeological Features

The colluvial deposits sealed a number subsoil features which were cut into the underlying plateau gravel. The main subsoil feature was a linear one (1141), very poorly defined in places, aligned approximately north–south through the trench and curving slightly in the southern end of the trench. Four sections were excavated through the ditch. Each section revealed a different profile. The best-defined sections showed the ditch to have a fairly broad, U-shaped profile, between 0.62 m and 1.32 m wide and between 0.12 m and 0.22 m deep (Fig. 35, sections C and D). Each section had a single fill of dark brown silty loam (1127, 1128) from which undiagnostic, but very fresh, unabraded worked flint, burnt flint and fragments of charcoal were recovered.

A number of features were located to the west of ditch 1141, these comprised five pits (1114, 1110, 1112, 1124, and 1130), four possible postholes (1105, 1107, 1136 and 1138) and two curvilinear gullies (1117 and 1122). Pit 1114, the largest pit, was circular in plan, had steep concave sides and very well defined edges (Fig. 35, section B). It was 1.80 m in diameter, 0.76 m deep and contained four fills (1121, 1115, 1119 and 1120) all of which were greyish–brown clay loams containing varying quantities of flint gravel. Fill 1115 produced a small assemblage of undiagnostic worked flint, burnt flint and fragments of charcoal. Processing of a sample of the main fill from this feature indicated very low potential for palaeo-environmental remains (details in archive).

Pits 1110, 1112 and 1130 were all very similar in form: roughly circular in shape, between 0.80 m and 0.84 m in diameter and between 0.15 m and 0.26 m deep. They all had U-shaped profiles and moderately well-defined edges. Each pit was filled with a single deposit (layers 1111, 1113 and 1131) of greyish–brown silty loam. Only pit 1130 produced any finds, comprising a small assemblage of Late Bronze Age flint-tempered pottery and undiagnostic worked flint. Pit 1124 was larger with a diameter of 1.28 m and a more oval shape in plan. It was 0.26 m deep, with a U-shaped profile and poorly-defined edges. It had a single fill of greyish brown clay loam with small fragments of charcoal but produced no datable finds.

The two curvilinear gullies were located in the northern area of the trench. Feature 1117 was a shallow, crescent-shaped gully, which appeared to continue beyond the limit of excavation. It varied from 0.50 m to 1.00 m in width and from 0.10 m to 0.20 m in depth. The fill (1118) was a greyish–brown clay loam from which a small assemblage of undiagnostic worked flint, burnt flint and charcoal was recovered. Within gully 1117 was feature 1122, a shallow, crescent-shaped gully approximately 0.50 m wide and 0.03 m deep with very poorly-defined edges. The single fill (1123) was a greyish–brown clay loam with sparse charcoal inclusions. Nearby, also within gully 1117, was a single posthole (1105), which was 0.28 m in diameter and 0.42 m deep with vertical sides and a flat base. The single fill contained abundant charcoal but no datable finds. Identification of the charcoal indicates that the posthole held a substantial oak post, probably associated with a structure.

Approximately 6 m to the west of gully 1117 was a group of three postholes (1107, 1136 and 1138). Posthole 1107 was 0.36 m in diameter and 0.32 m deep with steep, irregular sides and a flat base. Approximately 1.0 m to the west was the largest of the postholes (1136) which was 0.42 m in diameter and 0.72 m deep with straight sides and a flat base. The sloped sides of this posthole indicate that the post it contained was inclined to the south-west at an angle of approximately 70°. Approximately 0.40 m south-west of 1136 was a small, circular posthole (1138) which was 0.14 m in diameter and 0.14 m deep with straight sides and a flat base. The sloped sides of this posthole indicate that it supported a post inclined to the north-east at an angle of approximately 75°. The only artefacts recovered from the postholes comprised two small, undiagnostic broken flint flakes from the fill of 1136. Processing of an environmental sample from posthole 1107 indicated the presence of low quantities of charcoal.

Discussion

Ditch 1141 may represent the linear cropmark observed in the evaluation (AP3) but as it was sealed by nearly 1.00 m of colluvium this seems unlikely. It is perhaps more likely that cropmark AP3 represents a corridor of the deepest and most waterlogged soil in the base of the valley. It is probable that the two curvilinear gullies 1117 and 1122 and posthole 1105 represent the remnants of one or more structures. Similarly, the group of three postholes nearby, two of which held angled posts may represent a small structure of some form. Only one of the features (pit 1130) contained datable material in the form of Late Bronze Age pottery. However, the group of features is likely to be contemporaneous based on their proximity to one another and the fact that all were sealed below the lower colluvium. Some of the artefactual material recovered from the lower colluvium is also probably derived from the underlying subsoil features.

Overall the archaeological evidence suggests localised Late Bronze Age settlement-related activity (Phase 2) including settlement. It may be noted that this activity was confined to the west of ditch 1141 which may therefore have represented some form of boundary or drainage ditch for the settlement. As at Home Farm (see above) all of the features are poorly preserved and thus the original extent of activity is difficult to assess. The features may have been eroded and truncated for a prolonged period of time prior to being sealed by any great depth of colluvium.

SOUTH OF TOLPUDDLE BALL: W2402.14 (see Fig. 8) SY 8130 9460

Evaluation Background (Site AP14)

This area of interest was identified in the evaluation assessment. *'In the field south and east of Tolpuddle Ball the photographs [i.e. aerial] contain a large number of enigmatic features, some linear, some curvilinear, which do not all appear to be of the same date. Of all the crop and soil marks visible on this series [i.e. from the project], these are most likely to represent settlement evidence, presumably of prehistoric date ...'*. Geophysical survey (gradiometry) and trial trenching were subsequently undertaken. The former comprised seven long traverses plus shorter traverses in the southern part of the field. The results were negative: *' no trace was found of the linear features or possible settlement sites which appeared on the air photographs'*.

Trial excavations were undertaken by means of four manually-excavated trenches. Two trenches were located in the upslope area to intercept linear cropmark features and two trenches were located in the downslope zone to examine the area *'where the linear features converged'*. All trenches were originally 2.00 m x 1.00 m in size and some were subsequently extended (up to 8.10 m long in one case). No deposits or features of archaeological interest were observed. Ploughmarks were evident cutting into the underlying chalk in the upslope trenches. Periglacial features in the form of *'solifluction fissures'* were observed in the underlying chalk surface in the downslope trenches. Small quantities of finds were recovered from the trenches including one Iron Age/Roman sherd, one medieval sherd and 12 worked flints – mostly flakes but including one scraper and a possible Palaeolithic core.

In summary, the field evaluation report concluded: *'no features could be found to explain the cropmarks visible on the air photographs. There were no concentrations of prehistoric or later artefacts in the ploughsoil. Although it is possible that all of the trial excavations missed both structural and artifactual evidence, it is unlikely that significant archaeological remains survive in this area'*.

Re-inspection of the air photography originally consulted by the Liverpool Field Unit indicated that although some of the soilmarks appeared of possible archaeological origin, especially a large curvilinear ditch (see Fig. 8) and a few other linear features outside the bypass construction area, many of the other marks such as the group of circular feature in the downslope zone were not archaeologically convincing and some were possibly of geological origin. The site lay in an arable field on the south-facing slope of the valley of the river Piddle between 61 m and 71 m OD. The underlying geology comprised Upper Chalk with frequent periglacial striations.

Excavation

The site was initially investigated by means of two machine trenches, each 4 m wide. These were located to intersect several of the more convincing soilmarks. The northern trench (A) was 30 m long and the southern trench (B) was 50 m long (see Fig. 8).

Trench A contained several intercutting linear features aligned approximately north–south. Hand excavation of these features demonstrated that they were natural erosion gullies of probable periglacial date. Trench B also contained a number of irregular features, all of which appeared to be of natural origin. The single archaeological feature identified in this trench was a large oval pit (4002) sealed by a 0.50 m thick layer of colluvium which the subsequent watching brief (see below) demonstrated to extend over much of the southern part of the field. Modern brick and tile fragments were noted in the colluvium during topsoil stripping.

Pit 4002 was located towards the southern end of trench B, which was subsequently extended to expose the full extent of the feature. It was oval in shape, 3.20 m long, 2.20 m wide and 0.78 m deep with slightly undercutting sides and a flat base. The single fill comprised a dark yellowish–brown sandy loam (4001). Four sherds of Early/Middle Bronze Age grog-tempered pottery and 26 pieces of worked flint, including a broken knife, were recovered from the pit. Processing of a bulk environmental sample indicated a lack of preserved charred plant remains or charcoal. As this feature lay within a landscaping area and was sealed below colluvium, provision was made for *in situ* preservation of this and any associated features in the southern part of the field.

Watching Brief

During the watching brief a ditch aligned approximately east–west (5006) was revealed during topsoil stripping. The ditch was traced from its western terminal for approximately 105 m where it continued beyond the eastern limit of excavation (see Fig. 8). Hand excavation of five 2.00 m long slots across this ditch demonstrated that it had a regular V-shaped profile. It varied between 0.75 m wide and 0.50 m deep at its western end and 0.50 m wide and 0.20 m deep towards the eastern limit. All of the slots recorded a single brown sandy clay loam fill which produced a small assemblage of worked flint and a few sherds of Late Bronze Age pottery.

Another ditch (5013) was recorded immediately west of 5006. It was aligned approximately north–south and was traced from its northern terminal for approximately

70 m where it disappeared below the colluvium (see Fig. 8). The two 2.00 m slots excavated showed it to be between 0.80 m and 1.00 m wide and between 0.50 m and 0.60 m deep with a U-shaped profile. The ditch contained two fills – a primary fill of chalk rubble and an upper fill a yellowish–brown sandy clay loam. A small assemblage of worked flint was recovered from the ditch. Neither of the ditches recorded in the watching brief coincided with the linear crop/soil marks identified during the assessment.

Discussion

The only feature which coincided with any of the soil/cropmarks observed during the assessment phase of the project was the group of natural erosion gullies in trench A. Early/Middle Bronze Age activity (Phase 1) is represented by a single pit, possibly indicating an area of former settlement. Late Bronze Age activity (Phase 2) appears to be represented by the two ditches observed during the watching brief. Other features of these periods may survive *in situ* preserved below the colluvium.

No features were observed during the watching brief to the south and west of the two later prehistoric ditches. The ditches are therefore more likely to represent field boundaries rather than actual settlement and may be associated with other Phase 2 features at the Tolpuddle Ball site (400 m to the north-east) and at North of Tolpuddle Ball (300 m to the north-west).

NORTH OF TOLPUDDLE BALL: W2402.12 (Fig. 36) SY 8095 9485

Evaluation Background (Site U/AP13)

The evaluation assessment recorded '... a *pair of circular cropmarks* [Site AP13, see Fig. 8] *appear on the crest of Tolpuddle Ball. Given their proximity to the two round barrows* [i.e. on Tolpuddle Ball itself] *it seems most likely that they form part of a partially degraded Bronze Age cemetery. ...The proposed road will directly affect the most northerly of these features*'. The assessment study also recorded the presence of '*contour lynchets*' (Site U) between the A35 and Ashley Barn, part of which were intersected by the bypass. Overall, the assessment concluded that there was the possibility of a complex of prehistoric activity surviving north of Tolpuddle Ball, partly within the area affected by the bypass.

Field evaluation comprising fieldwalking and geophysical survey was subsequently undertaken. The results of the fieldwalking were summarised as follows: '*... no significant prehistoric or other finds of any period were made in the area to the north and west of Tolpuddle Ball.*' The geophysical survey identified one curved anomaly at or near SY 8092 9481 (off the proposed road line), interpreted in the report as most likely to be a post-medieval field boundary. No other anomalies which might represent archaeological remains were identified.

The site lay approximately 100 m to the north of the wooded crest of Tolpuddle Ball on a north facing slope between approximately 92 and 94 m OD (Plate 31). The underlying geology comprises Reading Beds overlying Upper Chalk. Prior to the excavation the site lay within a large pasture field.

Excavation

The strip and record area was 40 m x 30 m, located at the southern edge of the road corridor. The excavation recorded three subsoil features in total. A large irregular feature, probably of natural origin, was the only feature exposed which could account for the crop mark identified in the evaluation. Two further features, both small pits, were the only archaeological features identified within the stripped area.

Relatively large quantities of undiagnostic worked flint and burnt flint were recovered from the topsoil during its removal by machine. In order to examine the distribution of the artefacts an 8 m wide north–south transect across the centre of the trench was carefully cleaned by hand and three features were located. Artefacts recovered during the hand cleaning were collected from each 5.00 m length of cleaning (contexts 2001–2005). The remainder of the stripped area was examined and hand cleaned in areas where concentrations of flint, pottery etc. were discerned but no other features were located. All artefacts recognised on the stripped surface were collected (2014 to west of hand cleaned strip and 2015 to the east).

A large feature was located on the southern edge of the trench (2006). Hand excavation showed this to be extremely irregular, probably a pit subsequently disturbed by an animal burrow (Fig. 36, section). The single dark reddish–brown sandy loam fill (2007) produced 92 sherds of Late Bronze Age pottery including two jars (Fig. 48, 16 and 17) and the base and sides of a large, thick-walled vessel. Moderate quantities of diagnostic Late Bronze Age worked flint in a very fresh condition and burnt flint were also recovered.

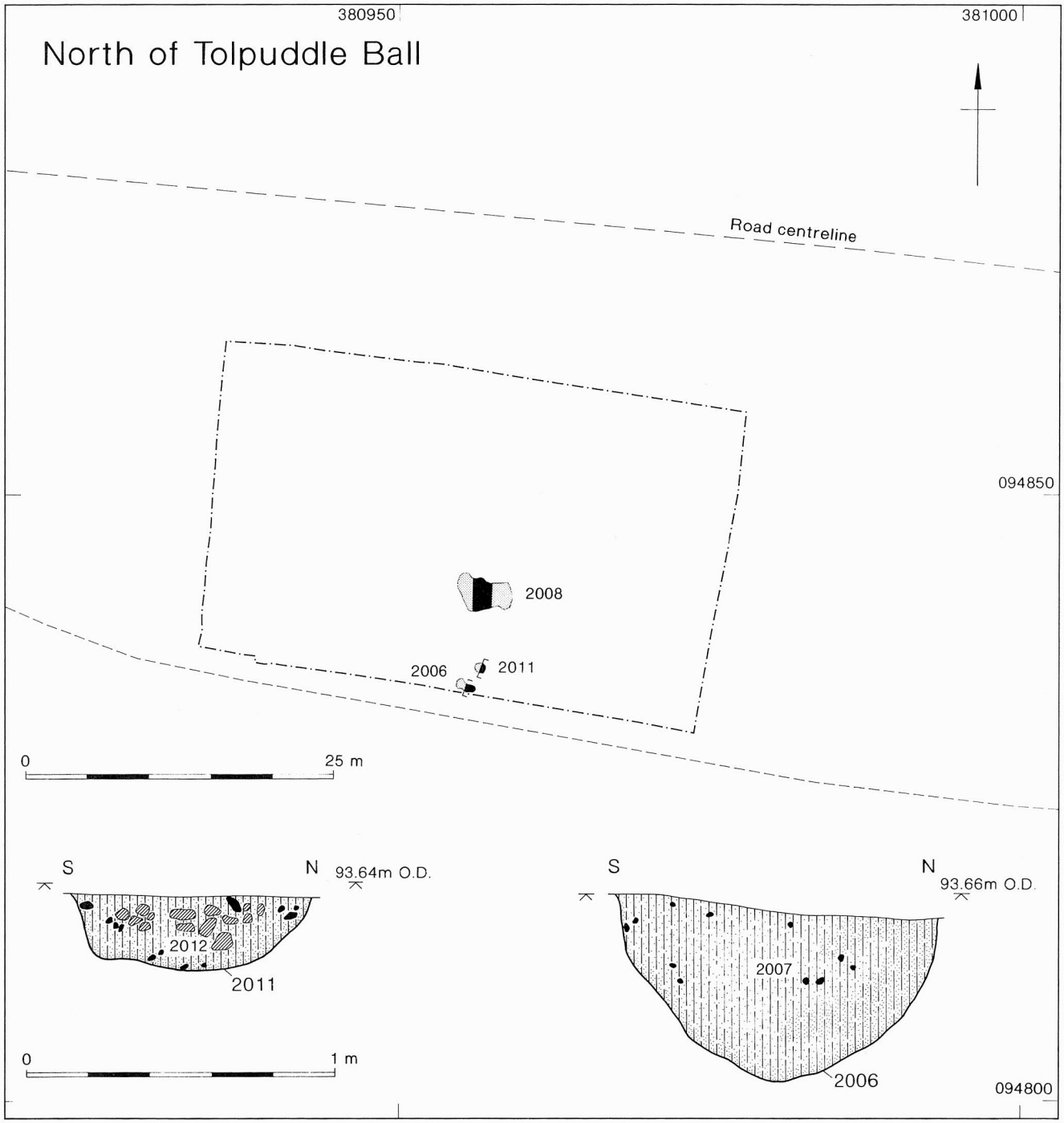


Figure 36 North of Tolpuddle Ball: plan and sections

Approximately 1 m to the north-east of feature 2006 a small circular feature was exposed (2011). Excavation revealed a pit, 0.76 m in diameter and 0.40 m deep with steep sides and a concave base (Fig. 36, section). Over 13 kg of burnt flint were recovered from the single dark greyish–brown sandy loam fill (2012), along with small quantities of undiagnostic worked flint and Late Bronze Age pottery. Although no traces of *in situ* burning were found, the large quantity of burnt flint indicates burning in the nearby area. Environmental samples taken from pits 2006 and 2011 produced small quantities of cereal remains (emmer and spelt wheat and hulled barley) and charcoal. The charcoal indicates a range of woodland types were exploited for fuel, including hazel, ash and oak.

The largest of the three features exposed was a large irregular feature (2008) approximately 4.50 m long and 2.50 m wide. A 0.50 m wide slot was excavated through the centre of this feature in order to discern its nature. A small assemblage of medieval pottery, worked flint and burnt flint was recovered from on or near the surface of this feature but no archaeological material was recovered from a depth greater than 0.10 m. The feature was up to 0.90 m deep with a very irregular base and



Plate 31 North of Tolpuddle Ball: general view looking north to Weatherby Castle (left-hand side)

sides. The fills (2009 and 2013) appeared to comprise stained natural sand. The feature was interpreted as being of natural origin, probably a large tree throw.

Discussion

The two small pits (2006 and 2011) and virtually all of the pottery recovered from the topsoil were dated to the Late Bronze Age (Phase 2). The quantities of burnt flint recovered from pit 2011 indicate it may represent a hearth or fire/cooking pit. Overall, the evidence suggests a localised area of activity, possibly associated with the extant barrows on Tolpuddle Ball which lie only 100 m away. It may also be noted that three small features of broadly contemporaneous date were recorded approximately 600 m further east at the Tolpuddle Ball site (see above, W2402.13, Phase 2). Together these remains indicate a low level of Late Bronze Age activity in the local area. The small quantities of Romano-British and medieval pottery recovered probably derive from manuring.

HILL BARN BORROW PIT, TOLPUDDLE: W2402.18 (see Fig. 7) SY 7920 9530

A 10 ha borrow pit was evaluated in two phases in August 1997 and February 1998. The borrow pit lay north of Tolpuddle village in a large north–south dry valley immediately south of Hill Barn. The greater part of the site was on the east-facing slope of the valley between 91 m and 98 m OD. No previously-recorded archaeological sites or findspots lay within the limits of the borrow pit. The nearest sites recorded on the County Council's Sites and Monuments Record were a group of barrows on Warren Hill and the possible remains of prehistoric field systems on Lord's Down (detected on aerial photographs) which lie approximately 1 km north and 1.5 km north-west of the borrow pit respectively.

Evaluation by machine trial trenching was undertaken in the form of a 2% sample of the site (Fig. 7: trenches A, B and 1 to 6). The east–west alignment of most of the trenches was designed to provide transects down the prevailing slope and across the dry valley, to allow an examination of colluvial deposits, if present. Trenches 1–4 were also designed to investigate a more level plateau in the north-west corner of the site which, on topographic grounds, appeared to be of slightly higher potential for former settlement.

A small number of subsoil features was discovered. trench B exposed a large amorphous feature (6006) approximately 7 m wide and a minimum of 1.20 m deep with very irregular sides, probably of natural origin. It produced 22 pieces of worked flint, 258 g of burnt flint and eight sherds (70 g) of pottery, generally unabraded and nearly all dated to the Late Iron Age/Early

Romano-British period. A small curving ditch (6019) was located in the western end of trench 1 and was traced for a distance of 17 m. The ditch was on average 0.80 m wide and up to 0.30 m deep. The only finds from it were three worked flint flakes. A second, very insubstantial gully (6026) was recorded in trench 3 but produced no finds. A watching brief during topsoil stripping did not reveal any further features of archaeological interest. Relatively shallow colluvial deposits, up to 0.50 m deep, were recorded in the base of the dry valley (trenches B and 2). The evaluation background, methodology and results are described in full in the evaluation reports (Wessex Archaeology 1997b; 1998).

The evaluation results, particularly the pottery from trench B, indicate the likelihood of an as yet undiscovered Iron Age and/or Roman site in the local area. The initial evaluation of the bypass route by Liverpool University identified faint soilmarks, possibly representing enclosures, some 200 m from the south-west corner of the borrow pit, centred at SY 788 949 (Site AP7, Hill Barn West). If these soilmarks are of archaeological origin (which is unknown) it is possible that they are the source of the Iron Age/Roman material recorded within the borrow pit.

ROMAN ROAD, TOLPUDDLE COMMON: W2402.10 (see Fig. 7) SY 8050 9496

The bypass route crosses the line of the Roman Road from Badbury Rings (near Wimborne) to Dorchester (Margary 1967, 109; RCHME 1975, xxxiii–xxxiv, road V). Within the bypass corridor the line of the Roman Road comprised a 3 m wide sunken trackway with a 0.80 m high positive lynchet along its southern side. The nearest sections of the road which survive as recognisable earthworks are further north-east around Ashley Barn (Scheduled Monument No. 533). A section excavated through the Roman Road at Bere Down approximately 4 km to the north-east (Farrar 1949, 60) demonstrated the presence of a 6 m wide metalled surface, flanked by wide ditches 18 m apart. A section across the line of the Roman Road was excavated in Tolpuddle during road widening in 1977 but no evidence of the road was found (Keen 1977, 125). Further west, nearer Dorchester, excavations across the road at Stinsford have also demonstrated the presence of a metalled *agger* and fairly substantial side ditches (Chowne 1988).

The intersection of the bypass and the line of the Roman Road lies between 83 m and 87.5 m OD and



Plate 32 Roman Road, Tolpuddle Common: general view of excavations looking north-east along the line of the Roman Road

straddles a field boundary between two pasture fields. The underlying geology comprises Upper Chalk with frequent solution features. Trenches had been excavated by the Liverpool Field Unit as part of the field evaluation (Site T) but had not produced evidence of deposits or features associated with the Roman Road.

Excavation (Plate 32)

Prior to machine trenching a ground survey was undertaken of the lynchets and trackway (see earthwork survey report below). Three trenches were subsequently excavated by machine across the line of the Roman Road and through the lynchet, which ran along the field boundary. The excavation area represented an approximately 50% sample of the line of the Roman Road within the construction corridor (see Fig. 7).

The lynchet which formed the field boundary to the south of the trackway was on average 0.80 m high where excavated and comprised a brownish–grey sandy loam which was overlain by a dark brown silty clay loam topsoil. No finds were recovered from the lynchet deposit, which partly overlay a crudely metalled surface. The metalled surface comprised a *c.* 0.15 m thick layer of flint gravel within a dark greyish–brown silty clay loam matrix and extended across the width of the trackway. This metalled surface was interpreted as an earlier surface of the trackway. The gravel surface directly overlay the natural substratum into which several ruts were cut. These were between 0.15 m and 0.40 m wide and up to 0.30 m deep. The only datable finds recovered from any of the ruts were a single sherd of modern whiteware pottery and one piece of modern bottle glass. The ruts therefore appear to be of modern date. No features or surfaces of Roman date were located.

WEST MEAD, NEAR BERE REGIS: W2402.16 (Figs 37–8) SY 8295 9515

Evaluation Background (Site C)

This site was originally identified during the evaluation as a scatter of medieval material found during fieldwalking which was subsequently investigated with four hand dug test pits. The test pits identified deep colluvial deposits and a layer of *'dark humic soil'* below the modern ploughsoil. An extensive metal detector survey was also conducted over an area of approximately 1.8 ha and produced a large assemblage of metalwork ranging in date from Romano-British to post-medieval (Higgins 1995).

The site lay approximately 2 km west of Bere Regis (see Fig. 2) in an arable field approximately 150 m to the south of Milborne Water, a tributary of the Bere Stream. It was located on a gentle north-facing slope below Piddle Wood, at a height of between 47 m and 50 m OD. The underlying river gravels were between 45.5 m and 49.6 m OD

Excavation Method and Results

Initially one trench 5 m wide and 80 m long was excavated by machine parallel to the eastern field boundary along the evaluation baseline to locate the medieval deposits. This trench was subsequently extended to reveal the limits of a ditched enclosure.

The topsoil was removed by machine to reveal the dark humic layer (3004) identified during the evaluation, which extended for approximately 12 m north–south and 16.5 m east–west. The humic layer overlay a colluvial deposit (3005) which was *c.* 13.5 m north–south and more than 50 m east–west. This deposit continued beyond the eastern and western limits of excavation. The humic layer and underlying deposits were examined in detail by five 2 m x 2 m hand-dug test pits which demonstrated the presence of a complex sequence of deposits of which 3004 was the most recent.

Following test pitting the colluvial deposits were removed by machine, apart from a number of baulks left in place for detailed recording and sampling (see Fig. 37, Plate 33). Machining proceeded to the surface of natural gravels or to the surface of visible archaeological features. The mechanical removal of the colluvial deposits revealed a number of ditches (3009, 3015, 3016, 3036, 3060 and 3069) forming a sub-rectangular enclosure approximately 20 m north–south by 40 m east–west. Close examination of the section baulks revealed that, where a relationship could be discerned, these ditches cut the earliest colluvial deposits. This relationship was noted in plan during the machining on only one of the ditches (3016).

Another north–south ditch (3049), which was traced for 35 m, extended to the north of the rectangular enclosure. To the south of the main area of investigation a small machine cut trench was excavated to investigate a possible building platform. However, this surface feature proved to be of natural origin.

Colluvial and Midden Deposits (Fig 37)

The earliest of the colluvial deposits (3006 and 3008) overlay the natural gravels and comprised thick deposits of yellowish–brown very sandy loam. Although no stratigraphic relationship or physical connection was visible between the colluvial deposits they are considered, on the basis of similarity of colour and tex-

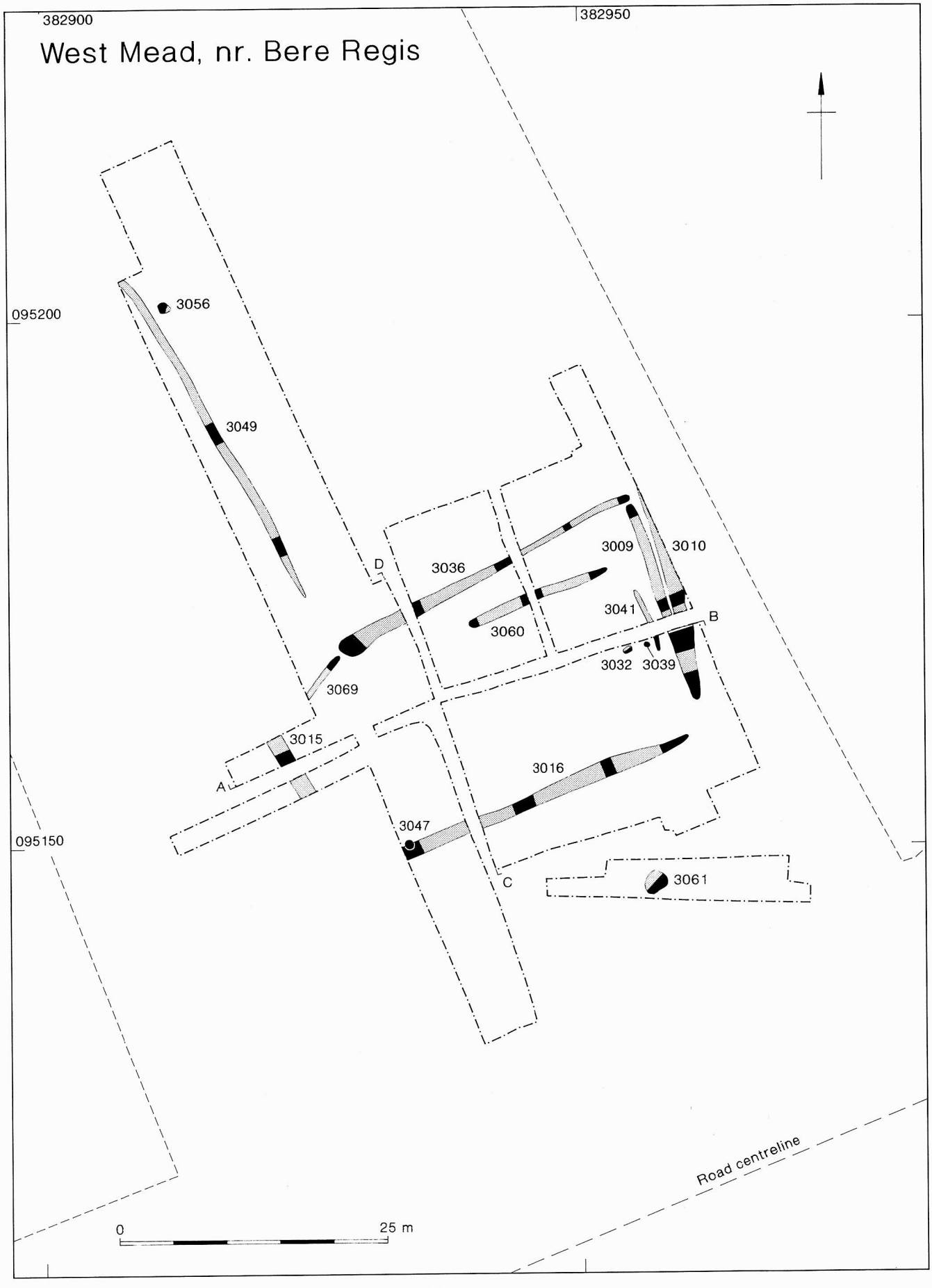


Figure 37 *West Mead, near Bere Regis: plan of features*



Plate 33 West Mead, near Bere Regis: excavation in progress looking north-east towards Milborne Water

ture, to represent a once-contiguous deposit separated by a later ditch. A sharp drop at the northern limit of deposit 3006, approximately 0.40 m in height, could represent a small lynchet which formed while the colluvium was being deposited (see Fig. 38, section C–D).

At least two of the ditches (3015 and 3016) were observed to cut deposit 3006. Ditch 3036 cut deposit 3008 immediately to the north of the possible lynchet. All of the ditches are sealed below an upper colluvial deposit (3005 to the south of the possible lynchet and 3007 to the north). Although no direct stratigraphic relationship exists between 3005 and 3007 (since they are separated by the possible lynchet) on the basis of their similarity of colour and texture they are assumed to be broadly contemporaneous.

Deposit 3005 was overlain by the '*dark, charcoal rich deposit*' noted in the evaluation which comprised a very dark brown sandy loam with abundant charcoal inclusions (3004). The extent of this deposit was confined within the rectangular enclosure. The enclosure ditches were probably completely silted up at the time of the deposition of the charcoal-rich layer. This suggests that the enclosure boundaries were still respected and were probably still delimited in some way, perhaps with a fence.

A suite of environmental samples from all the main deposits observed was taken to assess the preservation of land snails, pollen, plant remains and charcoal and for soil micromorphology description. All of the deposits described above were sealed below a sandy clay loam ploughsoil (3001) from which large quantities of pottery (mostly medieval, post-medieval and modern), animal bone, worked flint and burnt flint were recovered.

The Enclosure and Other Features

Nine linear features and five pits/postholes was recorded within the main area of excavation. Two of these, a lozenge shaped feature of uncertain function (3032) and a large (*c.* 0.45 m diameter and 0.54 m deep) posthole (3039), were sealed below the earliest of the colluvial deposits (3006) but were undated. A single feature (3061), possibly a pit but more likely a tree throw, was located within the small machine trench to the south of the main area of excavation. The rectangular enclosure comprised four ditches (3009, 3015, 3016 and 3036), at least one of which (3009) appears to have been re-cut (3010). None of the ditches which formed the enclosure intercut and the siting of the terminals also suggests that the ditches were contemporaneous.

The northern enclosure ditch (3036) was 30 m long and irregular. It varied from 0.50 m wide and 0.20 m deep at its eastern terminal to 1.20 m wide and 0.65 m deep at the western terminal. It appeared to run approximately along the northern (downslope) edge of the possible lynchet. Five slots, representing about 16% of the total length, were excavated by hand. In each case the profile of the ditch was generally V-shaped with steep, straight sides and a concave base. Only three small abraded sherds of pottery, datable to the prehistoric, Romano-British and medieval periods and a small assemblage of worked and burnt flint were recovered from the greyish–brown sandy loam fill of the ditch (3013, 3024, 3038, 3044 and 3068). Approximately 0.50 m to the west of the western ditch terminal was the eastern terminal of a small gully (3069) which continued on a roughly similar alignment for 5 m to the western limit of excavation

Approximately 0.50 m to the south of the eastern terminal of ditch 3036 was the northern terminal of the eastern enclosure ditch 3009. This ditch, which was 19.5 m long, generally 1 m wide and between 0.35 m and 0.50 m deep with a shallow V-shaped profile, appears to have been re-established on a slightly more easterly alignment (ditch 3010). Unfortunately the fills of the two ditches could not be differentiated over much of their length, although at one point a clear distinction was recorded in both plan and section.

The southern enclosure ditch (3016) which cut the lower colluvium (3006) terminated approximately 3 m to the south of the southern terminal of ditch 3009/3010. From this point it ran west for 28.5 m and continued beyond the western limit of excavation. This ditch was between 1 m and 1.40 m wide with a regular V-shaped profile and was between 0.40 m and 0.60 m deep. A large quantity of animal bone (265 pieces, predominantly horse) was recovered from the fills of this ditch. Close to the western limit of excavation a small circular pit or posthole (3047) cut into the fill of the ditch. This feature was 0.90 m in diameter and 0.42 m deep with near-vertical sides and exhibited possible signs of *in situ* burning. As no dateable finds were recovered the pit can only be interpreted as post-dating the enclosure.

A short length of the western enclosure ditch (3015) was exposed in the excavation. This was a broad ditch which cut colluvial deposit 3006 and was 1.90 m wide and 0.45 m deep with a V-shaped profile. A small assemblage of medieval pottery and worked flint was recovered from its single brownish–grey sandy loam fill (3014).

Within the enclosure were two short shallow gullies the smallest of which (3041) was parallel to the eastern ditch 3009. Feature 3041 cut the earliest colluvial deposit (3006) and was sealed below deposit 3005, suggesting that that it was broadly contemporary with the enclosure. The larger gully (3060) was roughly

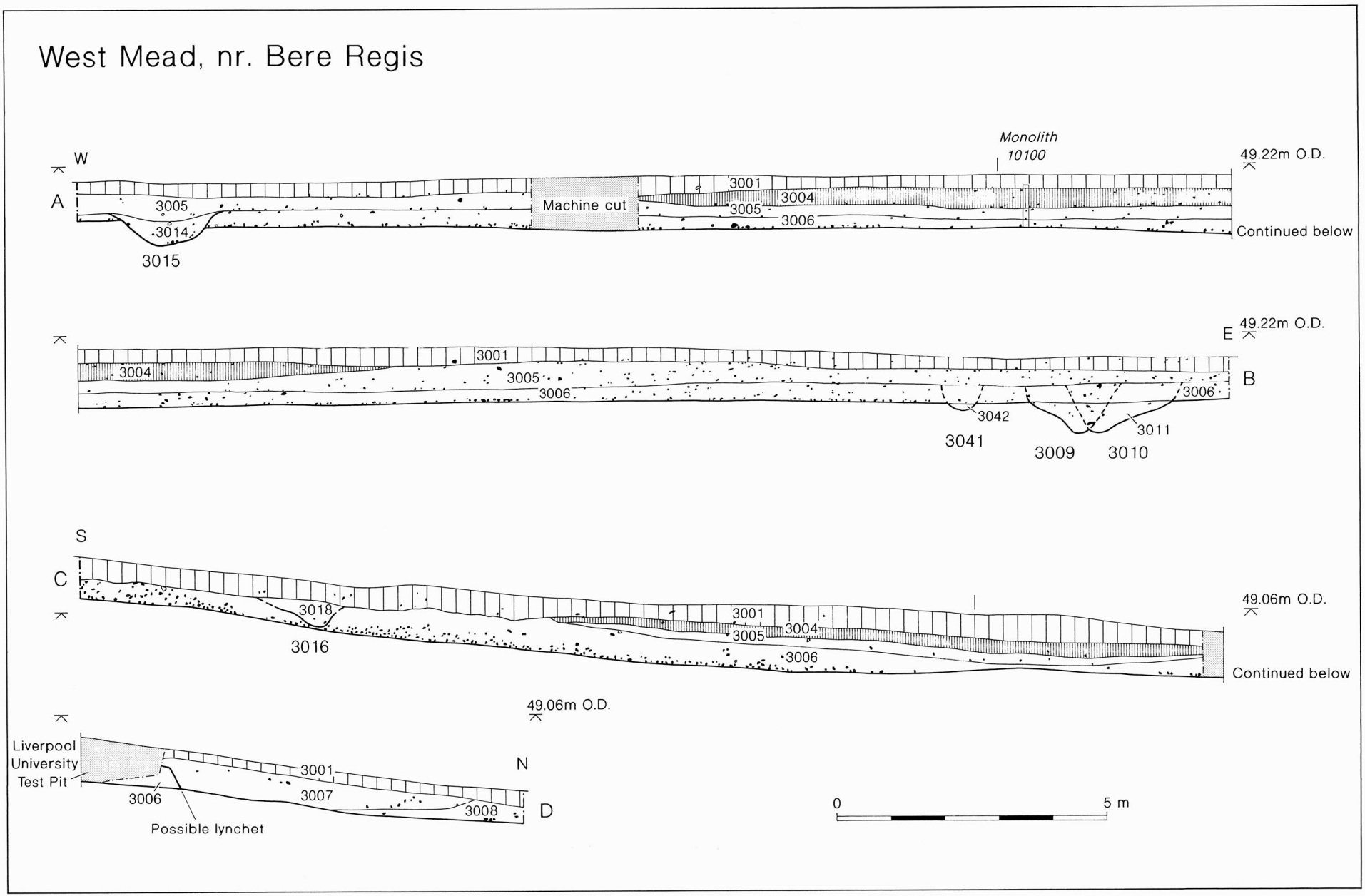


Figure 38 West Mead, near Bere Regis: sections of main stratigraphic sequence

parallel with the northern ditch, some 3 m south of it. It was traced from its eastern terminal, approximately 3.5 m to the west of ditch 3009, for 14 m where it appeared to terminate. However, since the colour difference between the fill of the gully and the surrounding gravels was extremely slight it is not certain that the ditch terminated here.

Approximately 6 m to the north of the western terminal of ditch 3036 was the southern terminal of ditch 3049, a fairly narrow (average width 1 m) ditch with a steep V-shaped profile and an average depth of 0.50 m. This continued northwards for *c.* 35 m where it continued beyond the northern limit of excavation. Stratigraphically, ditch 3049 pre-dated deposit 3008 and was sealed below deposit 3007, indicating that it was broadly contemporary with the enclosure to the south.

Approximately 1 m to the east of ditch 3049 was a small, shallow, irregular, oval feature (3056). Large quantities of charcoal were noted in its single dark brown sandy clay fill (3057) but no dateable finds were recovered from it. The date and function of this feature is uncertain.

Documentary Evidence, Jo Draper

The site lies within the manor of Shitterton which lies at the western end of Bere Regis parish. A detailed manuscript map of the area, dated 1820, surveyed by William Shorto of Dorchester (Plate 34) shows that the excavation area coincides with the eastern corner of West Mead (Plot No. 2). West Field (Plot No. 1) lies immediately to the south on the other side of the road. The field names reflect their position and use as part of Shitterton Manor. No indication of settlement is shown on the 1820 survey but the site is on the junction of the arable land and open downland, right on the edge of the manor and parish. The existence of an almost detached part of Turner's Puddle parish immediately opposite the excavation area is probably simply coincidence, and like much of the boundary hereabouts, reflects the junction between different types of land-use.

West Mead and the surrounding fields were farmed from Shitterton and were part of a much larger holding. The 1839 Turner's Puddle tithe map (DCRO/T/TPD) shows the same family holding three adjacent fields to the west – Norden West Ground, Norden Middle Ground (both arable) and Piddle Woodmead (a meadow). The outlying part of Turner's Puddle parish was still in existence in 1839, called Lears Close (arable) and held by the same family. Clearly these parts of Turner's Puddle were incorporated into Shitterton Farm by the early 19th century.

On the 1845 Bere Regis Tithe (DCRO/T/BER) the Milborne Water marks the boundary between the land farmed from Shitterton (presumably the old manor) and that farmed by Roke Farm. The excavation area is still within West Mead. Immediately to the north is Rams Mead, belonging to Roke Farm. The fields to the east are Copy Cross and part of Thorney Plot, both arable. Copy Cross is probably named from the track which earlier ran across it. Other small meadows nearby include Deverill Mead and a Cowleaze.

Medieval Settlement in the Tolpuddle / Bere Regis Area

Earlier medieval settlement makes a clear pattern on the chalk, with the villages down in the river valley (usually right beside the river) and the parishes stretching up onto the waterless chalk downs. The parishes are usually sub-divided between two to four separate settlements. The Winterborne valley to the north-east is a typical example, with dense settlements along the river (Taylor 1970, 56–7). The Piddle valley to the south is similar, but the parishes also extend over heathland. The Piddle valley had many more settlements than parishes (RCHME, 1970a, 22).

The site at West Mead is close to the complex junction of four medieval parish boundaries (Bere Regis, Turner's Puddle, Affpuddle and Tolpuddle), which probably reflect the junctions between arable and pasture, or pasture and woodland. If the excavated deposits are derived from an adjacent settlement they could fit into the pattern of separate settlements within a parish: they lie beside the small Milborne Water and a reasonable distance from Shitterton to the east and Milborne St Andrew to the north-west. The Milborne Water is only a small stream, but it does support several villages (and smaller settlements) upstream to the north-west of the site.

The site lies within the parish of Bere Regis, a large parish which extends across chalk and heathland. Mapping of the 11th- to 13th-century settlements in the parish has demonstrated that, besides the village of Bere, there were six other farms or settlements (Taylor 1970, 91). Four of these were on the heathland to the south, and two on the chalk. One of the chalkland settlements is Shitterton, the manor whose land includes the area of West Mead. Although some of these settlements only occur in documents from the 13th century, they are likely to be earlier in origin. Further settlements might be expected in the 12th or 13th century as the population (and the arable area) increased (Taylor 1970, 88). The archaeological evidence for late 12th-/13th-century activity at West Mead could be interpreted as associated with a farm on the outskirts of Bere Regis, establishing new fields outside the area of the open fields. However, if this is so, the attempt failed and the settlement was very short-lived. On balance this suggestion for a short-lived attempt at a new farm on the edge of the parish perhaps seems unlikely.

Bere Regis in the Late 12th / early 13th Century

The large parish of Bere (with the exception of Shitterton) was a Royal manor from the 10th century and remained in the hands of the King until 1259 (Pitfield 1978, 27). The King's House was on Court Green, close to the church in the centre of the village. It was demolished early in the 19th century (*ibid.*, 27–31). Between 1202 and 1204 large sums of money were expended on the King's Houses at Bere, and particularly on the King's chamber, in preparation for King John's visits. The King visited once in 1204, three times in 1205,

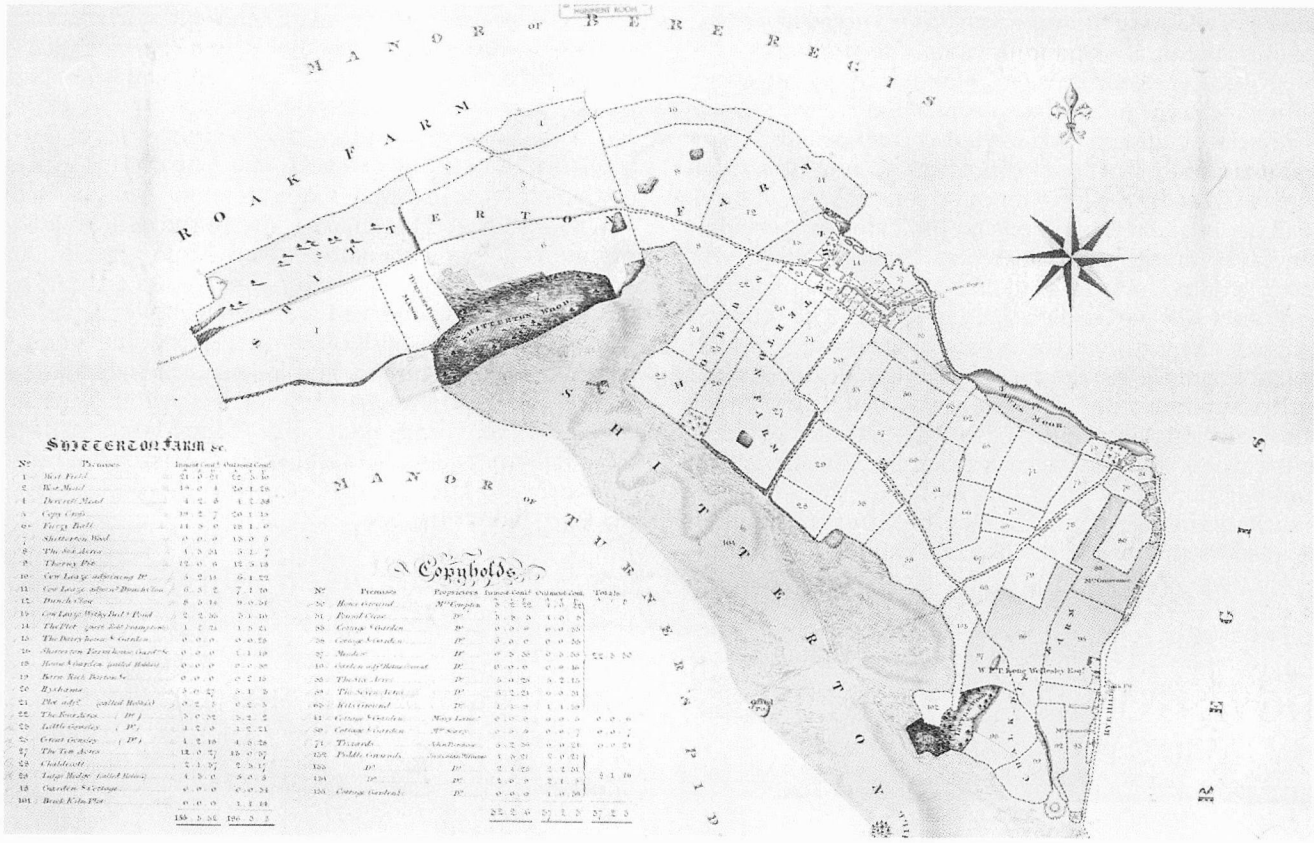


Plate 34 Extract from William Shorto's Map of the Manor of Shitterton Manor, 1820 (DCRO KL11)

and once or twice every year up to 1216, the year of his death. The coincidence of the date of the work on the King's houses (and the King's visits to Bere) with that of the archaeological evidence at West Mead is notable and the two may be related in some way. The fact that the site did not continue to be occupied after the early 13th century perhaps supports the argument that the two were directly linked. Against the site being related to King John's visits is its distance from the King's House (2 km) and the fact that West Mead lay in the manor of Shitterton, which was not held by the King.

Farms Around West Mead

Roger's Hill Farm, only 1 km north-west of West Mead, is documented from the early 16th century although the origin of its name is uncertain (Brocklebank 1968, 83–4). It may well lie on the site of an earlier settlement. Roger's Hill Farm and Ashley Barn Farm are in Affpuddle parish, outside the area of the large open fields of the parish. Roke (or Roak) Farm 1 km to the north-east is beside the large springs which are the source of the Bere Stream. This much larger river joins the Milborne Water just east of West Mead. The name Roke is known from the late 15th century (A. Mills, 1977, 276), and the extensive 1170s maps of Bere Regis show it, like Roger's Hill, set with its own enclosed fields. Both these farms are within one field of the site, but West Mead seems always to have been within the manor of Shitterton.

The Later History of the Site

Shitterton Farm (the old manor) is not included in the series of maps of Bere Regis and other farms in the area of the 1770s. The earliest map is a rather strange and inaccurate-looking plan of the Milborne Stream of about 1797, which traces the whole course of the little stream from Milton Abbas to Roke Water. Apart from showing the field to the north of West Mead as a watermeadow, such detail as there is matches Shorto's 1820 survey.

Discussion

Environmental evidence has shown that the humic deposit noted in the evaluation probably represents a midden deposit. Despite their stratigraphic separation the very limited date range of the artefacts recovered from the midden, ditches and colluvium deposits indicates that the activities represented by all these features and deposits occurred over a short period of time in the earlier 13th century (Phase 6), probably over no more than 50 years.

In the published report of the evaluation and metal detector survey on this site it is stated that the large field in which the site lies '*was previously divided into about eight small paddocks in which, in the area under examination, there were earthworks.*' (Higgins 1995, 143). These paddocks are not evident on cartographic sources and the source of the information is not cited. The only possible earthworks noted in the area of the

site were the possible building platform noted above and a slight break of slope immediately to the north of it: both were of natural origin. Given that 13th century pottery was the latest datable material recovered from the enclosure ditches and in view of their position below approximately 0.50 m of colluvium, it is unlikely that the excavated enclosure comprised one of the paddocks.

The sequence of deposits indicates a period of medieval arable agriculture (as represented by the lower colluvium) prior to the establishment of the enclosure in the earlier 13th century. The possible lynchet along the northern side of the enclosure may suggest that the northern enclosure ditch was cut along an existing boundary. The similarity of the ditch fills and the overlying colluvial deposit suggests that the ditches silted up as colluviation took place. The location of the midden deposit within the limits of the enclosure indicates that the boundaries of the latter continued to be respected after the ditches had completely filled up and were probably delimited in some way, perhaps with a fence or hurdles. Two postholes, one of which (3047) cut the fill of the southern enclosure ditch, may support this suggestion.

Evidence to suggest that the enclosure and midden represent a settlement or lie close to the edge of a settlement is scant. No building remains were located: two floor tiles and two roof tiles were the only building materials of medieval date recovered from the site. An agricultural function is far more likely, that is, that the midden deposits represent a stockpile of domestic and agricultural refuse, perhaps re-used on the surrounding arable fields as fertiliser. The coincidence of the date of the ceramic assemblage from the excavated deposits and the documentary evidence for Kings John's visits to Bere Regis between 1204 and 1216 is striking but must remain enigmatic since unfortunately there is no direct evidence to link the two.

DOWNTONS FARM, PUDDLETOWN: W2402.3 (Fig. 39) SY 7550 9490

Evaluation Background (Site F/AP2)

This site incorporates two archaeological components identified during the assessment: linear cropmarks visible on air photographs (AP2) and documentary evidence for a former farm (Site F).

Site AP2 was identified as a '*... pair of linear crop mark features north-west of Northbrook Farm*' which comprise one (westernmost) aligned roughly north–south, and another shorter cropmark aligned south-west to north-east. The aerial photographic transcription provided in the assessment report shows the western feature visible over approximately 210 m and the eastern one for approximately 70 m (see Fig. 4). No further work or field evaluation appears to have been undertaken to investigate these cropmarks and their date and origin was not therefore known prior to excavation on this site in 1996.

Site F was described in the assessment report as follows: '*The Puddletown Tithe Map of 1842 shows a small farm called Downtons Farm on the direct line of the proposed road at SY 7540 9488 ... The site is at present greatly overgrown and has modern building rubble dumped on it. No further information has been located.*' The site was described as '*... a probable pre-19th century farm*'. During the course of compiling the *Written Scheme of Investigation* for Site F, Wessex Archaeology discovered that the location of 'Downtons Farm' assigned in the assessment was in fact not that of the farm building (Tithe No. 116) but an associated '*Cowleaze and site of Kennel*' (Tithe No. 220) which lies some 100 m further to the south-west (see Draper, below). When correctly plotted, the locations of the farm buildings were found to lie partly within the archaeological area designated to investigate the cropmark Site AP2. Both sites were therefore investigated together.

The site lay between 60 and 67 m OD on a low gravel terrace, which sloped down to the south approximately 100 m north of the River Piddle. The majority of the site lay on a gently sloping terrace and the southern edge coincided with a steep bank which dropped down to the flood plain of the river. A small platform was noted extending southwards from the eastern end of the bank. Prior to the excavation the site lay within a pasture field. The underlying geology comprises Plateau Gravels overlying Upper Chalk.

Excavation

Initially three trenches were excavated by machine, parallel with the bypass corridor, to locate the cropmark features. The trenches were initially *c.* 10 m wide, and of varying lengths. The southern and central trenches were extended on their eastern sides in order to expose the remains of two masonry and brick buildings, interpreted as part of Downtons Farm, which were partially revealed within the bypass corridor. Apart from the two buildings, only a small number of subsoil features were recorded

Subsoil Features

Three subsoil features were exposed within the northern and central trench; two linear features and a scoop. A shallow ditch on a north–south alignment (1002), 0.70 m wide and 0.11 m deep, with a U-shaped profile was traced for 10 m across the entire width of the

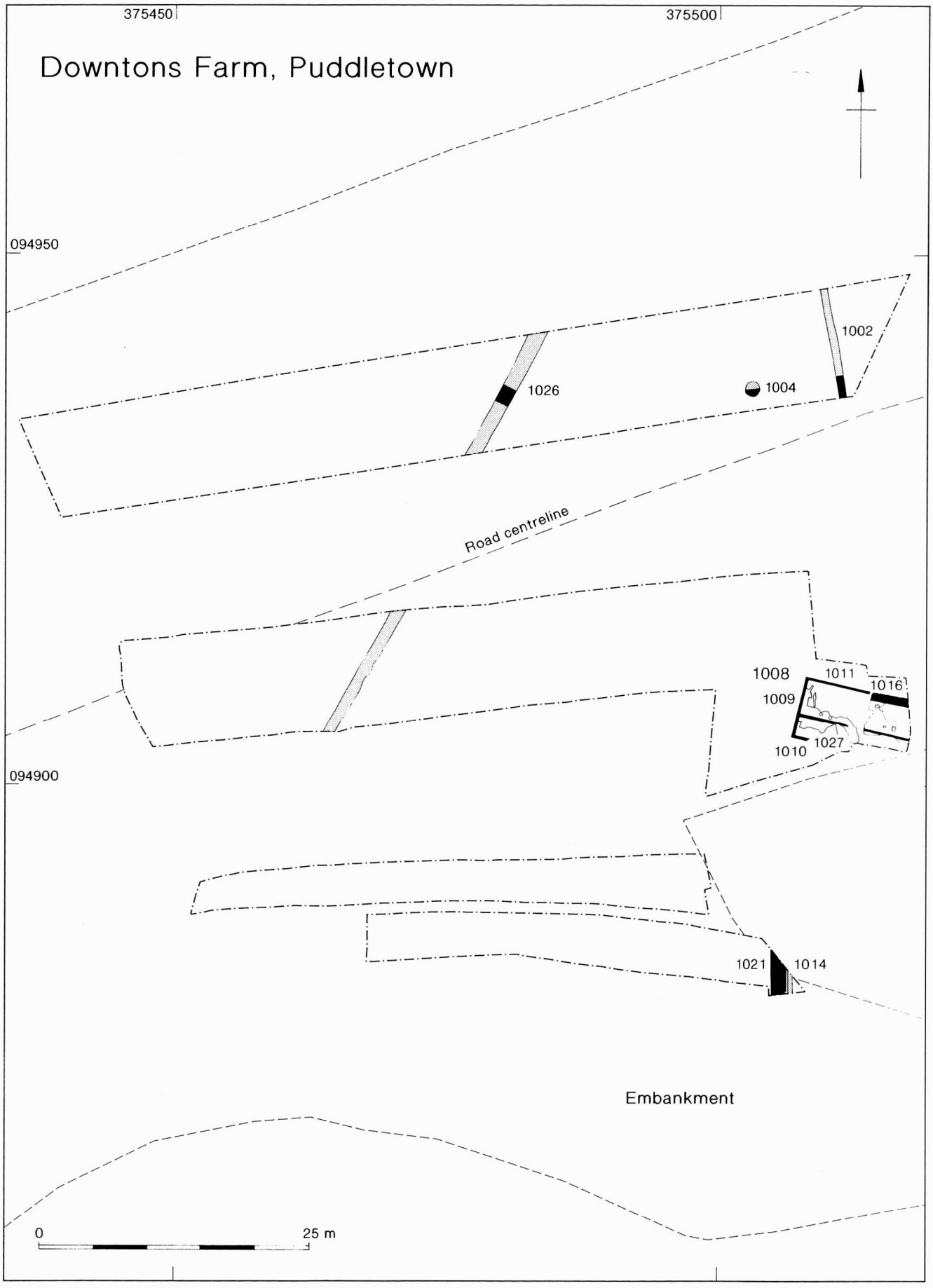


Figure 39 Downtons Farm, Puddletown: plan of features



Plate 35 Downtons Farm, Puddletown: building 1008 looking towards Northbrook

northern trench. It produced a fairly large quantity of post-medieval pottery. Its position, alignment and probable date suggest that it represents the western boundary of Downtons Farm as shown on the 1842 Tithe Map (see below, Draper). A shallow sub circular scoop (1004) approximately 1.30 m in diameter and 0.07 m deep with a concave profile lay some 8 m west of ditch 1002 and appeared to be broadly contemporaneous with it. Small quantities of post-medieval pottery and clay pipe fragments were recovered from the grey silt fill and abundant charcoal inclusions were also noted. Sample excavation of a broad, shallow linear feature (1026) which ran down the prevailing slope showed it to be 1.85 m wide and a maximum of 0.10 m deep with an irregular profile. The single greyish brown silty clay fill contained no finds. This feature is probably of natural origin, possibly an erosion feature of periglacial date.

Building 1008 (Plates 35 and 36)

The footings and cobbled floor of a building were revealed in the extreme eastern end of the central trench. The building was constructed on a terrace cut into the south-facing slope. The northern edge of the terrace was revetted by a rough flint and mortar wall (1016) which was traced for a length of *c.* 3.5 m from its western end to the limit of the bypass corridor. Wall 1016, which was 0.65 m thick and stood to a height of 0.45 m, was constructed of large flint nodules, some of which had been roughly dressed, and bonded with a sand and lime mortar. A few sherds of post-medieval (Verwood) pottery were recovered from within the build of the wall. To the west of wall 1016 were the remains



Plate 36 Downtons Farm, Puddletown: detail of building 1008 showing cobbled floor



Plate 37 Downtons Farm, Puddletown: detail of wall footing 1014 (scale 2 m)

of three further walls (1009, 1010 and 1011) constructed of 19th-/20th-century bricks. These walls appear to represent a later addition to the western side of the original building. The interior of the building contained a well-laid, flint cobbled floor with an east–west drain (1027), approximately 3.0 m to the south of the northern wall.

Wall Footing 1014 (Plate 37)

A short length of masonry wall footing (1014) with a brick and rubble core was exposed in the extreme eastern end of the southern trench continuing beyond the limit of the bypass corridor. The footing was aligned north–south along the western edge of a small platform (noted above) and was 0.61 m wide and only one course high (0.21 m). The footing was located directly on natural gravels. The gravels dropped away to the west and the outside (western) edge of the wall footings was formed from larger blocks of limestone in order to level the foundations before the wall proper was constructed. The wall was butted along its eastern side by a heavily compacted layer of redeposited chalk, presumably the remains of a rammed chalk floor. To the west of wall (1014) was a very shallow gully (1021) which ran parallel to the wall and outside the building and was 1.47 m wide and 0.19 m deep. It was filled with two layers of greyish–brown silt and may have been a drip gully.

Documentary Evidence, Jo Draper

A documentary search was made using source material in the Dorset County Record Office (DCRO), Dorset County Museum (DCM) and the Dorset County Library (DCL). There is copious documentation for Puddletown, including Downton. The farm buildings were at the western end of Northbrook, a rather detached part of the village. The lane called Northbrook runs west from the Blandford Road north of the village. It is now a dead-end but formerly extended further west to Downtons Farm (1902 OS).

The 1842 Tithe Map provides the clearest view of the farm and its buildings (Fig. 40). The buildings and plot numbered 116 are listed as *'Downton's House, barn, stables and garden'* in the terrier. Nearby, the lettered name on the map is immediately above a building numbered 220, listed as *'Downstone Cowleaze and site of Kennel'*. Three other fields have *Downton* or *Downstone* as part of their name. The terrier shows that Downton Farm was being farmed by a tenant and was part of a large farm with fields scattered all over Puddletown including a block to the north and west of the farmhouse, strips in the meadows and cottages in the village. The pattern is one of dispersed holdings, relating to earlier open fields, rather than a compact block of land. Downtons was not therefore a discrete unit at this date and the house may not have been used as the farmhouse.

There is a large quantity of documentation for the estate, which was sampled. Downtons evidently did not survive as a farm. By the time of an estate survey in 1860 (DCRO D/BOP/C1/1) Stafford Park Farm, the large house at the east end of Northbrook, had taken over the fields which belonged to Downton as part of their 1457 acres. Downtons Farm is present on the 1902 Ordnance Survey. On the 1963 survey the farm appears to survive but perhaps only partly, the northern building on the tithe map being absent.

The 18th and 17th Centuries

Every house in Puddletown was listed by the rector in 1724 (Williams 1988). In Northbrook, on the north side *'The 4th House and last, belonging to Farmer Rawlins of Drewce, call'd by the name of Downton Farm'* was occupied in 1724 by John and Margaret Runyer. It does not seem to be a farmhouse. A revision in 1769 to the Rector's survey gives John Vincent and his two daughters as tenants (Williams 1988, 59). A survey of the manor of Puddletown in 1792 (DCRO D/PUD/E1/1/10) states that Downtons, late Chubbs is let to Eliz. Hayes. *'The Buildings consist of a stone, brick & clay house thatched. A Stable and Straw house. A Barn and other outbuildings, in bad Repair, and now let in two tenements with a good garden and orchard. Also two cottages and Gardens nearly adjoining the last, clay and thatch, likewise in bad repair'*. These were let with 72

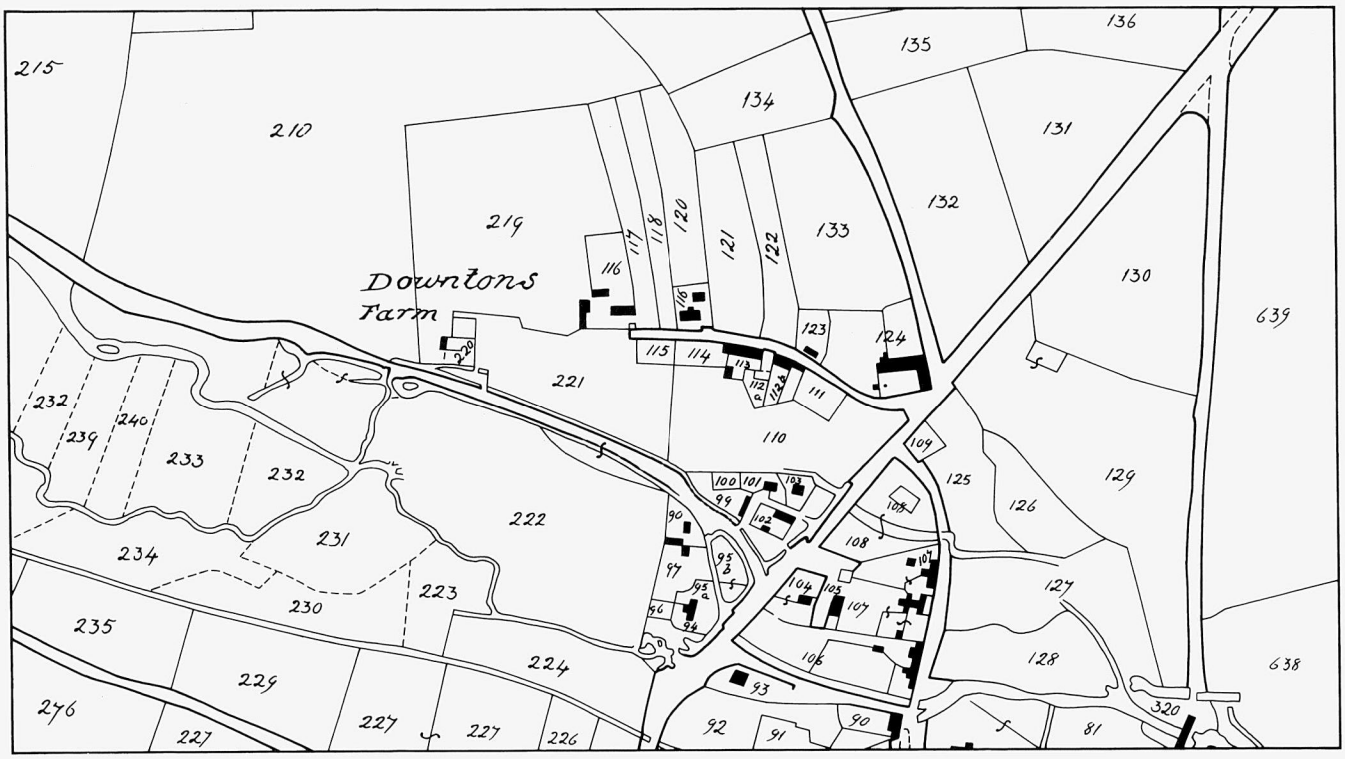


Figure 40 Northbrook, Puddletown (extract from 1842 Tithe Map)

acres of land, commonage for 20 beasts (cattle) and 230 sheep, and four heathland plots. This 1792 description sounds like a complete farm and it is similar to that of the 1842 tithe. The land was probably scattered about the parish (indeed the heathland plots had to be) as the holding is on the tithe map

The earliest discovered reference to Downtons is among a catalogue of leases for Puddletown from the later 17th century: '*Downtons Tenement with the appurtances*' being let to Thomas Rawlin for three lives on 29th September 1693 (DCRO/PUD/E1/3/1/1). Only the house is listed, but this does not mean that it was not a farm.

Medieval Puddletown and Downtons

The large parish of Puddletown belonged to Christchurch Priory until the Dissolution. It included six medieval settlements besides Puddletown itself (RCHME 1970a, 222). One of these settlements, the lost '*Hyde*' has been identified as on or very close to the site of the current Druce Farm, which lies 1 km to the north-west of Downtons (Taylor 1966, 213). Northbrook seems unlikely to have been a separate medieval settlement, as it is so close to Puddletown, but it is possible that the farm is of medieval origin. The pattern of landholding in 1842 shows that it was part of a scattered holding, not a compact block of land, which might suggest enclosure outside the medieval open fields.

Discussion

Wall 1014 which occupied a platform to the east of the excavations (the majority of which lies beyond the limit of the bypass) represents the western wall of a building shown on the 1842 Tithe Map. Information from Mr Drew, who worked at Downtons Farm in the 1950s and '60s, and examination of aerial photographs taken in 1978 for the road scheme revealed 1014 to be the western wall of a thatched barn which was apparently demolished in the early 1980s. Some of the masonry blocks used in the construction of this wall comprised fine dressed limestone, some with 'keying' grooves, which may suggest that the masonry was re-used from an earlier, higher status building. Mr Drew also advised that building 1008 was a cattle byre, which was demolished in the early-mid 1960s, and is presumably the northernmost building of Downtons Farm depicted on the 1842 Tithe Map.

The remains of the two buildings partially exposed in the trench are undoubtedly those of the two western-most buildings of Downtons Farm. Documentary research has traced the farm back to the late 17th century and in all likelihood the farm is of late medieval origin, if not earlier. The alignment of the earlier phase of building 1008 in relation to 1014 and that of the presumed garden boundary (1002) appears to differ slightly with that shown on the 1842 Tithe Map but it does match the alignment shown on the 1902 Ordnance Survey Map quite well. The rest of these two buildings, along with (it is assumed) the eastern of the group of three shown on the Tithe Map, remains preserved beyond the limit of construction for the bypass.

ROGER'S HILL FARM BURIAL, NEAR BERE REGIS: W2402.19
SY 82083 94770
Julie Lovell

Introduction

Human remains were discovered on 22 April 1998 following a period of heavy overnight rain which washed out part of a skull from the eastern side of a cutting for a new underpass (Bridge 30) to Roger's Hill Farm (see Fig. 2 and 8). Investigation of the side of the cutting revealed the presence of a grave, largely beyond the extent of the cutting but within the area of a proposed man-hole. After issue of a Home Office Licence an excavation was undertaken of the grave and the surrounding area affected by the construction of the man-hole, approximately 4 m x 4 m overall. Overburden deposits were removed by machine under archaeological supervision to the depth at which archaeological deposits were visible. The excavation was undertaken between 28 April and 1 May 1998.

The grave was located at the southern end of the tree-lined avenue to Roger's Hill Farm just inside the eastern line of trees and at the former junction of the avenue with the Bere Regis to Tolpuddle Road (Plate 38). The location coincides with the parish boundary between Turners Puddle and Affpuddle (see Fig. 8).

Excavation Results (Fig. 41)

The underlying geology comprised chalk, the upper surface of which sloped down from 54.06 m OD at the south of the excavation area to 52.21 m OD at the north, forming a small natural hollow. Overlying the chalk was a deposit of greyish–orange silty clay loam (6105) up to 0.35 m deep which was in turn overlain by a brownish–orange silty sand (6103), 0.60 m deep. The sandy deposit was overlain by road make-up levels which were a maximum of 0.60 m deep. These road make-up levels were largely modern deposits but a localised area of earlier road metalling was also recorded, south of the grave (Fig. 41, section). No finds were recovered from the earlier metalling layer which can therefore only be dated as post-medieval and post-dating the burial itself.

A rectangular grave (6100) was observed in the northern part of the excavation area, cut into layer 6105 and sealed by 6103. The grave was aligned east-north-east to west-south-west and the extant part measured 0.62 m wide, 1.53 m long and up to 0.68 m deep. The grave had near-vertical sides and an uneven base which was progressively deeper towards the eastern end. The grave contained a single extended inhumation burial (6101), the head being at the western end of the grave. As noted above, the western edge of the grave had collapsed into the cutting for the underpass and the skull and upper vertebrae were recovered prior to archaeological excavation of the grave (see Fig. 41, plan). The skeleton was that of a female aged over 40 years old. The cause of death was not evident from the skeletal remains (see McKinley, below).

A collection of copper alloy objects were associated with the skeleton, comprising two pins (Obj. 803 and 804) and fourteen wire loops (Obj. 802). The pins were located on either side of the upper rib cage and the wire loops were found together in the pelvic region of the skeleton (see Fig. 41 for location) . The loops were partly embedded in organic material which has been identified as degraded textile remains (see finds report below). The grave fill (6102) comprised an orangey–brown silty clay loam containing frequent chalk fragments. The chalk fragments were less compacted towards the base of the grave and the soil around the skeleton itself was very loose.

The only other features observed in the excavation area were three east–west aligned wheel ruts which lay 0.70 m to 2.00 m south of the grave. The ruts measured up to 3 m long, between 0.12 m and 0.26 m wide and up to 0.15 m deep. The bases of the ruts comprised compacted flint gravel. A copper alloy staple and a fragment of an iron nail or pin were recovered from the fill of the ruts. Stratigraphically the ruts are contemporaneous with the burial and indicate that the grave was dug on the roadside.



Plate 38 Roger's Hill Farm Avenue from the south, the burial location is within the scaffolded area to the right of the concrete pourer

Human Bone, Jacqueline I. McKinley

The method of analysis of the bones followed that for the main groups of skeletons from Tolpuddle Ball (see below including glossary, Section 3). Virtually the whole skeleton was represented (99%) and the bone was generally in good condition, but very dry and consequently slightly friable. The bone represents an adult female, aged over 40 years old. The estimated stature of the

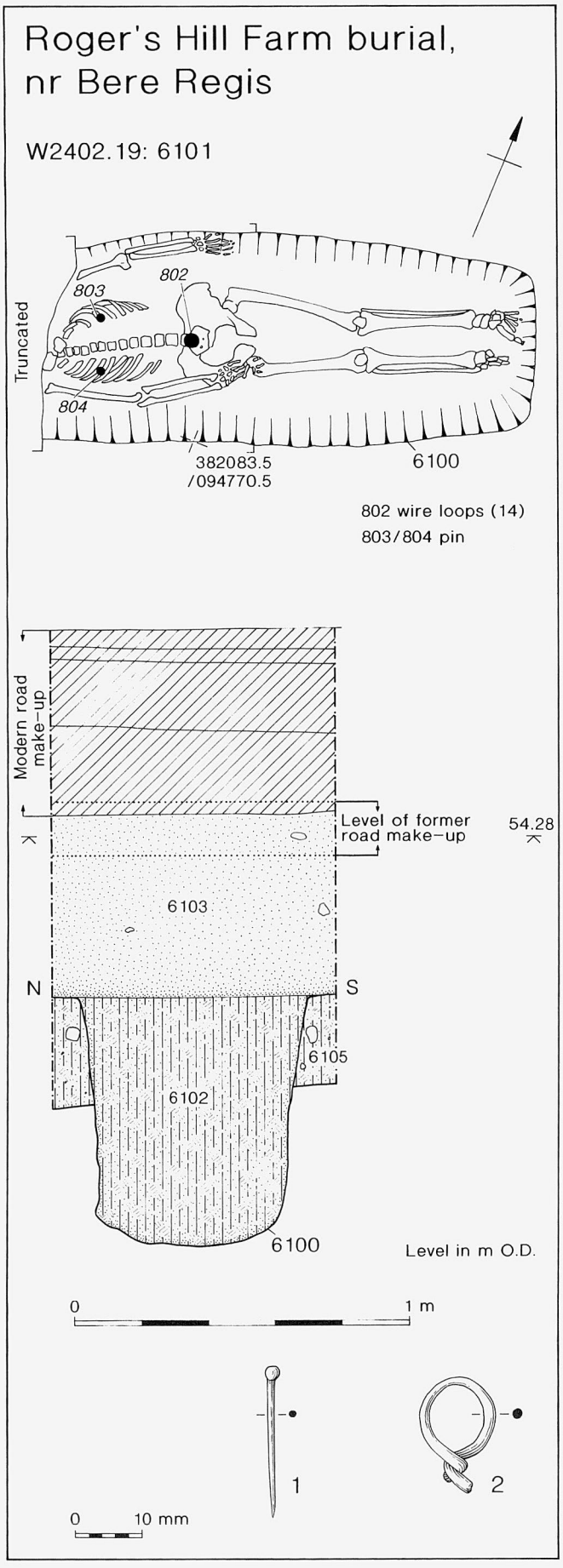


Figure 41 Roger's Hill Farm burial: plan, section and copper alloy objects (1 and 2)

individual is 1.59 m (5′ 2"). A full report on the skeletal remains, including details of pathology, is contained in the project archive.

The Cranial Index is 77.1 (Mesocrany). The Platymeric Index is 83.7 (Platymeric) and the Platycnemic Index is 68.2 (Mesocnemic). The Robusticity Index (femur) is 11.8.

Green staining was noted over the anterior of the 5th lumbar vertebra body (L5), the right ventral side of the sacrum (S1), the dorsal side of left ilium, the ventral surface of one left rib sternal end, and the distal half left femur shaft. The staining in the area of the pelvis and the left rib derived from copper alloy artefacts recovered during excavation. The cause of staining to the distal femur (knee region) suggests the original presence of other artefacts which have not survived.

A high level of ante mortem tooth loss was recorded (43%), especially in the maxilla (71%). This is likely to be the result of excess wear – the remaining sockets being very shallow – and possibly dental caries. Dental abscesses were observed in 33% of the sockets, with associated infection within the antrum (leading to secondary sinusitis), the mandibular canal and the buccal surfaces of both the mandible and the maxilla. The lesions are suggestive of a low level of dental hygiene, and may also reflect a poor level of nutrition associated with a diet based largely on cereals and vegetables. Lesions indicative of degenerative joint diseases were very slight and, together with the generally gracile skeleton, do not indicate a strenuous life-style. However, strong muscle attachments were noted for the *flexor digitorum superficialis* (especially the right side) which flexes the middle finger phalanges and the iliofemoral ligament attachments were also pronounced. Osteophytes were noticeable in most of the finger joints, particularly in the right hand. These observations suggest the woman was predominantly engaged in activities using her hands, for example textile production. The cause of death was not evident from the skeletal remains.

Copper Alloy and Iron Objects, Emma Loader

Sixteen copper alloy objects were recovered from the burial comprising two pins and 14 wire loops. The pins have wire-wrapped, globular heads and measure 22 mm and 27 mm in length (Fig. 41, 1). During conservation of one of the pins, the shaft was observed to be surrounded by organic deposits, most likely highly degraded textile remains. An incised line was also noted running around the pin-head (A. Wilson, Salisbury Conservation Lab. report). The pins are comparable to Crummy's type 2 which cover a wide date range from the 14th through to the 17th century (Crummy 1988, fig. 4:452). The location of the pins on either side of the rib cage and the observation of former textile remains suggest that they may have been used to secure clothing or a shroud.

The wire loops were recovered together from the pelvic region of the skeleton; some embedded in an organic matrix. Each loop is approximately 10 mm in diameter and consists of a loop of copper alloy wire,

twisted twice to form a short stem (Fig. 41, 2). Identical wire loops have been recovered from Colchester (Crummy 1988, fig 16:1624) in contexts dating from the 16th to the 18th centuries (context type unknown). Detailed inspection of one of the loops by the conservation laboratory revealed areas of structured fibrous deposits on both surfaces of the loop. The alignment of the fibres is suggestive of a plain weave textile. This limited evidence for textile remains suggests that the organic matrix associated with the loops also probably represents highly degraded textile remains (A. Wilson, Salisbury Conservation Lab. report). The loops are very likely therefore to have been associated with costume or dress accessories, probably acting as eyelets. The location of the loops around the waist/pelvic region and in a group also suggests that they formed part of a woven dress accessory, for example a purse or small bag with a drawstring through the loops.

In addition, two objects were recovered from the adjacent wheel ruts (6104) comprising a copper alloy staple and part of the shank of an iron nail or pin. Neither is diagnostic, but both are likely to be post-medieval.

Illustrated objects

(Fig. 41)

1. Copper alloy pin, Obj. No. 803, context 6102.
2. Copper alloy wire loop, Obj. No. 802, context 6102.

Discussion, Jo Draper and Carrie M. Hearne

The discovery of the grave of a woman near Roger's Hill Farm is an unusual and enigmatic archaeological find. The burial is most likely to date from the 16th to 18th century. The grave is very unlikely to represent a pauper burial since it lies on unconsecrated ground and only one mile from the village churches at Affpuddle and Turners Puddle which would have afforded pauper's burial plots.

The wheel ruts to the south of the grave recorded at the same stratigraphic position as the grave cut itself confirm the location of the burial alongside a former road surface, in a slight coombe. The subsequent filling of the coombe with a deep deposit of sandy material (6103) resulted in the sequence of road make-up levels recorded in the excavation area. The deep deposit of sand sealing the grave was also the reason why the grave was not visible during the early stages of constructing the underpass.

The grave was located on the parish boundary between Turners Puddle and Affpuddle (see Fig. 8). Prior to the construction of the bypass this location was marked by a T-junction with a northward approach to Roger's Hill Farm. The tithe maps, however, show that this was formerly a crossroads with a short road leading south-east (on the line of the parish boundary) and joining a drove way which led from the pasture fields of Turners Puddle (1839 Tithe Maps, DCRO T/AFF; T/TPD). The woman's grave therefore lay alongside the Bere Regis to Tolpuddle road on the north-east corner of a former crossroads and on the parish boundary. The burial was undoubtedly deliberately placed at this location. Parish boundaries and/or crossroads away from settlements (i.e. on 'no man's land') were traditionally used for the burial of felons, suicides and others who were deemed social or moral outcasts, probably including those accused of witchcraft. Crossroad burial was abolished by the 1823 *Suicide Act*.

Unfortunately Coroner's records are very sparse for Dorset, and only survive for this area in a private collection (DCRO D/FIL/X9). No Coroner's records for Turners Puddle or Affpuddle could be located. A reference to suicide burials on a boundary at Milton Abbas in 1603 (DCRO /D/PLR/Li) is part of a deposition of the manor boundaries. A boy who hanged himself was buried on one of the bounds of the waste of Hermitage in 1607 (DCRO/D/RGB/737). Much later evidence from Nether Compton shows the practice continued. At midnight on 2 May 1822 Robert Tucker, aged 71, was buried *'at the cross road'* (DCRO/Nether Compton/Transcripts/Burials/Tucker) – he had hanged himself in his bakehouse two days earlier. Executed felons were also buried at crossroads. An order for *'the corpse of the felon to be buried at a cross way a stake stuck through him and so forth'* survives from Nynehead, Somerset (Weaver and Mayo 1913). A stake through the heart was also the custom for suicide burials.

The Parish Registers for Turners Puddle and Affpuddle only survive from 1640 and 1722 respectively. Those for Turners Puddle have been transcribed, apart from one volume, but neither the transcripts nor the original volume have any reference to suicide (or any other abnormal) burial in the whole period 1640 to 1919 (DCRO /PE/TPD). Affpuddle registers are transcribed for the period 1722 to 1850 (DCRO/PE/AFF) and include one suicide, that of William Chapman Cosh '... *by order of the Coroner of Dorset, found hanging in Brook Barn, aged 21 to be buried in the churchyard*'. He died on 9th April 1844 indicating that by that time at least suicides were being buried in the churchyard at Affpuddle. If the woman buried at Roger's Hill crossroads represents a suicide from Affpuddle parish (a much larger parish than Turners Puddle) the implication is that she died before 1722. Suicide burials were normally face-down (prone) and this might argue against the Roger's Hill victim being a suicide (see Cox 1998, 119–21; Harding 1998, 60–2 for discussion on suicide burials).

It is tempting to make a link between the burial of an older woman (over 40 years) in this location as the possible burial of a witch. This interpretation cannot be supported by any direct archaeological evidence but perhaps should not be ruled out as entirely fanciful. Trials for witchcraft in Dorset were not uncommon, particularly during the 17th century. Indeed such trials are recorded in the county as late as the close of the 19th century. The outcome of trials could range from a simple revoke of witchcraft to actual execution of the unfortunate accused (see Udal 1922, 201–18). Traditionally female witches outnumbered males but the latter were not uncommon. A published list of 18 witchcraft trials in Dorset between 1527 and 1884 lists 12 accused women and six men, and includes one Alice Abram (or Browning) a widow of Tolpuddle who was accused of witchcraft in 1655 (Davies 1997, 162). The

accusations of witchcraft against Susan Woodrowe by her employer, the Reverend William Ettrick of Affpuddle and Turners Puddle, in the early years of the 19th century are also well documented and attest to the continuing power of superstition in people's minds (Hole 1964).

Some 3.5 km south of the Roger's Hill burial, on the same parish boundary, the 1839 Tithe map shows a stone called the *Dead Woman*. The stone is also shown on the 1902 Ordnance Survey map and may well mark the position of a similar burial. Whether the Roger's Hill burial was originally marked in some way above the ground is not known. Evidence for the burial of criminals and suicides at rural crossroads is becoming increasingly common, both through direct archaeological evidence and historical research (see Halliday 1997). The skeletal remains from Roger's Hill were reburied at St Laurence's Church, Affpuddle on 19 November 1998.

WEST OF ROGER'S HILL FARM: W2402.15 (see Fig. 8) SY 8170 9470

Two machine trenches were excavated to investigate two circular cropmarks (Site AP15) identified by during the evaluation assessment (see Fig. 8) and interpreted as of possible prehistoric date. Re-inspection of the air photographs indicated that they were pasture marks and archaeologically unconvincing. In the western trench the only deposit of any archaeological significance was a small patch of dark grey silty clay which directly overlay the natural reddish–brown clay subsoil. Excavation by hand proved this to be simply a thin (0.03 m) layer containing small quantities of coal, charcoal and clinker. No features were found to correspond with the possible cropmark. The eastern cropmark was found to coincide with a disused and overgrown cattle trough. After the removal of the topsoil by machine the surface of the variable gravel and clay subsoil was carefully examined but no features were discerned. It appears that the cropmarks identified during the evaluation were probably caused by the space left around the cattle trough during ploughing/cutting.

WATCHING BRIEF REPORT

An archaeological watching brief was undertaken between March 1997 and February 1999. All areas of topsoil stripping, both for the main works and associated construction areas (lagoons, ditching, service diversions etc.) were monitored by suitably experienced archaeologists. The agreed methodology for the watching brief was set out in *a Written Scheme of Investigation* (Wessex Archaeology 1996a/b). Full details of the watching brief results are held in the project archive (Ref. W2405).

Small numbers of features of varying date were recorded near excavated sites, particularly in the vicinity of Tolpuddle Ball. These observations have been incorporated in the appropriate site reports. A Late Romano-British burial (5067) discovered approximately 100 m north of the Tolpuddle Ball excavation (see Fig. 8) is also described in that site report (Phase 3–5 burials; Plate 23). The Late Roman and post-Roman cemetery near Tolpuddle Ball was initially discovered during the watching brief. A full excavation of the site was undertaken and is reported as such above (W2405.17). The discovery of an isolated post-medieval roadside burial near Roger's Hill Farm is also described as a separate 'site' above (W2402.19, see Fig. 8; Fig 41, Plate 38).

In addition to these discoveries a concentration of worked flint was recorded during topsoil stripping of the eastern end of the route between Roger's Hill Farm and West Mead. A 250 m length of the bypass route centred on SY 82850 95050 was 'fieldwalked' after topsoil stripping using timed collection units. The assemblage totalled 309 pieces and was largely undiagnostic apart from several scrapers and a knife made on a reused flake. The group probably derives from activity throughout the Neolithic and Bronze Age and its condition indicates that it was redeposited, probably from the north-facing slopes of Piddle Wood. Several other more localised concentrations of worked flint were noted during the watching brief but were not found to be associated with any discernible features or deposits.

As on any watching brief the result is influenced by prevailing conditions and the conscientiousness of the staff involved. Due to the variable nature of the underlying geology, weather conditions and differing methods of topsoil stripping, visibility levels for observing archaeological deposits and features ranged from poor to good. The need to provide a safe working environment for all construction personnel also had implications for watching brief, particularly during the

main topsoil strip (April to June 1997) which involved the use of a fleet of very large motor scrapers. In these conditions access for archaeologists to freshly stripped areas was, by necessity, constrained but a method was put in place which allowed regular inspection without incurring delays to the general progress of the topsoil strip. Nevertheless, it must be accepted that very localised or ephemeral archaeological deposits would generally be difficult to identify in such conditions. Limitations of this type would, realistically, be very hard to avoid on any major civil engineering project. On a more positive note, site monitoring visits and the requirements for certification of all areas of topsoil stripping ensured consistency of approach and standards – attributes which are not always associated with archaeological watching briefs. Overall, therefore, the watching brief was considered effective. The generally low incidence of finds recovered away from the main sites reinforces confidence in the watching brief results and it is therefore considered unlikely that any significant archaeological deposits or sites were 'missed'.

GROUND SURVEY
Kit Watson and Carrie M. Hearne

As discussed above (Section 1) as part of the overall scope of works *'Ground Survey'* was undertaken at six locations on the bypass route (see Table 1). The fieldwork mainly comprised earthwork survey using a Total Station Theodolite, supplemented with written, drawn and photographic records. The survey method was generally based on transects to produce cross sections through sites/features and also three dimensional terrain models (full details in archive). The two main sites requiring earthwork survey and which were not also subject to Strip and Record investigation were the water meadow systems at Druce Lane, Puddletown and Devil's Brook, Burleston. The Puddletown hollow way was also only subject to Ground Survey (see Fig. 2). The three other survey sites – Burleston Down, the Roman Road intersection and North of Tolpuddle Ball were principally areas of Strip and Record investigation. For these sites the survey results have been incorporated into the main site reports above and only a brief note is provided below. Full details of the methodology and detailed results on all the survey sites are contained in the project archive.



Plate 39 Druce Lane Watermeadows, Puddletown: detail of 'Galpins' maker's plate on sluice

Druce Lane Watermeadows, Puddletown: Site W2402.1 SY 751 945

The Druce Lane watermeadows extend over *c.* 2 km of the Piddle Valley, from Waterston Manor in the west to Puddletown. Although the early origins of water meadow development are not fully understood, it is known that Dorset was a pioneer of the technique. The 'watering' system at Druce and others in the Piddle and Frome valleys have been demonstrated to date from the early 17th century (Whitehead 1967; Bettey 1977) making them amongst the earliest recorded water-meadows in southern England. The 18th century was also a period of intensive watermeadow development in the county, partly following the publication of George Boswell's *Treatise on Watering Meadows* which was published in 1779 in Puddletown where the author



Plate 40 Druce Lane Watermeadows, Puddletown: extract from 1978 air photograph, north at top



Plate 41 *Druce Lane Watermeadows, Puddletown: view of sluices looking north-east to Druce Lane*



Plate 42 *Druce Lane Watermeadows, Puddletown: view of culvert*

lived. The treatise was a practical manual on the construction and operation of water meadows, the author proclaiming '... *assiduity, experience and common sense form a far surer guide to us than fancy and theory*'

The western section of the Druce Lane system has been greatly modified in recent times. The eastern part (that partially affected by the construction of the bypass) is derelict and has not been actively managed in recent history and the network of former channels and drains is poorly preserved. A group of iron sluices with makers marks by Galpin of Dorchester may relate to a final attempt to upgrade the meadows in the mid 19th century (Plate 39).

A detailed contour survey was undertaken of the area of the water meadows affected by the new road embankment (approximately 300 m in length) and an adjacent balancing pond. With the exception of the main channels, extant earthworks were very slight, minor channels for example ranging in depth between 0.05 m and 0. 20 m. Although the earthworks of the water meadow system have been severely reduced the ground survey was able to record the pattern of mains and drains – as summarised on Fig. 4 (details in archive). The interpretation of the survey data is assisted by aerial photographs taken in 1978 for the road scheme (Plate 40). Supplementary records were made of structural components of the system directly affected by the bypass including three hatches and a culvert (Plates 41 and 42). The iron sluice fittings, along with a plaque on the culvert parapet on Druce Lane were removed prior to construction for deposition in an appropriate museum.

Devil's Brook Watermeadows, Burleston: Site W2402.7 SY 774 949

The watermeadow system which extends along several kilometres of the narrow Devil's Brook valley, north of Burleston, was the subject of detailed survey and assessment by Liverpool University as part of the evaluation in 1991–2. The initial desk-based assessment (EAU 1991; Site L) included the following information:

Although they have been modified after 1842 by the building of Water Barn and the link road to Burleston Down and much more recently by the construction of a large trout pond at the southern end, many channels and drains survive with sharp profiles. The meadows are currently managed by traditional methods. The channels are regularly cleaned out and the valley flooded during the winter . ... No specific documentary evidence has been located which would allow these water-meadows to be precisely dated. It would seem most probable that they were constructed towards the middle of the 17th century. ... The watermeadow system at Devil's Brook is historically significant both because it appears to belong to an early group in southern England and because it is a very rare example of the survival of traditional management systems.



Plate 43 Devil's Brook Watermeadows, Burleston: looking east to Burleston Down



Plate 44 Devil's Brook Watermeadows, Burleston: extract from 1978 air photograph, north at top

A follow-up stage of work on the watermeadows in March 1992 comprised a detailed field survey, an examination of the present management of the system (drawn from information from Mr A. Tanswell, Farm Manager for Mr Wood Homer of Bardolf Manor) and an assessment of the regional context of the system. The field survey included plotting (by eye) onto 1:2500 base maps the system of channels and sluices around Water Barn; comparisons with aerial photographs taken for the road scheme and historical maps of the mid 19th century. Two transects across the valley were taken by 'instrument survey' and a photographic survey of general and specific features was made. In addition standing buildings were 'superficially examined to check their relationship with the water system'. Full details on the work undertaken by Liverpool University and the results of the survey are provided in the relevant evaluation report (EAU 1992, Appendix 4). It is not within the remit of this report to reproduce the results of the evaluation survey.

Wessex Archaeology was required to undertake a detailed earthwork survey of that part of the system directly affected by construction of the bypass. Being still operational, the channels were well defined and easily surveyed (Plate 43). The main features evident are summarised in Fig. 5 (details in archive). As for the Druce Lane meadows, the 1978 aerial photographs for the scheme provide a very useful additional resource for the layout of the meadows (Plate 44).

Puddletown Hollow Way: Site W2402.4 SY 760 950

The hollow way runs north from Puddletown to the A354 converging with the latter immediately north of its intersection with the bypass (see Fig. 4). The earthwork survey comprised a series of east–west transects augmented by survey of additional surface features where present. The survey demonstrated that at the north end of the area affected by road construction the hollow way survived as a linear feature 8 m to 10 m wide and up to 0.90 m deep. The southern two thirds appeared to have been reduced and virtually levelled by subsequent absorption into the neighbouring fields. Further north, on the other side of the A354 the line of the hollow way continues as a footpath running due north to Chebbard Farm (approximately 1 km west of the centre of Dewlish village) and ultimately on to Cheselbourne. In all probability the route is of medieval, if not earlier, origin.

Other Ground Survey Sites

At Burleston Down (W2402.8) the two 'lynchets' on the western part of the site identified during the evaluation (Site O, see Figs. 5 and 32) were recorded by means of two transects down the prevailing (east-facing) slope encompassing both features. Excavation of four machine trenches demonstrated that neither of the two lynchets were in fact the result of agricultural activity. The very large (eastern) feature is almost certainly a river cliff of periglacial origin and is discussed at greater length in the site report (see above).

On the line of the Roman Road across Tolpuddle Common (Site W2402.10) survey was undertaken across the area of its intersection with the bypass (see Fig. 7). A series of transects were recorded perpendicular to the line of the Roman Road. Overall, surface features were generally slight with the exception of a lynchet on the south (upslope) side of the footpath which marks the boundary between two major field parcels. As a surface feature the height of the lynchet varied from a minimum of 0.70 m to a maximum of 1.30 m.

At North of Tolpuddle Ball (W2402.12), the lynchets identified in the evaluation (Site U) were found to be located off the route of the bypass. By agreement with the Department's Agent and the Project Archaeologist survey of these unaffected features was not undertaken. A general survey of the topography of the strip and record area was, however, made.

Section 3. The Finds and Human Bone

All sites produced finds in varying quantities but the overwhelming majority, both in range of material represented and quantity, was derived from the 1993 excavations at Tolpuddle Ball (TP93). Table 6 summarises the presence of finds by category for each site. Quantification of finds from each site is provided in the relevant reports below. Finds have been described and discussed by material type from the project as a whole, referenced by site and phase or period as appropriate. Detailed analysis of all categories of finds is held in the project archive.

Iron Age and Roman Coins, S.C. Bean

A total of 112 coins was recovered from the excavations at Tolpuddle Ball (TP93) comprising one Late Iron Age silver stater, 103 Roman copper alloy issues and eight post-medieval coins. Over half of the Roman coins (59) were recovered by metal-detecting across the trench and spoil heaps (generally assigned context 1558). A further 35 coins were unstratified or poorly stratified, and two were recovered from a medieval hollow way. A small proportion of the coins, therefore, was recovered by hand excavation of features or deposits and only some of these (eight in total) were from well-stratified contexts. In addition, two Roman copper alloy issues were recovered during the watching brief; one was recovered from a ditch immediately south of the Tolpuddle Ball site and one was associated with an inhumation burial (W2405, Cat. Nos 4 and 54A respectively).

Discussion

The earliest coin from the site is the Durotrigian Celtic silver stater (Plate 45, Cat. No. 1). This coin is little worn (though the obverse die itself is worn) and appears to have been fairly fresh when deposited.

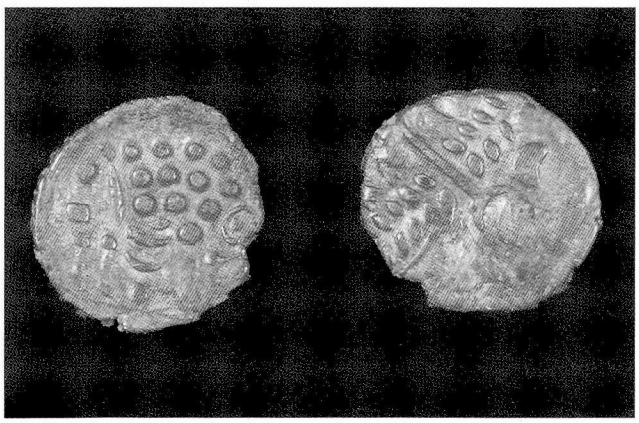


Plate 45 Durotrigian silver stater from Tolpuddle Ball (TP93): left, reverse; right, obverse (scale 2:1)

There are only four 1st/2nd century AD Roman coins (Cat. Nos 2–5). These comprise one each of Vespasian (AD 69–79), Trajan (AD 98–117), Hadrian (AD 117–138) and Commodus (AD 177–192). These coins are all worn and appear to have been old when lost. By contrast the three coins of Postumus (AD 259–268: Cat. Nos 7–9) are only lightly circulated and appear to have been fairly fresh when lost.

Coin loss apparently increases through the later 3rd and into the 4th century AD. The bulk of the coins from the site date to the middle and later part of the 4th century. This group includes a Constantinian coin (Cat. No. 54A) recovered from the grave of an adult female during the watching brief north of the main Tolpuddle site (burial 5067). The coin was placed on the base of the grave between the knees of the woman. Only three coins date after *c.* AD 378 (Cat. Nos 93–95) and a dramatic decline is therefore apparent for this period. There are no *siliquae* in the group, indeed there is a general absence of high value coins from the site. Many of the 3rd/4th century coins from the site are irregular or imitative issues, a not particularly unusual phenomenon. No die-links were observed between any of these coins (although many are poorly preserved) and so it is unknown whether any are of local production.

Table 7 shows the Roman coins plotted by period. The Celtic stater has been plotted in the period up to AD 41. The many irregular issues have been plotted in the period of the coins which they imitate. There are several weaknesses in tabulating the data in this manner (see Reece 1991, 1–11) the chief being that, by its nature, it is based on the date of the coins' production and not the date of loss/deposition and the inferred human activity. The coins have been plotted by number and by coins per thousand (percentage x10) to allow comparison with other sites in Reece (1991). The uncertain Roman coins (Cat. Nos 96–105) have not been plotted. The composition of the coin assemblage is comparable with those from several other rural and villa sites, most particularly Kingscote, Chedworth and Winterton (Reece 1991, nos 66, 91, 98 and see no. 56).

In summary the group of coins from Tolpuddle appears typical of a lesser Roman site, which on numismatic evidence appears to date to the later 3rd and 4th centuries. In contrast to the pottery assemblage, there is nothing in the numismatic record to suggest continuity from a Late Iron Age site. As already noted, the small group of early Roman coins from the site are very worn and appear to have been old when lost. Given the evidence of other material types, it is likely that the coin list is more a reflection of coin use, rather than human activity, on the site. The bulk of the coins date to a period (after AD 260) when the nature of money had changed from a currency of relatively stable, intrinsic worth, to a token currency of very variable and often little worth. The quantity of coinage in circulation was greatly increased while its often low value meant that once lost it was less likely to be recovered.

Table 6: Presence of finds categories by site

Site Ref	*Site (west to east)*	*Coins*	*Cu alloy*	*Lead*	*Iron*	*Pottery*	*Ceramic building material*	*Fired clay*	*Roman glass*	*Worked flint*	*Burnt flint*	*Shale*	*Worked stone*	*Bone/ antler objects*	*Human bone*
W2402.3	Downtons Farm	–	–	–	*	*	–	–	–	*	*	–	–	–	–
W2402.5	Lower Eweleaze	–	–	–	–	*	–	*	–	*	*	–	–	–	–
W2402.6	Home Farm	–	–	–	–	*	*	–	–	*	*	–	–	–	–
W2402.8	Burleston Down	–	–	–	–	*	–	*	–	*	*	–	–	–	–
W2402.18	Hill Barn, Tolpuddle	–	–	–	–	*	–	–	–	*	*	–	–	–	–
W2402.10	Roman Road	–	–	–	*	*	–	–	–	*	–	–	–	–	–
W2402.12	N. of Tolpuddle Ball	–	–	–	–	*	–	*	–	*	*	–	–	–	–
W2405.17	Tolpuddle Ball Cemetery	–	–	–	–	*	–	*	–	*	–	–	–	–	*
TP93	Tolpuddle Ball (1993)	*	*	*	*	*	*	*	*	*	*	*	*	*	*
W2402.13	Tolpuddle Ball (1996/7)	–	–	–	*	*	*	*	–	*	*	*	*	–	*
W2402.14	S. of Tolpuddle Ball	–	–	–	–	*	–	–	–	*	–	–	–	–	–
W2402.15	W. of Roger's Hill Farm	–	–	–	–	–	–	–	–	*	–	–	–	–	–
W2402.19	Roger's Hill Farm burial	–	*	–	*	–	–	–	–	–	–	–	–	–	*
W2402.16	West Mead	–	–	–	*	*	*	*	–	*	*	–	*	–	–
W2405	Watching brief	*	–	–	*	*	*	*	–	*	*	–	–	–	*

Table 7: Tolpuddle Ball Iron Age and Roman coins by period

Period	*No. coins*	*Coins per 1000*
To AD 41	1	10.5
AD 41–54	–	–
AD 54–68	–	–
AD 69–96	1	10.5
AD 96–117	1	10.5
AD 117–138	1	10.5
AD 138–161	–	–
AD 161–180	1	10.5
AD 180–192	–	–
AD 193–222	–	–
AD 222–238	–	–
AD 238–260	2	21.1
AD 260–275	16	168.4
AD 275–296	1	10.5
AD 296–317	1	10.5
AD 317–330	6	63.2
AD 330–348	24	242.1
AD 348–364	10	105.3
AD 364–378	28	294.8
AD 378–388	1	10.5
AD 388–402	2	21.1
Total	96	1000

Catalogue of Iron Age and Roman coins

(all TP93 unless stated otherwise)

All entries are in the following format – denomination, weight, die axis, special find number, context number, description, classification and date. Reference: Cunetio – Besley and Bland 1983. Abbreviations: LRBC – Late Roman Bronze Coinage; RIC – Roman Imperial Coinage. * indicates coin recovered from hand excavation of feature or deposit (all other coins recovered by metal detector survey – MD).

Celtic

1.* Ar stater 5.35 g. 80°. SF 6, context 40, structure 702. Durotriges. Obv. Abstract wreath pattern; Rev. Abstract horse left. Little circulated, worn obverse die. Van Arsdell 1989, 1235–1. 1st century BC (Plate 45).

Roman to AD 260

2.* As 8.81 g. 180°. SF 128, context 10/41. Vespasian. Rev. Pax standing left with cornucopiae and branch. Worn and flan bent. AD 69–79.

3. Sestertius 21.39 g. SF 298, context 1558 (MD survey). Trajan. Rev. Standing figure. Circulation worn, pitted. AD 98–117.

4.* Sestertius 19.8 g. 180°. Obj. 700, context 5034, ditch 5031 (W2405 watching brief). Hadrian. Rev. Figure (?Aeternitas) standing left. Circulation worn, abraded. AD 117–138. (Identification by N. Wells, Wessex Archaeology)

5. As 9.48 g. 0°. SF 272, context 1558 (MD survey). Commodus. Rev. Figure standing left. Circulation worn, abraded. AD 177–192.

6. As 9.64 g. 180°. SF 132, context 1 (MD survey). Gordian III. Circulated. RIC IViii 307b. AD 241–243.

AD 260–296

7.* Sestertius 15.68 g. 170°. SF 102, context 87, medieval hollow way 88. Postumus, Lyon. Rev. Emperor in military attire holding globe and spear. Lightly circulated. RIC Vii 106. AD 260.

8. AR antoninianus. 2.85 g. 200°. SF 25, context 1, topsoil. Postumus. Rev. VICTORIA AVG Victory left, captive at feet. Lightly circulated. Cunetio 2381. *c.* AD 262.

9. AR plated antoninianus. 2.96 g. 190°. SF 305, context 1558 (MD survey). Postumus. Rev. FELICITAS AVG Felicitas standing left with sceptre and cornucopia. 19 mm. Little circulated, plating lifting. Cunetio 2908. AD 263–265 for prototype.

10. AE antoninianus. 2.31 g. 0°. SF 118, unstratified. Salonina. Rome. Rev. IVNO REGINA Juno standing left. Lightly circulated, buckled. AD 260–268.

11. AE antoninianus. 1.75 g. 0°. SF 259, context 1558 (MD survey). Victorinus. Worn. RIC Vii 113. AD 268–270.

12.* AE antoninianus. 1.48 g. 0°. SF 37, context 64, structure 702. Victorinus. 'Cologne'. Rev. [ORIENS AVG] Sol left. 19 mm. Worn. cf. RIC Vii 115. AD 269– 270.

13. AE antoninianus. 1.98 g. 0°. SF 301, context 1558 (MD survey). Victorinus. Rev. Pax. Little circulated. RIC Vii 116. AD 268–270.

14. AE antoninianus. Irregular. 1.17 g. 50°. SF 127, context 1 (MD survey). Victorinus. Rev. Uncertain figure. 17 mm. Worn. AD 268–70.

15. AE antoninianus. Irregular. 1.72 g. 200°. SF 42, ?context 64, ?structure 702. Tetricus I. Rev. Pax holding olive–branch and vertical sceptre. 15.5 mm. Circulation worn, worn dies. RIC Vii 100. AD 270–273.

16. AE antoninianus. Irregular. 1.85 g. 190°. SF 270, context 1558 (MD survey). Tetricus I. Rev. Female figure standing left. 17.5 mm. Abraded. *c.* AD 270–273.

17. AE antoninianus. 1.60 g. 0°. SF 290, context 1558 (MD survey). ?Tetricus I. Rev. Standing female figure left. Chipped and abraded. AD 270–273.

18. AE antoninianus. 2.11 g. 0°. SF 257, context 1558 (MD survey). Tetricus II (Caesar). Rev. Pontifical implements. Abraded. cf. RIC Vii 254. AD 270–273.

19. AE antoninianus. 2.38 g. 0°. SF 25, unstratified. Tetricus II (Caesar). Rev. SPES AVGG Spes. Lightly worn, worn rev. die. RIC Vii 270. AD 270–273.

20.* AE antoninianus. 2.55 g. 50°. SF 101, context 64, structure 702. Claudius II. Rev. ANN[ONA AVG]. 19 mm. Lightly circulated. AD 268–270.

21. AE antoninianus. Irregular 1.27 g. 0°. SF 277, context 1558 (MD survey). ?Claudius II. ?Eagle. 17 mm. Worn and abraded. ?After AD 270.

22. AE antoninianus. Irregular.1.47 g. SF 287, context 1558 (MD survey). ?Claudius II. Rev. Figure left. 16 mm. Worn and abraded. ?AD 268–270 for prototype.

23*. Ar antoninianus. 1.99 g. 160°. SF 180, context 64, structure 702. Gallienus (sole reign). Rome. Rev. [P]AX AVG V. 20 mm. Little circulated, corroded. RIC Vi 255. AD 260–268.

24.* AE antoninianus. 4.14 g. 180°. SF 43, context 64, structure 702. Probus. Lyon. Rev. FIDES MILITVM. Little circulated. RIC Vii 80. AD 276–282.

AD 320–330

25. AE nummus. 2.24 g. SF 92, unstratified. Constantine I. Rev. ?Sol. Much worn, chipped. *c.* AD 314–319.
26. AE nummus. 2.14 g. SF 268, context 1558 (MD survey). Uncertain. Rev. Wreath containing VOT/[..]. Abraded. AD 320–324.
27. AE nummus. 1.49 g. 180°. SF 130, context 1 (MD survey). Constantine II (Caesar). Rome. Little circulated, corroded. RIC VII 243(?). AD 321.
28. AE nummus. 2.61 g. 10°. SF 302, context 1558 (MD survey). Crispus. ?Arles. Lightly circulated. RIC VII 254(?). AD 322–323.
29. AE nummus. 0.91 g. 0°. SF 292, context 1558 (MD survey). Constantinople. Rev. GLORIA EXERCITVS Emperor standing. Half a coin, abraded. AD 326–330.
30. AE nummus. Irregular 0.92 g. SF 265, context 1558 (MD survey). Rev. ?GLORIA EXERCITVS Emperor standing. 15 mm. Abraded. ?AD 326–330.
31. AE nummus. 1.55 g. 0°. SF 296, context 1558 (MD survey). Constantine I. Constantinople. Rev. LIBERTAS PVBLICA. Abraded. AD 324–330.

AD 330–348

32. AE nummus. 1.69 g. SF 262, context 1558 (MD survey). Rev. GLORIA EXERCITVS Two soldiers, two standards. Abraded. AD 330–335.
33. AE nummus. 1.43 g. 180°. SF 261, context 1558 (MD survey). ?Constantine II. ?Antioch. Rev. GLORIA EXERCITVS Two soldiers, two standards. Abraded. AD 330–335.
34. AE nummus. 1.84 g. 180°. SF 90, unstratified. Constantine II (Caesar). Lyon (mint-mark blundered, possibly irregular). Rev. GLORIA EXERCITVS Two soldiers, two standards. Practically uncirculated. LRBC I 198. AD 330–335.
35.* AE nummus. Irregular. 1.64 g. 190°. SF 220, context 333, ?occupation deposit. Constantine II. Rev. GLORIA EXERCITVS Two soldiers, two standards. 15.5 mm. Circulation worn, abraded. AD 330–335.
36. AE nummus. Irregular 1.39 g. 20°. SF 197, context 248, layer overlying pit group. Constantine I/II. Rev. GLORIA EXERCITVS Two soldiers, two standards. Circulation worn. AD 330–335.
37. AE nummus. Irregular 0.91 g. 180°. SF 198, context 248, layer overlying pit group. Constantine II (Caesar). Mint mark Trier. Rev. GLORIA EXERCITVS Two soldiers, two standards. 12.5 mm Little circulated. cf. LRBC I 63. AD 330–335.
38. AE nummus. Irregular 0.88 g. 160°. SF 194, context 248, layer overlying pit group. Constantine II (Caesar). GLORIA EXERCITVS Two soldiers and two standards. 9 mm. Lightly circulated. AD 330–335.
39. AE nummus. Irregular 0.79 g. 200°. SF 286, context 1558 (MD survey). Constantine I/II. Mint mark Trier. Rev. GLORIA EXERCITVS Two soldiers, two standards. 13 mm. Little circulated, chipped. cf. LRBC I 48/9. AD 330–335.
40. AE nummus. Irregular. 1.49 g. SF 288, context 1558 (MD survey). ?House of Constantine. Obv. ?Irregular Pearl diademed bust right. Rev. ?GLORIA EXERCITVS Two soldiers. 15.5 mm. Worn and pitted. ?AD 330–341 for prototype.
41. AE nummus. 2.02 g 180°. SF 282, context 1558 (MD survey). Constantine I. Trier. Rev. VRBS ROMA Wolf and twins. Little circulated. LRBC I 76. AD 330–335.
42. AE nummus. 1.99 g. 0°. SF 89, unstratified. House of Constantine. Trier. Rev. VRBS ROMA Wolf and twins. Lightly worn, slightly abraded. LRBC I 85. AD 330–335.
43.* AE nummus. Irregular 1.40 g. 30°. SF 80, context 651, scoop 652. House of Constantine. Mint mark Trier. Rev. VRBS ROMA Wolf and twins. 16 mm. Lightly worn, worn dies. AD 330–335.
44. AE nummus. Irregular 0.97 g. SF 126, MD survey. Irregular VRBS ROMA Wolf and twins. 14.5 m. Worn and abraded. *c.* AD 330–337.
45. AE nummus. Irregular 0.91 g. 160°. SF 306, context 1558 (MD survey). House of Constantine. VRBS ROMA Wolf and twins. Mint mark RoEX. 13.5 mm. Lightly circulated. AD 330–341.
46. AE nummus. 2.52 g. 0°. SF 52, context 1, topsoil. House of Constantine. Lyon. Obv. Constantinopolis; Rev. Victory on prow. Light circulation wear. LRBC I 191. AD 330–335.
47. AE nummus. Irregular 0.80 g. 280°. SF 193, unstratified. House of Constantine. Mint mark Rome. Obv. Constantinoplis; Rev. Victory on prow. 11 mm. Circulation worn. AD 330–341.
48. AE nummus. 1.50 g. 210°. SF 34, unstratified. House of Constantine. ?Rome. Obv. Constantinopolis; Rev. Vicory on prow. Lightly circulation worn. AD 335–341.
49. AE nummus. 1.13 g. 0°. SF 289, context 1558 (MD survey). Constantine I. Arles. Rev. GLORIA EXERCITVS Two soldiers, one standard. Circulation worn, abraded. LRBC I 398. AD 335– 337.
50. AE nummus. 1.65 g. 0° SF 274, context 1558 (MD survey). Rev. GLORIA EXERCITVS Two soldiers, 1 standard. Partially encrusted. AD 335–341.
51.* AE nummus. Irregular. 1.39 g. 180°. SF 72, context 64, structure 702. Constantius. Mint mark Trier. Rev. GLORIA EXERCITVS Two soldiers, one standard. 15 mm. Lightly circulated, worn obverse die. cf. LRBC I 132. AD 335–341.
52. AE nummus. 1.32 g. 180°. SF 137, context 1, topsoil (MD survey). Constantius/Constans. Rome. VICTORIAE DD AVGGQ NN Two Victories. Little circulated, abraded. RIC VIII 83/84. AD 347–348.
53. AE nummus. Irregular. 1.05 g. 40°. SF 278, context 1558 (MD survey). House of Constantine. Rev. VICTORIAE DD AVGGQ NN Two Victories each holding wreath. 11.5 mm. Worn and abraded. AD 341–348.
54. AE nummus. Irregular. 1.15 g. 40°. SF 291, context 1558 (MD survey). Rev. VICT AVG Victory left. 12.5 mm. Little worn, abraded. AD 341–348.

54A.*AE nummus. 1.4 g, 180°. Obj. 750 (Burial 5067, W2405 Watching Brief). Constantinian. GLORIA EXERCITUS, Two soldiers with two standards. Clipped. AD 330–345. (Identification by N. Cooke, Wessex Archaeology).

AD 348–364

55. AE nummus. Irregular. 1.06 g. 0°. SF 17, context 1, topsoil. Constantius II. Mint mark Trier. FEL TEMP REPARATIO Phoenix. 15 mm. Little circulated, chipped. RIC VIII 227. AD 348–350.
56. AE nummus. Irregular 4.07 g. 0°. SF 51, context 1, topsoil. Rev. FEL TEMP REPARATIO Fallen horseman. 20.5 mm. Abraded. *c.* AD 348–360.
57. AE nummus. Irregular. 2.29g. 0°. SF 129, context 1, topsoil (MD survey). Constantius II. Mint mark

Siscia. Rev. FEL TEMP RE–PARATIO Fallen horseman. 17.5 mm. Little circulated. RIC VIII 336. *c.* AD 351–355.

58. AE nummus. 1.33 g. SF 139, context 1, topsoil (MD survey). Rev. ?FEL TEMP REPARATIO Falling horseman type. 16.5 mm. Much corroded. ?AD 350–361 for prototype.
59.* AE nummus. Irregular 0.86 g. SF 121, context 57, trackway 58. Rev. ?FEL TEP REPARATIO Falling horseman type. 12 mm. Circulation worn, abraded. Later 4th century.
60. AE nummus. Irregular. 0.71 g. SF 284, context 1558 (MD survey). Rev. ?FEL TEMP REPARATIO Falling horseman. 12 mm Much worn and abraded. Later 4th century.
61. AE nummus. 2.18 g. 40°. SF 91, context 1, topsoil. Rev. ?FEL TEMP REPARATIO Emperor on galley. Chipped and abraded. Later 4th century.
62. AE nummus. ?Irregular. 4.12 g. 0°. SF 269, context 1558 (MD survey). Decentius (Caesar). Rev. Two Victories holding inscribed wreath, no supporting column. 21 mm. Little circulated, abraded. AD 351–353.
63. AE nummus. 1.78 g. 0°. SF 256, context 1558 (MD survey). ?Magnentius\Decentius. Rev. ?Two Victories holding wreath. Abraded. ?AD 351–353.
64. AE nummus. 5.04 g. 180°. SF 303, context 1558 (MD survey). Revolt against Magnentius. Trier. Rev. SALVS AVG NOSTRI ChiRho. Little circulated. RIC VIII 332. AD 353.

AD 364–378

65. AE nummus. 2.19 g. 0°. SF 199, context 248, layer overlying pit group. Valentinian I. Lyon. Rev. GLORIA ROMANORVM Emperor dragging captive. 18.5 mm. Circulation worn. LRBC II 338. AD 367–375.
66.* AE nummus. 2.18 g. 20°. SF 225, context 1060, cut 1061. Valentinian. Siscia. Rev. GLORIA ROMANORVM Emperor dragging captive. Light circulation wear. LRBC II 1435. AD 367–375.
67. AE nummus. 2.09 g. 0°. SF 125, MD survey. Valens. Alexandria. Rev. GLORIA ROMANORVM Emperor dragging captive. Lightly circulated, abraded. cf. LRBC II 2859 AD 364–367
68. AE nummus. 2.36 g. 190°. SF 280, context 1558 (MD survey). ?Valentinian. Rev. GLORIA ROMANORVM Emperor dragging captive. Worn and abraded. AD 364–375.
69. AE nummus. 1.91 g. 180°. SF 283, context 1558 (MD survey). Valentinian I/II?. Rev. GLORIA ROMANORVM Emperor dragging captive. Little circulated, chipped. AD 364–378.
70. AE nummus. 1.89 g. 180°. SF 273, context 1558 (MD survey). Rev. GLORIA ROMANORVM Emperor dragging captive. Worn and abraded. AD 364–378.
71. AE nummus. 1.11 g. 0°. SF 276, context 1558 (MD survey). Valentinian. Rev. GLORIA ROMANORVM Emperor dragging captive. Worn and abraded. AD 364–375.
72.* AE nummus. ?Irregular. 2.38 g. 20°. SF 213, context 1074, scoop 1055/1075. Valentinian. Lyon. Rev. GLORIA ROMANORVM Emperor dragging captive. 17.5 mm. Circulation worn, abraded. AD 364–378.
73. AE nummus. ?Irregular. 1.77 g. 0°. SF 153, context 1, topsoil. Valens. Lyon. Rev. GLORIA ROMANORVM Emperor dragging captive. 17.5 mm. Light circulation wear, abraded. AD 364–378.
74.* AE nummus. ?Irregular 0.83 g. 0°. SF 31, context 64, structure 702. Lyon. Rev. GLORIA ROMANORVM Emperor dragging captive. 16 mm. Circulation worn, chipped. AD 365–378.
75. AE nummus. ?Irregular 1.79 g. 0°. SF 255, context 1558 (MD survey). Valentinian. Rev. GLORIA ROMANORVM Emperor dragging captive. 17 mm. Circulation worn, abraded. AD 364–375.
76. AE nummus. 1.72 g. 180°. SF 254, context 1558 (MD survey). Thessalonica. Rev. GLORIA ROMANORVM Emperor dragging captive. Abraded. AD 367–378.
77. AE nummus. Irregular 1.65 g. 0°. SF 253, context 1558 (MD survey). Valens. Rev. GLORIA ROMANORVM Emperor dragging captive. 17 mm. Chipped and abraded. AD 364–378.
78. AE nummus. Irregular 0.92 g. 180°. SF 300, context 1558 (MD survey). Rev. GLORIA ROMANORVM Emperor dragging captive. 15 mm. Chipped and abraded. AD 364–378.
79. AE nummus. 1.86 g. 180°. SF 88, context 1, topsoil. Gratian. Lyon. Rev. SECVRITAS REIPVBLICAE. Lightly circulated. LRBC II 349. AD 367–375.
80. AE nummus. 2.28 g. 0°. SF 146, context 1, topsoil. Gratian. ?Lyon. Rev. SECVRITAS REIPVBLICAE Light circulation wear, abraded. AD 367–378.
81.* AE nummus. 2.90 g. 170°. SF 223, context 1060, cut 1061. Found beside a bone. Valentinian. Rome. Rev. SECVRITAS REIPVBLICAE. Circulation worn, pitted. LRBC II 712. AD 367–375.
82. AE nummus. 1.54 g. 30°. SF 53, context 1, topsoil. Gratian. Nicomedia. Rev. SECVRITAS REIPVBLICAE. Circulation worn, abraded. LRBC II 2338. AD 367–375.
83. AE nummus. 1.85 g. 0°. SF 1, context 2, natural feature 3. Gratian. Rev. SECVRITAS REIPVBLICAE. 17.5 mm. Worn, abraded. AD 367–375.
84.* AE nummus. 2.16 g. 210°. SF 65, context 64, structure 702. Gratian. Rev. SECVRITAS REIPVBLICAE. 17.5 mm. Circulation worn, abraded. AD 364–378.
85.* AE nummus. 1.16 g. 0°. SF 3, context 87, medieval hollow way 88. Rev. SECVRITAS REIPVBLICAE Abraded, chipped. AD 364–378.
86. AE nummus. Irregular 2.08 g. 40°. SF 154, context 1, topsoil. Rev. SECVRITAS REIPVBLICAE. 16.5 mm. Circulation worn. AD 364–378.
87. AE nummus. ?Irregular 1.92 g. 0°. SF 263, context 1558 (MD survey). Valentinian. Arles. Rev. SECVRITAS REIPVBLICAE. 16 mm. Circulated, chipped. AD 364–375.
88. AE nummus. Irregular 1.86 g. 180°. SF 148, context 1, topsoil. Lyon. Rev. SECVRITAS REIPVBLICAE. 15.5 mm. Circulation worn. AD 364–378.
89. AE nummus. 2.13 g. 180°. SF 271, context 1558 (MD survey). Trier. Rev. GLORIA ROMANORVM Victory left with wreath and palm. Circulation worn, abraded. AD 365–378.
90. AE nummus. 1.65 g. 0°. SF 266, context 1558 (MD survey). Valens/Valentinian. Trier. GLORIA ROMANORVM Victory left with wreath and palm. Abraded. AD 365–378.
91. AE nummus. 1.26 g. 0°. SF 297, context 1558 (MD survey). Trier. Rev. GLORIA ROMANORVM Victory left with palm and wreath. Much worn and abraded. AD 365–378.
92. AE nummus. 1.60 g 170°. SF 264, context 1558 (MD survey). Gratian. Arles. Rev. GLORIA NOVI SAECVLI. Abraded. AD 367–375.

AD 378–408

93.* AE nummus. Irregular 1.11 g. 0°. SF 157, context 1066, pit 1067. Valentinian II. Mint mark Arles. Rev. VICTORIA AVGGG Victory left. 12 mm. Lightly circulated. LRBC II 546. AD 378–383.

94.* AE nummus. Irregular 0.99 g. 0°. SF 224, context 1060, cut 1061. Coin B on hammerhead. Valentinian II. Rome. Rev. SALVS REIPVBLICAE Victory dragging captive. 12.5 mm. Circulation worn. LRBC II 796/799. AD 388–392.

95. AE nummus. Irregular 0.57 g. SF 147, context 1, topsoil. Arcadius. Obv. Bust right, hand holding wreath above; Rev. Die worn smooth. 13.5 mm Circulation worn AD 383–408.

Uncertain Roman

96. AE nummus. Irregular. 1.19 g. 200°. SF 4, context 1, topsoil. Obv. Constantinian bust right. Rev. Crude standing figure. 9 mm Lightly circulated, poor dies. Early 4th century.

97. AE nummus. Irregular 0.96 g. SF 294, context 1558 (MD survey). House of Constantine. Rev. Obliterated. 12 mm. Abraded. Early–mid 4th century for prototype.

98. AE nummus. 1.58 g. SF 267, context 1558 (MD survey). ?House of Constantine. Rev. Obliterated. Abraded. First half of 4th century for prototype.

99. AE nummus. 1.69 g. SF 279, context 1558 (MD survey). Chipped, abraded. Second half 4th century.

100. AE nummus. 0.66 g. SF 293, context 1558 (MD survey). Rev. ?Victory left. Abraded and chipped 4th century.

101. AE nummus. 1.22 g. SF 285, context 1558 (MD survey). Obv. Bust right. Rev. Standing figure. 15 mm. Much worn and abraded. 4th century.

102. AE nummus. 1.48 g. 340°. SF 260, context 1558 (MD survey). Rev. Figure holding spear and shield. Abraded. 4th century.

103. AE nummus. Irregular 1.08 g. SF 295, context 1558 (MD survey). 10mm. Worn and abraded. 4th century.

104. AE nummus. 0.97 g. SF 281, context 1558 (MD survey). 14 mm. Much abraded. 4th century.

105. AE nummus. 0.86 g. SF 275, context 1558 (MD survey). Types obliterated. 12 mm. Abraded. 4th century.

Copper Alloy Objects (Figs 42–3), Emma Loader

A total of 45 copper alloy objects was recovered spanning a date range of Bronze Age to modern. All of the objects were recovered from Tolpuddle Ball (TP93). A significant proportion of the objects (34, representing 75%) was recovered from the topsoil or unstratified contexts during a metal detecting survey. Twenty-two of this group comprised objects of post-medieval or modern date (e.g. buttons, buckles, rings and fittings) or undatable items (miscellaneous strip and sheet fragments, off-cuts) which are not discussed further in this report.

The majority of the remaining 23 objects are common items of Late Iron Age or Romano-British dress or personal adornment; other objects include Iron Age/Roman mirror fragments and a possible harness fitting, as well as a Bronze Age spearhead and a post-Roman, possibly Saxon pin. The condition of the objects is fair to good. All of the objects have been X-radiographed, and an appropriate selection, including diagnostic objects from stratified and unstratified contexts, conserved. No metallurgical analysis was undertaken. All objects have been individually described in catalogue-style entries (in archive). Table 8 gives a breakdown of objects by phase.

Table 8: Tolpuddle Ball copper alloy objects by phase

	Phase						
Object	*3*	*4*	*5*	*6*	*7*	*U/S*	*Total*
Spearhead	–	–	–	–	–	1	1
Brooch	–	2	1	1	–	4	8
Armlet	–	–	–	–	–	1	1
Toe ring	–	1	–	–	–	–	1
Mirror	–	–	–	–	1	1	2
Perf. disc	–	–	1	–	–	–	1
Pin	–	–	–	–	–	1	1
Harness/ belt fitting	–	–	–	–	–	2	2
Strap loop	–	–	–	–	–	1	1
Misc.	1	1	–	–	–	3	5
Total	1	4	2	1	1	14	23

In addition to the items from Tolpuddle Ball, a group of 16 small copper alloy objects was found in association with a post-medieval burial near Roger's Hill Farm. These objects (two pins and 14 wire loops) are described and illustrated in the site report above (W2402.19, Fig. 41)

Socketed Spear Fragment (Fig. 42, 1)

The end of a bronze spear was recovered from the topsoil during metal detecting. It represents the tip from a basal loop spearhead and is datable to the Middle Bronze Age. A similar example has been found at Amesbury, Wiltshire, and others are known in the local area, for example at Middle Gussage, Dorset (Moore and Rowlands 1972, pl. XI, 60, pl. X11, 61–3).

Brooches (Fig. 42, 2–9)

Eight brooches were found, four from unstratified contexts and four from datable contexts (Phases 4, 3/4, 5 and 6). Six are bow brooches and two disc brooches: all are of Late Iron Age or Roman date.

The bow brooches consist of one Colchester type (Fig. 42, 5; e.g. Brailsford 1962, fig. 6:C3); four 'strip brooches' (Fig. 42, 2–4, 7), a type commonly found in Dorset (e.g. Brailsford 1962, fig. 7, C32 – C38; Corney 1991); and a 'knee' or T-shaped brooch (Fig. 42, 6; e.g. Butcher 1982, fig. 76, no. 5). All these types, except the 'knee' brooch, are datable to the first half of the 1st century AD. The knee brooch dates from AD 80 (at the earliest) to the 2nd century AD. One of the strip brooches (Fig. 42, 3) was

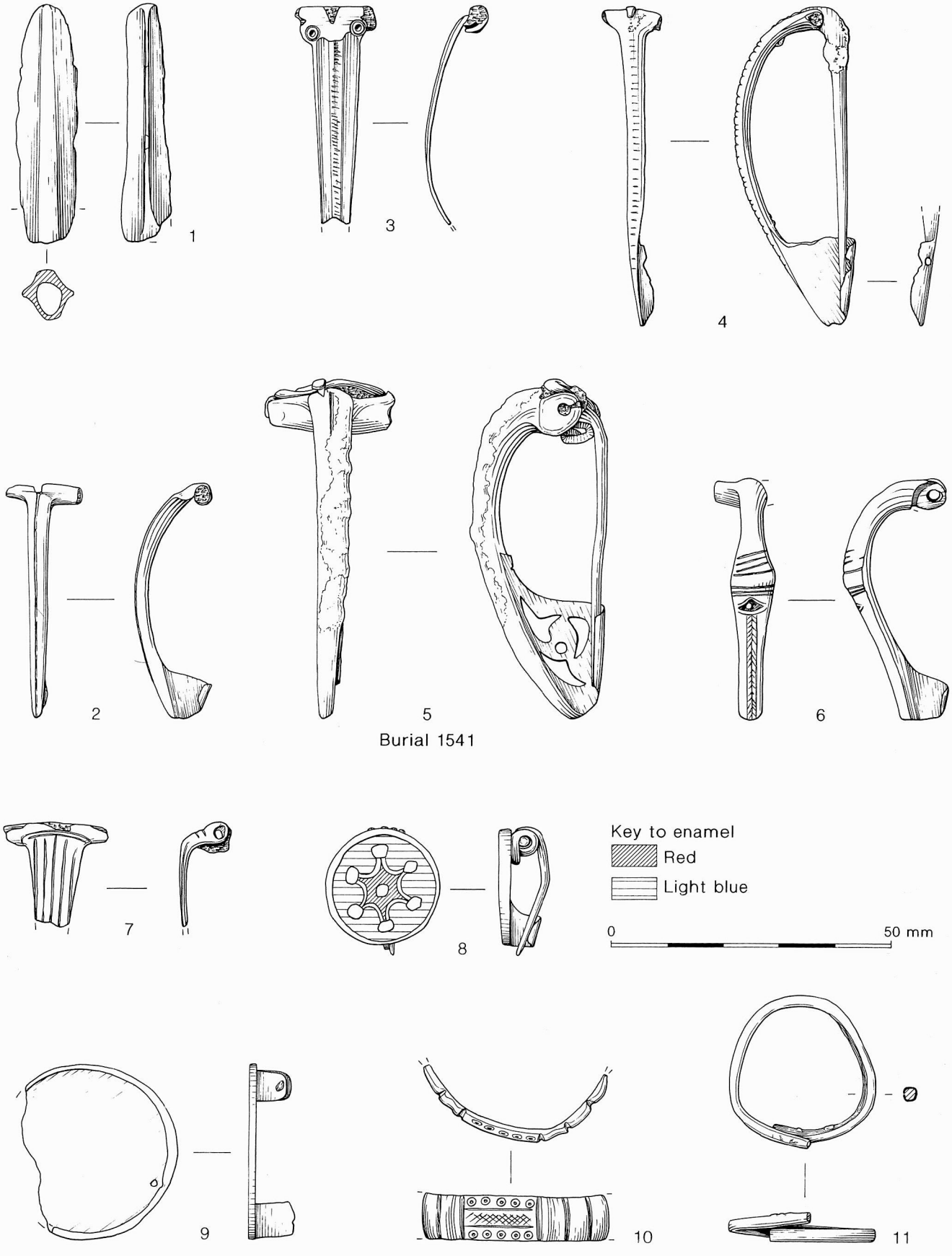


Figure 42 Tolpuddle Ball (TP93): copper alloy objects 1–11

recovered from the medieval hollow way (Phase 6) and one from a Phase 4 Late Iron Age pit 1093 (Fig. 42, 4). The Colchester type brooch (Fig. 42, 5) was recovered from Phase 4 burial 1541 apparently positioned at the right shoulder of the individual (see Plate 22). The other bow brooches were from unstratified contexts.

Both of the disc brooches are Romano-British types. One, recovered from metal detecting, is enamelled (Fig. 42, 8). The design may be compared to a brooch found at Corbridge, Northumberland (Snape 1993, fig 12: 97), dated to the 2nd or 3rd century AD. The second, larger, brooch (Fig. 42, 9) was recovered from Romano-British occupation deposit 248 (Phase 5). It is comparable to an example from Camerton (Jackson 1990, plate 12, 118) and shows evidence of white metal plating on the upper surface.

The range of brooches from the site is typical of the types found at similar settlement sites in Dorset and the south of England in the pre- and post-Conquest period, the best comparisons being with those from Hod Hill hillfort in Dorset (Brailsford 1962, figs 6–10).

Armlet (Fig. 42, 10)

A fragment of an armlet was recovered from the topsoil. It has a distinctive multiple motif design similar to that of a complete armlet from Colchester, Essex (Crummy 1983, fig 47:1730) which is of 3rd–4th century AD date.

Toe Ring (Fig. 42, 11)

An irregular wire ring was recovered from Phase 4 burial 1348. The ring, which is not quite round, was recovered from the left foot, around two toes of the skeleton (see Plate 21). This ring is similar, though larger in diameter, to Late Iron Age rings found at Maiden Castle, Dorset (Laws 1991, fig. 129, 14), and Meare Village East, Somerset (Coles 1987, fig. 3.11, 50).

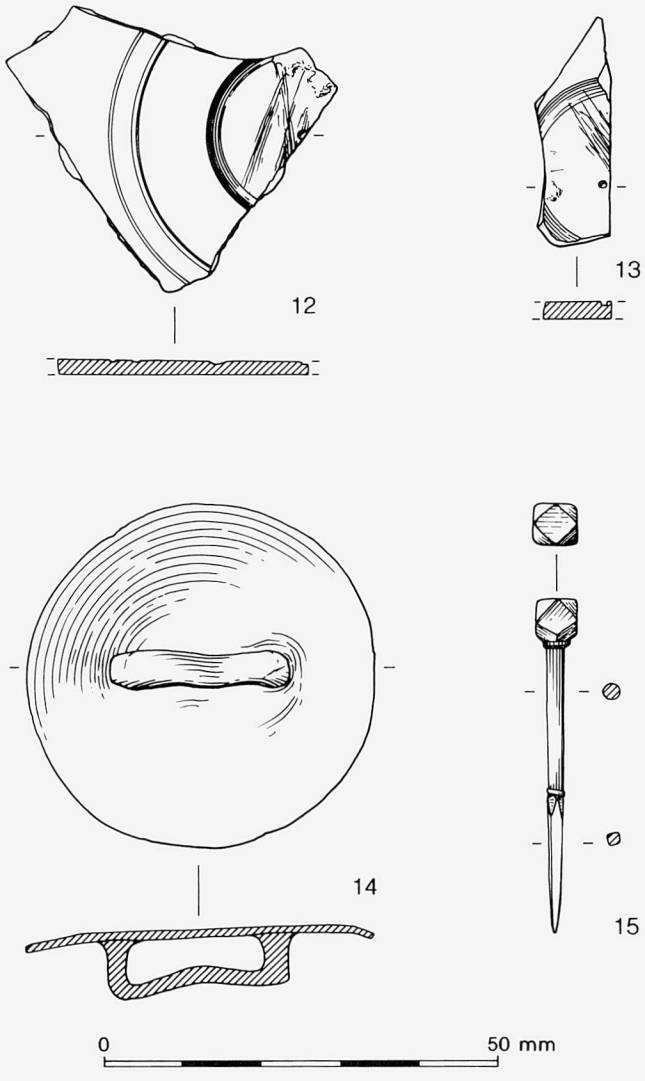


Figure 43 Tolpuddle Ball (TP93): copper alloy objects 12–15

Mirror Fragments (Fig. 43, 12–13)

Two small fragments of Roman round mirrors were recovered, one from the topsoil and one from a post-medieval trackway (Phase 7). The fragments have polished surfaces with a mottled green patina. Concentric circles are present on the underside of each fragment but there are no other diagnostic features. The fragments can be compared to Lloyd-Morgan's Group H mirrors (1981), flat or slightly convex with a simple pattern of concentric circles. The fragments are not conjoining but given their similarity they are likely to derive from the same mirror.

Harness or Belt Fittings (Fig. 43, 14)

A large, flat, circular disc with a strap loop on the reverse was recovered from Romano-British structure 702 (Phase 5). This disc has no evidence of decoration, and it is possible it was a harness attachment. It is similar in size to Romano-British harness attachments found at Chichester, West Sussex (Down 1978, fig. 10.35, 82), where these attachments are described as military pieces, although for the Tolpuddle Ball example this seems unlikely given the domestic character of the site.

Two further possible harness or belt fittings were found during the metal detector survey, both of uncertain date. The first (SF 314) has a domed head and a riveted shaft, and is comparable to an example, possibly post-Roman, from Colchester (Crummy 1983, fig. 55, 1813). The second (SF 335) consists of a length of cross-piece with arms slightly hooked at the end; no direct parallels have been found for this object. To this group may be added a plain rectangular strap loop (SF 95) recovered from the metal detector survey, probably also of medieval date.

Pin (Fig. 43, 15)

A four sided, facet-headed, hipped pin was recovered during metal detecting. The date of this pin is not certain, though it is possibly Saxon. A comparable pin

was found at the Saxon site of West Stow (West 1985, fig. 246: 5).

Miscellaneous Objects

Five other objects merit comment, either by virtue of their provenance or on the basis of intrinsic interest. A small, corroded strip, probably an offcut or waste fragment, was recovered from Late Iron Age pit 122 (SF 211, Phase 4), and a small, solid cylindrical object (length 7 mm, diameter 5 mm), possibly a modern intrusion, from the fill of Iron Age antenna ditch 375 (SF 218). Three further objects from the metal detector survey are of uncertain, although not obviously of post-medieval or modern date. These comprise two stud heads (SF 96, SF 309), and a possible vessel foot (SF 119).

Discussion

Overall, the range of objects represented at Tolpuddle Ball is generally typical of a small rural settlement site, with numerous parallels from other Late Iron Age and Romano-British sites in the region. The mirror fragments, however, are of interest, despite their occurrence as redeposited fragments. Although several mirrors are known from Dorset in Late Iron Age and early Romano-British contexts, they are by no means a common type.

The facet-headed pin is also of interest. If this item is of Saxon date, it represents the only find of this date from the project. Although an isolated and unstratified find it may be associated with the post-Roman cemetery.

Illustrated objects

Fig. 42

1. Socketed arrowhead. SF 313, context 1, topsoil.
2. Strip brooch. SF 99, unstratified.
3. Strip brooch. SF 105, context 778, medieval hollow way 779, Phase 6.
4. Strip brooch. SF 164, context 1209, pit 1093, Phase 4.
5. Colchester type brooch. SF 245, context 1540, Iron Age burial 1541, Phase 4.
6. T-shaped brooch. SF 312, context 1558, MD survey.
7. Strip brooch. SF 81, unstratified.
8. Brooch, enamelled. SF 210, context 248, Romano-British occupation layer, Phase 5.
9. Disc brooch. SF 334, context 1558, MD survey.
10. Armlet/bracelet fragment. SF 41, context 1, topsoil.
11. Wire toe ring. SF 170, context 6, Iron Age burial 1348, Phase 4.

Fig. 43

12. Mirror fragment. SF 138, context 1, topsoil.
13. Mirror fragment. SF 21, context 57, post-medieval track 58, Phase 7.
14. Looped disc. SF 14, context 54, Romano-British structure 702 , Phase 5.
15. Pin, facet-headed. SF 181, context 1, topsoil.

Lead Objects (Fig. 44), Emma Loader

A small amount of lead was recovered from Tolpuddle Ball (TP93), 38 fragments in total. Four pieces came from Romano-British contexts (Phase 5: hollow 178, occupation layer 248, structure 702), two from a post-medieval track (Phase 7), 11 from the topsoil and the remaining 21 were recovered during the metal detecting survey.

The majority of the fragments comprise unidentifiable lumps and sheet fragments, with no diagnostic features. These pieces are interpreted as waste and offcuts from lead working, and are undatable.Although on the basis of provenance some at least are of Romano-British date (hollow 178 and occupation layer 248), the evidence is insufficient to suggest lead-working on any scale during this period, and may merely relate to the *ad hoc* use of lead, for example, for pot repairs (see below). None of these miscellaneous fragments are discussed further here (details in archive). Six objects, however, are more diagnostic, and are described below. All six were either from the topsoil or were recovered during the metal detecting survey. All objects, including the undiagnostic fragments, have been individually described in catalogue-style entries (in archive).

Weights

One steelyard weight, with an iron suspension loop which appears to continue through the weight (Fig. 44) was recovered from the topsoil (SF 2, context 1). It is likely that this item is of Romano-British date. A similar weight was found at Colchester (Crummy 1983, fig. 105, 2510) although the iron suspension loop on the latter object was only embedded into the upper face of the weight. Other examples have been found at Bath (Cunliffe and Davenport 1985, fig. 78, 16) and Gorhambury, Hertfordshire (Wardle 1990, fig. 139, 920, 921).

Two small, round, flat weights were also recovered from the topsoil. It is possible that these weights were used as spindlewhorls, and while they are more commonly made from clay, examples of lead spindlewhorls were found, for example, in medieval contexts in Bryggen, Norway (Øye 1988). On morphological grounds these objects are not closely datable.

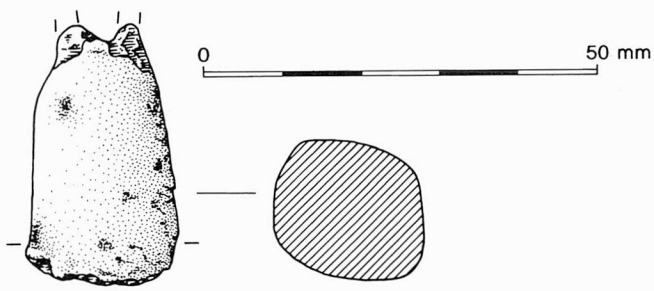


Figure 44 Tolpuddle Ball (TP93): lead weight

Table 9: Tolpuddle Ball iron objects by phase

Object	*Phase* 3	4	3/4	5	6	7	*Undated*	*Unstrat.*	*Total*
Knife	–	–	1	2	1	–	–	2	6
Tool	–	–	–	–	–	–	1	–	1
Needle	–	–	–	1	–	–	–	–	1
Ferrule/socket	–	–	–	2	–	–	–	2	4
Key	–	–	–	2	–	–	–	–	2
Spike loop	–	–	–	–	–	–	–	2	2
Nail	23	1	3	248	3	56	2	296	632
Hobnail	–	–	–	120	–	6	–	27	153
Cleat	–	–	–	9	–	1	–	5	15
Horseshoe	–	–	–	–	–	2	–	5	7
Disc	–	–	1	–	–	–	–	–	1
Misc./unid.	1	1	6	70	2	14	19	94	207
Total	24	2	11	454	6	79	22	433	1031

Tube

A rolled lead tube was recovered from the topsoil. The date is unknown, as is its function. The Liverpool University post-excavation assessment suggested that it might represent a rolled curse tablet, such as the examples from Uley, Gloucestershire (Tomlin 1993). However, its appearance after cleaning suggests that it is very unlikely to be a curse and more likely an offcut fragment

Pot mends

Two pot mends are likely to be of Romano-British date. These objects were unstratified but may have been retrieved from a Phase 5 occupation layer below topsoil during metal detecting. Pot mends of lead are relatively common, and were used to plug holes in vessels. The size of these mends indicate that they are likely to be from larger, thick-walled vessels such as amphorae, although neither was found *in situ*.

Iron Objects (Figs 45–6), Emma Loader

The vast majority of the ironwork came from Tolpuddle Ball (TP93, W2402.13 and watching brief). A total of 1031 objects and fragments of iron was recovered from a variety of contexts, both stratified and unstratified, across the site. The assemblage covers a wide date range from Iron Age to post-medieval; objects have been dated, where possible, on the basis of diagnostic features and/or provenance.

Objects recovered during the metal detecting survey consist largely of nails and the remaining objects are unidentifiable or comprise undiagnostic fragments. The majority of these unstratified objects appear to be of post-medieval or modern date. These objects are not considered further in this report, nor are other objects (with the exception of those demonstrably or possibly of medieval or earlier date) recovered from excavated contexts dated as post-medieval, identifiable post-medieval objects which are considered to be intrusive in earlier contexts, or nails recovered from topsoil and unstratified contexts. All the remaining objects apart from nails have been individually described in catalogue-style entries (in archive). All objects, with the exception of some items from the metal detecting survey, have been X-radiographed. Table 9 gives a breakdown of objects from Tolpuddle Ball by phase.

Only 13 objects were recovered from all other sites. West Mead produced five nails, one strip, one staple, one knife and two unidentified objects. Downtons Farm produced two nails. Finally, the Roman Road excavation at Tolpuddle Common produced a single nail. These objects all derive either from unstratified contexts, or contexts dated medieval or later (Phases 6 and 7) and, with the exception of the knife from West Mead, they are not discussed further in this report. Full details may be found in the archive. The knife from West Mead has been conserved.

Knives (Fig. 45, 1–2; Fig. 46)

Seven knife blades were recovered, of which six are certainly or probably of Romano-British date, and the seventh, from West Mead, medieval. Two complete or almost complete blades and four blade fragments were found at Tolpuddle Ball, of which one was recovered from a medieval hollow way (Phase 6, 779), two from a Romano-British structure (Phase 5, 702), one from an Iron Age/Early Romano-British feature (Phase 3/4) and two from the topsoil. One almost complete blade (Fig. 45, 1) was recovered from the topsoil, though it is possible that it derived originally from a Phase 5 occupation layer. This blade is comparable to Manning type 18b (1985, fig. 29). A second blade is comparable to

Manning type 16 (1985, fig. 28) and is from Phase 3/4 pit 1071 (not illustrated). The remaining blade fragments have no diagnostic features and cannot be assigned to specific types.

A small bladed object was recovered from Phase 5 structure 702 , though it is uncertain as to whether this object is actually a knife or not (Fig. 45, 2). It has a very short, steeply curved blade, with a handle, which the X-ray shows to be twisted, ending in an looped 'eye'. There is still a small piece of iron through this eye, which indicates that this object was originally attached to another object, such as a chain. A knife with a similar twisted handle was found at Chelmsford (Manning and Scott 1988, fig. 67, 15) and a similar but smaller object was recovered at Bucklersbury House, London (Wilmot 1991, fig. 91: 500), which is described as a miniature knife or an *ex voto* (votive) object. Alternatively, this object may be a surgical instrument, such as a scalpel, since it is comparable to objects found in the recently excavated 'doctor's grave' at Colchester (Crummy 1997). The form of these objects, although slightly longer, is similar to the object from Tolpuddle Ball.

One small knife was recovered from the topsoil at West Mead. The knife is 57 mm long with a whittle tang, and has a white metal shoulder plate (Fig. 46). Although recovered from an essentially unstratified context, associated artefacts would indicate a medieval date (early 13th century) for the knife, although no close parallels have been found.

Other Tools

One tool was identified as a possible punch (Manning 1985, A30, pl. 6); this is likely to be of Romano-British date although deriving from an undated context (1351).

Needle (Fig. 45, 3)

A large needle, recovered from Romano-British occupation layer 248, was identified from the X-ray, as there was no other visible indication as to its identity. It is unknown whether the curve on the needle is intentional or a result of damage. The needle is interpreted as a packing needle and is comparable to an example from Hod Hill, Dorset (Manning 1985, D33, pl. 15). Packing needles are larger than ordinary sewing needles, and are identifiable by their stout stem and overall length. They are assumed to have been used for sewing bundles, though they may also have been used in leather-working. The size of the hole left by a needle of this size would be substantial, and it would therefore have been used on coarse fabrics.

Ferrules and Sockets

Two possible ferrules were recovered, one spiral ferrule (Manning 1985, S101, pl. 67) which was recovered from Romano-British occupation layer 24 (Phase 5), and a ferrule with a possible rivet *in situ*. The latter object, recovered from the topsoil, is also likely to be Romano-British; it is comparable to an example from Colchester (Crummy 1983, fig. 132, 4107). Ferrules such as these were used to strengthen objects at a weak point, for example at a join between two components.

In addition two sockets were identified, one complete and one fragment, which are possibly conical ferrules, both probably Romano-British. The complete socket was recovered from an unstratified layer. An example presented by Manning is similar although longer (1985, S60, pl. 66). The section of the Tolpuddle Ball object is elongated and it is unknown whether it has been flattened intentionally or damaged. The smaller socket was recovered from an unstratified context (1567), and it is possible that this also represents a fragment of a conical ferrule. These objects were used on staffs to protect the ends, such as the end of a spear shaft, and these objects are frequently found on military sites although they are also known from civilian sites.

Keys (Fig. 45, 4–5)

Two keys were found, both of Romano-British type, one an L-shaped lift key from possible occupation layer 248, and the second a latchlifter from structure 702 (both Phase 5). The latchlifter (Fig. 45, 4) is an example of the simplest form of key, which is commonly found on Roman sites. The design is standardised, with variations occurring in the loop or design of the stem. Comparable examples are known from Hod Hill, Dorset (Manning 1985, O11, pl. 38). The L-shaped key (Fig. 45, 5) is again a common find on Romano-British sites and this example is comparable to Manning's Type 3 (1985, fig. 25). Originally this key had three teeth on the bit but only two remain.

Double Spiked Loops

Two double spiked loops were identified; comparable Romano-British examples are presented by Manning (1985, pl. 61: R40 to 46) and Crummy (1983, fig. 26: 4065). The function of these is to provide a loop or ring which was attached either to wood or masonry. Examples of these are common and occur on a large number of sites. Both loops were recovered from unstratified contexts.

Nails, Hobnails and Cleats

A total of 632 nails (excluding hobnails, see below) was recovered from the site. Of these, 291 were recovered from post-medieval, unstratified and undated layers, and 62 from metal detecting, and are not considered further here.

Coffin nails

Nails were recovered from two Romano-British graves at Tolpuddle Ball (TP93, Phase 5), 42 in total. Seven were recovered associated with burial 802 and 35 associated with burial 908. It should be noted that the total number of nails recovered from each of these burials does not appear to tally with the numbers recorded on site (20 and 17 respectively on the plans). Nails from these two graves were recognised during excavation as deriving from coffins. For burial 802 the positions of the nails were plotted in three dimensions; the nails being spaced singly around the putative coffin outline, but with some clustering at the corners of the head end. All the nails were heavily corroded nail

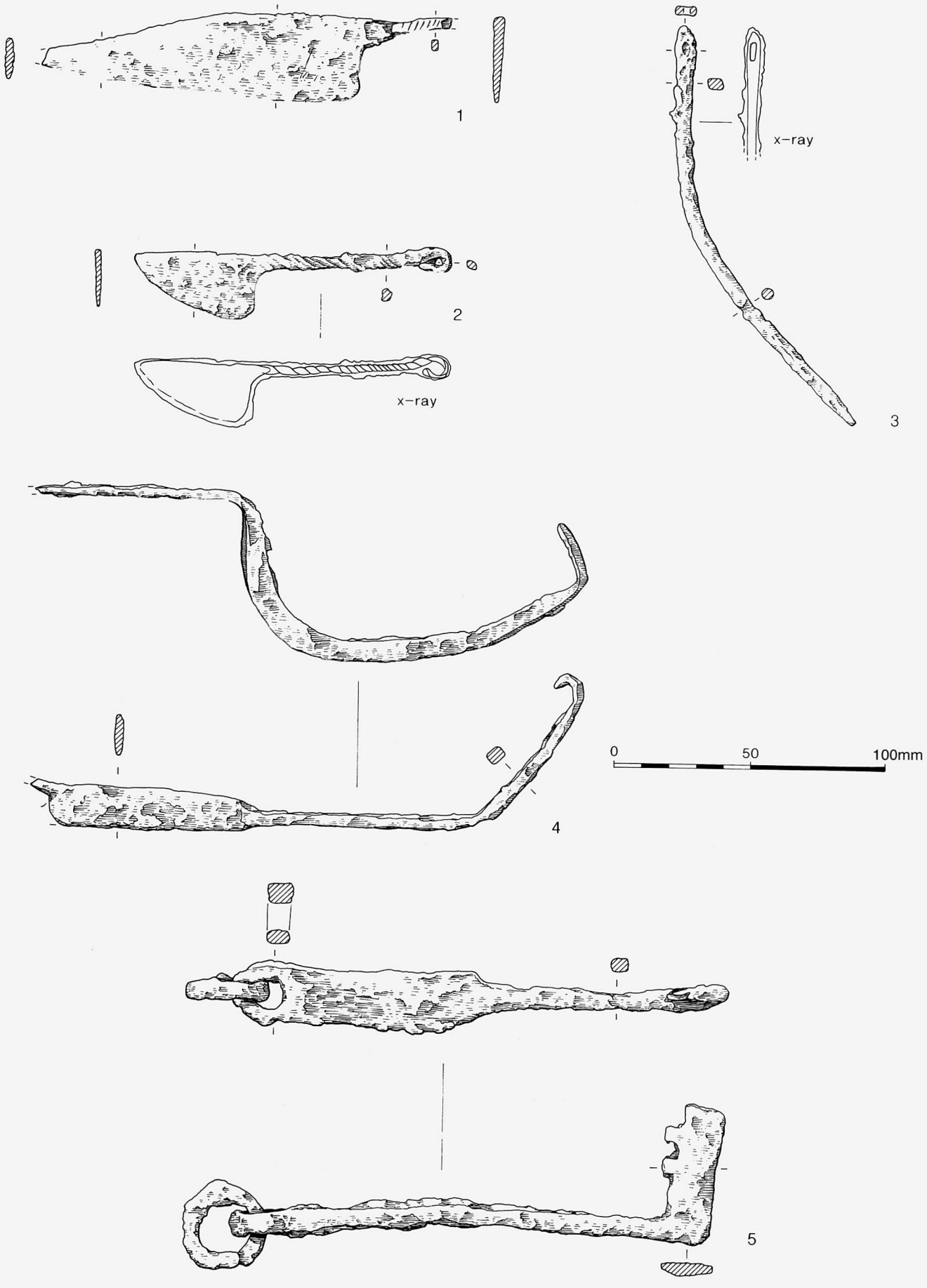


Figure 45 Tolpuddle Ball (TP93): Iron objects 1–5

shanks, square in section and with no other diagnostic features. One nail had a large tear-shaped flat head. This nail may have been decorative or to join more substantial timbers than the smaller nails.

Other nails
The types of nails present on the site cover the principal types identified by Manning (1985, fig 32), though they have not here been quantified by type. Nails are a particularly common find on Romano-British sites, and the nail assemblage from Tolpuddle Ball is comparable with that from Maiden Castle Road, Dorchester (Mills 1997, 122) and many other sites in the area, both in terms of number recovered and the range of types present. The function of the nails at Tolpuddle Ball was almost certainly structural, and nails used for masonry and timbers are present in the assemblage. Most of the nails derived from Phase 5 occupation deposits: 69 from layer 64, 44 from layer 248 and 49 from hollow 178.

Hobnails
A large number of iron hobnails (153) was recovered from the site, and the majority of these (120) came from Romano-British contexts (see Table 9). Four of the hobnails were *in situ* associated with a later 4th century AD burial of an adult female (burial 5067, Obj. 571) Of the hobnails from layers and features dated as Romano-British, 82 came from structure 702, 14 from occupation deposit 248, one from grain drier 1100, two from pits 27 and 4, 16 from hollow 178 and one from feature 983. Hobnails can have a variety of uses, either on the soles of boots or sandals, or as decorative studs on wooden objects. Manning also suggests that those examples with hollow heads were used on upholstery while the hobnails with small domed or pyramidal heads were from sandals and boots (1985, 135).

Cleats
A total of 15 cleats was recovered of varying sizes and lengths. Cleats are commonly thought to have been used on the heels of boots, though the larger cleats were often used to fasten wood. Nine cleats were recovered from Romano-British features, five from occupation deposit 64, one from shallow feature 1060, one from hollow 178, one from occupation deposit 248 and one from an unknown feature. Other cleats came from post-medieval or unstratified contexts.

Disc

A flat, almost circular disc was recovered from a Late Iron Age/Early Romano-British pit (1071, Phase 3/4). The disc is heavily corroded and its function is uncertain although it is comparable to a Middle Iron Age disc, also of unknown function, found at Danebury, Hampshire (Sellwood 1984a, fig. 7.23, 2.174).

Medieval Horseshoes

Seven fragments of horseshoes were recovered, all from topsoil or the post-medieval trackway (58) and all are dated as medieval. All are incomplete, the most

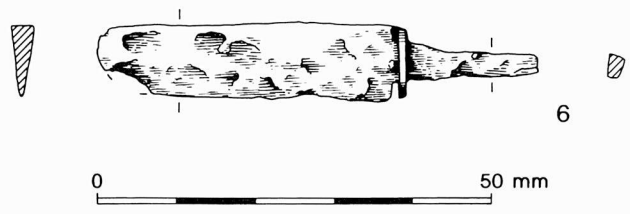


Figure 46 West Mead (W2402.16): iron knife 6

complete example consisting of the quarter and heel. Five of the shoes have rectangular holes, with no evidence of countersunk slots for the nail heads; one has rounded holes and the seventh possibly has round holes, though this fragment is quite corroded. No calkins are present on the heels of any of the examples. One shoe has a nail still through one hole, indicating accidental loss. Six of the shoes can be dated to the 13th century or early 14th century (Clark 1995, type 3). The seventh shoe has three rounded holes, set close to the edge of the shoe, with no other diagnostic features. Clark notes that this shoe type is predominant in London from the mid 11th to mid 12th century, and may continue in use thereafter (*ibid.* type 2A)

Miscellaneous and Unidentified Objects

A total of 209 unknown or unidentified objects was recovered from the site. These objects were either too fragmentary or too corroded to identify either a function or object, and have been grouped together. These include 39 sheet fragments, 14 strip fragments, four bolts, four rods, and four pieces of wire. Details of these and other unidentified objects may be found in the archive.

Conclusion

Overall, the assemblage of iron objects from Tolpuddle Ball is characteristic of a small rural settlement of the Iron Age to Romano-British period. The range of object types is relatively small, particularly those from well stratified contexts; a large proportion of the assemblage consists of nails. Other objects are of a purely functional nature and as such cannot be dated closely within the period of occupation of the site. It may also be noted that there is no direct evidence for ironworking on the site in the form of slag or other metalworking residues.

Illustrated objects
Fig. 45 – TP93
1. Needle. SF 438, context 248, Romano-British occupation deposit, Phase 5.
2. Small knife/scalpel. SF 56, context 64, Romano-British occupation deposit, Phase 5.
3. Knife. SF 35, context 1, topsoil.
4. Latchlifter. SF 59, context 64, Romano-British occupation deposit, Phase 5.
5. L-shaped lift key. SF 205, context 248, Romano-British occupation deposit, Phase 5.

Fig. 46 – W2402.16: West Mead
Small knife, Obj. No. 516, context 3001, topsoil.

Table 10: Prehistoric and Romano-British pottery by site (No./wt in g)

Site	*EBA/ MBA*	*LBA*	*EIA*	*MIA/ LIA*	*LIA/ ERB*	*R-B*	*Total*
Lower Eweleaze	–	29/79	–	–	7/20	–	36/99
Home Farm	–	67/440	–	–	1/1	–	68/441
Burleston Down	6/45	52/188	–	3/8	1/6	2/19	64/266
Hill Barn, Tolpuddle	–	1/5	–	–	10/78	–	11/83
N. of Tolpuddle Ball	–	141/1192	–	–	–	1/9	142/1201
Tolpuddle Ball Cemetery (1998)	57/583	18/64	–	41/115	10/45	14/19	140/826
Tolpuddle Ball (1991/3)	53/439	–	16/296	2560/24,563	6466/53,345	12,794/106,946	21,889/185,589
Tolpuddle Ball (1996/7)	58/515	122/644	–	68/517	21/127	–	269/1803
S. of Tolpuddle Ball	4/8	2/4	–	–	–	–	6/12
West Mead	1/21	4/15	–	4/30	1/7	3/15	13/88
Watching brief	1/6	4/21	–	4/27	12/61	8/151	29/266
Total	180/1617	440/2732	16/296	2680/25,260	6529/53,690	12,822/107,159	22,667/190,754

Prehistoric and Romano-British Pottery (Figs 47–51), M. Laidlaw

A total of 22,667 sherds of prehistoric and Romano-British date, weighing almost 191 kg, was recovered from eight sites and the watching brief. A very large proportion of this total (22,158 sherds; 98% by number/weight) came from the excavations at Tolpuddle Ball (TP93 and W2402.13). Overall pottery totals by site are presented in Table 10. Two reconstructed Iron Age vessels (TP93) are not included in the totals.

The bulk of the assemblage is dated to the Middle to Late Iron Age and Romano-British periods, with much smaller quantities of earlier prehistoric (Bronze Age and Early Iron Age) material. The condition of the pottery varies from site to site. The general condition of the material from Tolpuddle Ball is relatively good, with sherds of moderate size and a low degree of abrasion (mean sherd size overall 12.6 g); there are a number of reconstructable profiles, particularly amongst the Late Iron Age and Romano-British material. Assemblages from other sites are generally less well preserved, with smaller, more abraded sherds (mean sherd size ranges from 2 g at South of Tolpuddle Ball to 8.5 g at North of Tolpuddle Ball); this is due partly to the predominance on these sites of pottery of Late Bronze Age or earlier date, in more friable fabrics, and partly to the lack of demonstrably *in situ* deposits such as are apparent in some of the pit groups at Tolpuddle Ball.

Methods

The pottery was analysed using the standard Wessex Archaeology pottery recording system, which follows nationally recommended guidelines (Morris 1992; PCRG 1997). On the basis of the dominant inclusion type the stratified assemblage was divided into six broad fabric groups: Group FL (flint-tempered and flint-gritted fabrics); Group GR (grog-tempered fabrics); Group LI (limestone-tempered); Group QU (sandy fabrics); Group SH (shelly fabrics) and Group E ('established' wares of known type or source). Using a binocular microscope (x20) these were then subdivided into separate fabric types dependent on the frequency and size of the inclusions.

The pottery was recorded by fabric type within each context, noting details of surface treatments, decorations, manufacturing technique and evidence for use, e.g. residues. A type series was created for all diagnostic rim sherds, although some rim sherds were too small to be related to specific forms. Quantification of vessel forms is by rim count.

The unstratified material from Tolpuddle Ball (topsoil contexts), and the insecurely stratified fills of Romano-British structure 702 and possible occupation layer 248 (Phase 5), were treated in less detail; this material was scanned and broad fabric groups (e.g. flint-tempered, sandy) and diagnostic forms were recorded. All data were entered on to a database and full records exist in archive. The pottery discussed in detail below is stratified unless otherwise stated.

For the purposes of this report, the pottery has been divided into six chronological periods:

- Early/Middle Bronze Age (2400–1100 BC);
- Late Bronze Age (10th–8th centuries BC);
- Early Iron Age (6th–4th centuries BC);
- Middle to Late Iron Age (4th–1st centuries BC);
- Late Iron Age/Early Romano-British (1st century BC/1st century AD);
- Romano-British (late 1st–4th century AD).

The definition of the sub-divisions covering the Iron Age and early Romano-British period has deliberately been expressed to imply potential ceramic overlap. The assemblage from these periods is dominated by sandy fabrics which display little change in terms of texture, manufacture and surface finish from the Middle Iron

Table 11: Early/Middle Bronze Age pottery fabric totals by site (No./wt in g)

Site	*GR1*	*GR2*	*GR3*	*Grog (unspec.)*	*FL16*	*LI3*	*Total*
Burleston Down	3/9	–	3/36	–	–	–	6/45
Tolpuddle Ball Cemetery (1998)	6/21	29/416	8/46	–	10/88	4/12	57/583
Tolpuddle Ball (1991/3)	33/206	10/117	–	7/91	3/25	–	53/439
Tolpuddle Ball (1996/7)	48/312	7/174	3/29	–	–	–	58/515
S. of Tolpuddle Ball	4/8	–	–	–	–	–	4/8
West Mead	1/21	–	–	–	–	–	1/21
Watching brief	1/6	–	–	–	–	–	1/6
Total	96/583	46/707	14/111	7/91	13/113	4/12	180/1617

Age (fabric QU2), through the emergence of the Durotrigian industry (fabric QU102) and its development into the Black Burnished ware industry (E100) of the early Romano-British period. It is unlikely that the assemblages of these periods would show clear-cut horizons of ceramic change. Where diagnostic forms are absent, it is often difficult to assign fabrics to specific periods. Even when rim forms were present, the inherently conservative nature of later Iron Age and early Romano-British pottery manufacture in this area means that there is a large degree of overlap of fabrics and forms.

Terms describing the frequency of inclusions in the fabric descriptions below are defined as follows, after Terry and Chilingar (1955): rare (1–3%); sparse (3–10%); moderate (10–20%); common (20–30%) and abundant (30–50%).

Early / Middle Bronze Age (Fig. 47, 1–8)

This group is represented by a small assemblage of pottery (180 sherds) in five fabric types: three grog-tempered, one flint-tempered and one calcareous fabric. Sherds in these fabrics came from four sites, mostly Tolpuddle Ball, including the cemetery site (90% by weight) but also Burleston Down, South of Tolpuddle Ball and West Mead. One sherd was also recovered from the watching brief (Table 11).

Grog-tempered fabrics

GR1 Soft, soapy fabric, fine textured matrix containing moderate grog <5 mm; sparse quartz <0.5 mm. Generally oxidised.

GR2 Hard, slightly soapy fabric, moderately fine textured matrix containing common grog <5 mm mostly 3 mm); sparse angular flint <5 mm; sparse quartz <1 mm; rare iron oxide. Generally unoxidised.

GR3 Hard, coarse textured fabric containing sparse grog <2 mm; sparse quartz <2 mm. Generally oxidised.

Flint-tempered fabric

FL16 Moderately hard, moderately coarse textured matrix containing moderate well-sorted flint <2 mm, sparse grog <2 mm, sparse quartz <0.5 mm. Oxidised external surface and core, unoxidised internal surface and margin.

Calcareous fabric

LI3 Soft, moderately fine textured matrix containing common, fairly well sorted, subangular calcareous inclusions (probably calcite) <1 mm; rare subangular flint < 1mm; rare subrounded quartz <0.25 mm; rare iron oxides. Oxidised surfaces with unoxidised core.

These fabrics have been attributed to the Early/Middle Bronze Age mainly on the basis of fabric type and decoration. Diagnostic forms are scarce and most of the sherds are small, plain body sherds which were recovered as redeposited material in later prehistoric and Roman features. Those diagnostic sherds which are present include Beaker and Middle Bronze Age urn forms, all from Tolpuddle Ball; other sites produced no diagnostic material.

Three, possibly four, Beaker vessels were identified. Two vessels were recovered together and consist of one body sherd with parallel rows of finger-nail impressions in fabric GR1 (Fig. 47, 1) and one simple, upright rim in fabric GR2 with combed decoration (Fig. 47, 2). Another body sherd in the soft grog-tempered fabric GR1 has comb impressed decoration (Fig. 47, 3). One large, externally expanded rim in fabric GR1, with fingertip impressions, could also be from a Beaker (Fig. 47, 4).

Other diagnostic forms can be dated as Middle Bronze Age, and include one thick-walled, slightly inturned rim in fabric GR2 and probably from a bucket-shaped urn (Fig. 47, 5), one body sherd in fabric GR2, deriving from a globular urn with a small lug (Fig. 47, 8), one body sherd with incised decoration in fabric GR1 (Fig. 47, 6), and one body sherd with an applied lug. Three thicker walled body sherds in the flint-tempered fabric FL16 are also attributed to this period on the basis of fabric type and decoration (Fig. 47, 7). Four small sherds of calcareous fabric (LI3) are from the same vessel. They form a small, horizontally perforated lug, with traces of horizontal tooled grooves above. Such features are characteristic of Middle Bronze Age urns from the region, particularly on globular urns.

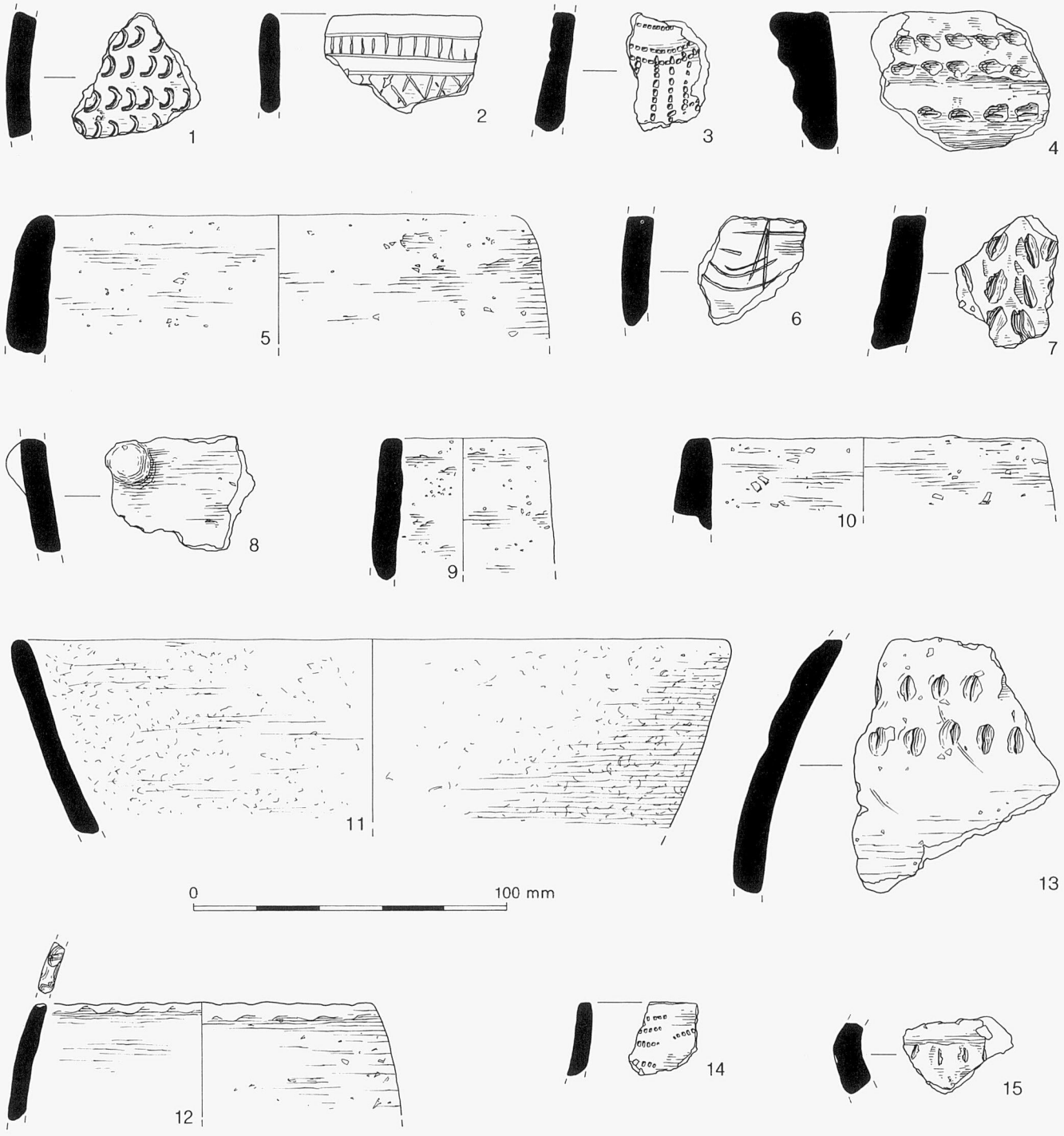


Figure 47 Tolpuddle Ball (TP93 and W2404.13): Bronze Age pottery 1–15

Distribution

Most of the sherds from Tolpuddle Ball were recovered from the Phase 1 enclosure ditch 2360 and from postholes associated with roundhouses inside the enclosure. Two of the Beakers came from pit 945 (Fig. 47, 1 and 2) and the third from pit 184 (Fig. 47, 4); the possible Beaker derived from a cleaning layer. Other sherds of Middle Bronze Age urns came from the Phase 1 possible ditch terminal 2480 (Fig. 47, 6) and a Romano-British ditch 243 (Fig. 47, 8). All three sherds of fabric FL16 were unstratified. On the cemetery site Ditch 5302 produced 48 sherds, mainly thick-walled vessels in grog and flint-tempered fabrics. These can be dated to the Middle Bronze Age on vessel form, although the only diagnostic sherds comprise three small, plain, inturned rims (fabric GR3). The same ditch produced three small sherds of Late Bronze Age pottery. The four calcareous fabric sherds (LI3) from a Middle Bronze Age globular urn occurred as redeposited material in the fill of grave 5257 at the Tolpuddle Ball cemetery (1998). It may be noted that this grave lies adjacent to Middle Bronze Age ditch 5302.

Early/Middle Bronze Age sherds from the three other sites (Burleston Down, South of Tolpuddle Ball,

West Mead) occurred exclusively as redeposited sherds in later contexts.

Discussion

Grog-tempered fabrics are characteristic of early prehistoric pottery in Dorset from the Early Bronze Age through to the Middle Bronze Age, unlike areas of Wessex further north where the early Bronze Age grog-tempered traditions give way to the flint-tempered Deverel-Rimbury style in the Middle Bronze Age. Grog-tempered fabrics are recorded from Early/Middle Bronze Age contexts elsewhere in south Dorset, for example at Dorchester (Cleal 1997, 88), Rowden (Davies *et al.* 1991) and Poundbury (Smith 1987).

The Middle Bronze Age urns are well paralleled within Dorset, for example at Simons Ground and Dorchester (Watling and White 1982; Cleal 1997); the Tolpuddle examples are of bucket shape or possibly (Fig. 47, 5) barrel shape, while incised decoration (Fig. 47, 6) and the example with the horizontally perforated lug (LI3) are more characteristic of the finer globular urns.

Late Bronze Age (Fig. 47, 9–15; Fig. 48)

This is a fairly small group of material (440 sherds), comprising sherds in 14 fabric types: nine flint-tempered, two limestone-tempered and three sandy. Due to similarities in the flint-tempered fabrics across the assemblage, it has been difficult in some instances to differentiate between Late Bronze Age and Middle Iron Age fabrics. Pottery of Late Bronze Age date is well represented at North of Tolpuddle Ball (only one other sherd of later date was recovered), and smaller but still significant quantities were also recovered from Lower Eweleaze, Home Farm, Burleston Down and Tolpuddle Ball. Stray sherds came from three other sites (South of Tolpuddle Ball, Hill Barn and West Mead) and from the watching brief (see Table 10, Table 12).

Flint-tempered fabrics

FL6 Soft, fine textured matrix containing sparse, moderately sorted angular flint <5 mm; sparse quartz <0.25 mm; rare iron oxides. Variable firing.

FL7 Soft, moderately fine-textured matrix containing sparse, fairly well sorted angular flint <2 mm; moderate quartz <0.25 mm. Generally oxidised.

FL8 Hard, moderately fine textured matrix containing moderate, moderately-sorted angular flint <6 mm; sparse quartz <0.25 mm. Generally unoxidised.

FL9 Hard, moderately fine textured matrix containing moderate, poorly-sorted angular flint <2 mm; sparse quartz <0.25 mm; rare organic strands. Variable firing.

FL10 Hard, moderately fine textured matrix containing moderate, poorly-sorted angular flint <10 mm; rare quartz <1 mm. Rare organic voids. Generally oxidised surfaces core variable.

FL11 Hard, coarse textured matrix containing moderate, moderately-sorted sub-rounded quartz 1 mm; sparse angular flint <1.5 mm; sparse iron oxides. Generally unoxidised.

FL13 Hard, moderately coarse textured matrix, containing sparse, moderately sorted angular flint <4 mm; moderate subrounded quartz <1 mm. Sometimes oxidised external surface, generally unoxidised core.

FL14 Hard, moderately coarse textured matrix, containing sparse, well sorted, angular flint <10 mm; moderate sub-rounded quartz <0.25 mm; rare iron ore. Generally unoxidised surfaces and core.

FL15 Hard, coarse textured matrix, containing common, moderately-sorted angular flint <5 mm (mostly 2 mm); moderate, sub-rounded quartz <0.5 mm; sparse iron oxide. Oxidised external surface, unoxidised core and internal surface.

Limestone-tempered fabrics

LI1 Soft, moderately fine textured matrix containing common, moderately-sorted sub-rounded limestone <6 mm (mostly 4 mm); sparse quartz <2 mm. Generally oxidised surfaces, unoxidised core

LI2 Soft, moderately fine textured matrix containing abundant, well-sorted sub-rounded limestone<3 mm; rare quartz <0.25 mm. Generally oxidised external surface, unoxidised core and internal surface.

Sandy fabrics

QU5 Soft, fine textured matrix, containing common, well-sorted, sub-rounded quartz <0.25 mm. Generally oxidised surfaces, unoxidised core.

QU6 Moderately soft, moderately fine textured matrix, containing sparse, moderately-sorted, sub-rounded quartz <2 mm. Generally oxidised external surface, unoxidised core and internal surface.

QU7 Hard, moderately coarse textured matrix, containing sparse, poorly-sorted, sub-rounded quartz <4 mm; rare angular flint <4 mm. Generally oxidised surfaces, unoxidised core.

All these fabrics are likely to have been produced locally since both clays and tempering materials would have been available within the local area, including the limestone outcrops of the Portland and Purbeck series. A preference for calcareous fabrics has been noted for the Late Bronze Age pottery from Dorchester, perhaps because of its ability to counter thermal shock (Cleal 1992, 37). For the Tolpuddle/Puddletown project the limestone-tempered fabrics are the least commonly occurring types, and the Late Bronze Age assemblage is dominated by flint-tempered fabrics, with sandy fabrics the second most common group.

The flint-tempered fabrics FL7, FL8, FL10, FL11, FL13, FL14 and FL15, both limestone-tempered fabrics and sandy fabric QU7 may be described as 'coarsewares' while the sandy fabrics QU5 and QU6 and flint-tempered fabrics FL6 and FL9 could be described as 'finewares', although due to the lack of vessel forms the distinctions between coarse and fine cannot easily be sustained.

There is a dearth of diagnostic material but a small number of rim and decorated body sherds are present at three sites. At Tolpuddle Ball a small cup (Fig. 47, 9), three flat-topped rims – all flint-tempered (e.g. Fig. 47,

Table 12: Late Bronze Age pottery fabric totals by site (No./wt in g)

Site	*FL6*	*FL7*	*FL8*	*FL9*	*FL10*	*FL11*	*FL13*	*FL14*	*FL15*	*LI1*	*LI2*	*QU5*	*QU6*	*QU7*	*Total*
Lower Eweleaze	10/29	2/14	2/4	–	–	–	2/3	–	–	–	–	7/21	6/8	–	29/79
Home Farm	7/11	–	–	2/4	48/398	–	–	4/13	–	–	–	6/14	–	–	67/440
Burleston Down	13/28	2/3	–	4/53	–	1/3	4/10	1/3	7/30	–	–	7/19	10/22	3/17	52/188
Hill Barn, Tolpuddle	1/5	–	–	–	–	–	–	–	–	–	–	–	–	–	1/5
N. of Tolpuddle Ball	14/26	1/4	52/631	11/286	2/22	24/168	4/17	–	–	–	15/38	6/10	9/56	3/14	141/1272
Tolpuddle Ball Cemetery 1998	–	2/5	4/16	1/2	–	1/5	2/9	1/5	–	–	–	1/1	2/8	4/13	18/64
Tolpuddle Ball 1996/7	24/67	–	11/51	42/206	3/32	2/12	–	–	–	3/16	16/86	2/16	9/19	10/139	122/644
S. of Tolpuddle Ball	2/4	–	–	–	–	–	–	–	–	–	–	–	–	–	2/4
West Mead	3/14	–	–	–	–	–	–	–	–	–	1/1	–	–	–	4/15
Watching brief	–	–	2/7	2/14	–	–	–	–	–	–	–	–	–	–	4/21
Total	74/184	7/26	71/709	62/565	53/452	28/188	12/39	6/21	7/30	3/16	32/125	29/81	36/113	20/183	440/2732

Figure 48 North of Tolpuddle Ball (W2402.12): Late Bronze Age pottery 16, 17

10), one plain-rimmed bowl (Fig. 47, 11) and one flared bowl with a plain rim were recorded. On this site decoration is limited to two impressed rims, one from a convex jar (Fig. 47, 12), a fingertip-impressed body sherd (Fig. 47, 13), one upright jar rim with tooled impressions around the neck (Fig. 47, 14), and one shoulder sherd from a bipartite jar with fingernail impressions (Fig. 47, 15).

North of Tolpuddle Ball produced two upright, flat-topped rim sherds from shouldered jars (e.g. Fig. 48, 16), as well as an externally-thickened jar rim (Fig. 48, 17). One small rim, probably from an upright rim jar, was recorded from South of Tolpuddle Ball. Three small rims consisting of one plain rimmed jar and two outcurving rims were recovered from the Tolpuddle Ball cemetery site.

Distribution

Most of the Late Bronze Age groups included at least some stratified material, although this largely consists of small groups from isolated features (one pit at Lower Eweleaze, two pits at Home Farm, one linear feature and a pit at Burleston Down, two pits at North of Tolpuddle Ball, one pit at South of Tolpuddle Ball).

At Tolpuddle Ball the Late Bronze Age pottery was concentrated at the eastern end of the site, within Phase 1 features excavated in 1996/7. Two of the jars came from pits 2721 (Fig. 47, 10) and 2722 respectively, and a third from pit 2807. One of the bowls was found in pit 2866 (Fig. 47, 11) and a second was a residual find in Iron Age ditch 2334 (Phase 3/4). The cup (Fig. 47, 9) came from a cleaning layer. Bronze Age ditch 5302 within the area of the cemetery excavated in 1998 produced three small sherds in Late Bronze Age sandy fabrics (QU6, QU7) in association with a larger group of Middle Bronze Age pottery.

Discussion

This is a small and somewhat disparate group of pottery containing little diagnostic material. There are sufficient features, however, to place the group within the post-Deverel-Rimbury ceramic tradition of the Late Bronze Age (Barrett 1980). Using Barrett's vessel classification, the emphasis of the assemblage appears to be on Class I vessels (medium to large coarseware jars), with some Class III (coarseware bowls) and Class V (cups). The range of vessel forms, combined with the lack of decoration, serve to place this small assemblage within Barrett's plainware phase of the post-Deverel-Rimbury at the beginning of the 1st millennium BC; a date range of 11th–8th century can be suggested.

Early Iron Age (Fig. 49, 18, 19)

Identifiable Early Iron Age pottery is rare (minimum of 16 sherds) and was identified only at Tolpuddle Ball (see Table 10). A small number of sherds was recorded in three fabrics, two shell-tempered and one sandy. Identification has been made mainly on the basis of fabric type and decoration and, to a lesser extent, the few vessel forms present. It should be pointed out, however, that due to the apparent continuity of use of fabric QU1 into the Middle to Late Iron Age (see below), assignation of pottery to this period has not been without problems, particularly since the bulk of the sherds were recovered redeposited in later features. Fabric totals for Tolpuddle Ball are given in Table 13, but note that fabric QU1 is not included in this chronological group (or in Table 10), since its accurate quantification for this period is not possible.

Shelly fabrics

SH1 Hard, moderately fine textured matrix, soapy feel, containing sparse, moderately-sorted shell <3 mm; rare iron oxides <1 mm. Variable firing mainly unoxidised.

SH2 Moderately soft, fine textured matrix containing abundant, well-sorted shell <4 mm. Unoxidised.

Sandy fabric

QU1 Hard, moderately fine textured matrix, containing common, well-sorted, sub-rounded quartz <0.5 mm; rare organic strands. Generally oxidised external surface and unoxidised core.

As for the Late Bronze Age pottery, there is no reason to suppose anything other than local manufacture for all three fabrics, shell being obtainable from outcrops amongst the Portland and Purbeck beds. This is in line with results from elsewhere in Dorset. Petrological analysis of several Early Iron Age sites has suggested that pottery production was for local consumption, based on exploitation of raw material sources within a 10 km radius (Morris 1994, 27).

The small quantity of sherds recorded in fabrics SH1 and SH2 (six and ten sherds respectively) includes four rim sherds. One large rim sherd has a convex, shouldered profile with a short upright, thickened rim (Fig. 49, 18). A second rim is similar but smaller. The other rims include one small rounded bowl rim and one plain rim, possibly from a lid.

One unusual decorated vessel warrants more detailed comment. Two conjoining body sherds (31 g) in the fine sandy fabric QU1 are incised with horizontal and diagonal lines which may originally have been infilled with a white inlay (Fig. 49, 19). This is an Early Iron Age technique commonly identified amongst the 'All Cannings Cross style' pottery of north Wiltshire (Cunnington 1923, pl. 31, 1; Morris forthcoming). Closer to Tolpuddle Ball a haematitie-coated bowl with incised decoration filled with 'white paste' was recorded at Rope Lake Hole on the South Purbeck coast in an Early Iron Age context (Davies 1987, 151, fig. 79 no. 15). Another possible example is known from an Iron Age site at Worth Matravers, also on the South Purbeck coast (P. Braddock pers. comm.).

Distribution

All pottery of this period came from Tolpuddle Ball and most (if not all) is likely to be residual. The convex jar with expanded rim derived from Phase 4 pit 1433 (Fig. 49, 18) and a similar smaller upright rim was recovered from the fill of a large Phase 4 bell pit (1093). Other rims came from pits 223 (Phase 4) and 735. The decorated body sherds (e.g. Fig. 49, 19) were recovered from a slot through the Phase 3/4 ditch 2334.

Discussion

As for the Late Bronze Age assemblage, this is a group which due to its small size and lack of diagnostic material is difficult to characterise. Sandy wares are ubiquitous throughout the Iron Age in south Dorset. Shelly fabrics have been recorded at Rope Lake Hole (Davies 1987) and Eldon's Seat (Cunliffe and Phillipson 1968), where they are dated predominantly as pre-3rd century BC. Calcareous fabrics, including shelly wares, dominated the Early Iron Age assemblage at Sutton Poyntz near Weymouth, where they were dated on ceramic grounds to the 8th to 5th centuries BC (Mepham in prep.), but are not present within the Middle to Late Iron Age assemblage from Wytch Farm, Purbeck, which consists entirely of sandy wares (Lancley and Morris 1991).

The vessel forms present are not particularly distinctive, but the convex jar with expanded rim (Fig. 49, 18) finds parallels within the Middle Iron Age assemblage at Wytch Farm (Lancley and Morris 1991, type 133). Also, the absence of the distinctive carinated bowl and jar forms of the Early Iron Age (e.g. Davies 1987, fig. 79) would tend to place this small assemblage slightly later, perhaps corresponding to period 2 at Rope Lake Hole, *c.* 5th–3rd centuries BC (*ibid.*, 155), although the presence of the unusual decorated sherd with Early Iron Age type decoration should be noted.

Middle to Late Iron Age (Fig. 49, 20–28)

Pottery of this period derived almost exclusively from Tolpuddle Ball, almost all of it from the 1993 excavations. Just 11 sherds were recovered from other locations (see Table 10). Ten fabric types are attributed broadly to the Middle to Late Iron Age period: six flint-tempered/flint-gritted and four sandy. The term 'flint-gritted' is used here to define fabrics with clay matrices containing sparse, angular, flint inclusions which are naturally occurring, while 'flint-tempered' refers to fabrics where the flint has been deliberately added by the potter to the clay matrix. The six flint fabrics each encompass a range of fabric variation and are all flint-tempered with the possible exception of FL3, which in some instances appears more flint-gritted. The distinction between flint-tempered and flint-gritted fabrics is not always clear-cut. Fabric totals for Tolpuddle Ball are given in Table 13, and for other sites in Table 14.

Table 13: Tolpuddle Ball Iron Age and Romano-British pottery fabric totals

Fabric	*No. sherds*	*Wt (g)*	*% period by wt*	*% total by wt*
EARLY IRON AGE				
Shelly fabrics				
SH1	6	63	21.3	
SH2	10	233	78.7	
Total EIA	*16*	*296*		*0.2*
MIDDLE/LATE IRON AGE				
Flint fabrics				
FL1	24	238	0.9	
FL2	46	517	2.1	
FL3	64	425	1.7	
FL4	32	296	1.2	
FL5	20	252	1.0	
FL12	7	108	0.4	
Unspec.	25	1149	4.6	
Sub-total	218	2985	11.8	
Sandy fabrics				
QU1	286	4535	18.0	
QU2	2013	15,115	60.0	
QU3	30	243	1.0	
QU4	53	984	3.9	
Unspec.	69	1333	5.3	
Sub-total	2451	22,210	88.2	
Total MIA/LIA	*2669*	*25,195*		*13.5*
LATE IRON AGE/EARLY ROMANO-BRITISH				
QU100	2524	28,473	53.2	
QU101	592	8622	16.1	
QU102	3381	16,422	30.7	
Total LIA/ERB	*6497*	*53,517*		*28.8*
ROMANO-BRITISH				
Coarsewares				
E100	11,606	90,563	84.6	
QU103	567	9322	8.7	
QU104	93	1158	1.1	
QU105	83	1254	1.2	
QU106	51	735	0.7	
Sub-total	12,400	103,032	96.3	
Finewares				
New Forest	54	420	0.4	
Oxford	22	109	0.1	
Colour coat unspec.	246	2205	2.1	
Mortaria	44	483	0.5	
Amphora	2	358	0.3	
Samian	37	355	0.3	
Other import	3	3	–	
Sub-total	408	3933	3.7	
Total R-B	*12,808*	*106,965*		*57.5*
Overall total	*21,990*	*185,973*		

NB. Two complete (reconstructed) pots not included

Table 14: Middle/Late Iron Age pottery fabrics totals by site (No./wt in g)

Site	*FL3*	*FL4*	*QU2*	*QU4*	*Total*
Burleston Down	–	–	3/8	–	3/8
West Mead	1/2	3/28	–	–	4/30
Watching brief	3/21	–	–	1/6	4/27
Total	4/23	3/28	3/8	1/6	11/65

Excludes Tolpuddle Ball

Flint-tempered and flint-gritted fabrics

FL1 Hard, moderately coarse textured matrix, containing moderate, well-sorted, angular flint <3 mm; sparse sub-rounded quartz <0.5 mm. Generally oxidised surfaces and core.

FL2 Hard, moderately coarse textured matrix, containing sparse, well sorted, angular flint <10 mm; moderate sub-rounded quartz <0.25 mm; rare iron ore; rare organic strands. Generally unoxidised surfaces and core.

FL3 Hard, moderately coarse textured matrix, containing sparse, moderately sorted angular flint <4 mm; moderate sub-rounded quartz <1 mm. Sometimes oxidised external surface, generally unoxidised core.

FL4 Hard, coarse textured matrix, containing common, moderately-sorted angular flint <5 mm (mostly 2 mm); moderate, sub-rounded quartz <0.5 mm; sparse iron oxide. Oxidised external surface, unoxidised core and internal surface.

FL5 Hard, moderately coarse textured matrix, containing sparse, moderately-sorted, angular flint <3 mm; sparse sub-rounded quartz <1.5 mm. Generally unoxidised.

FL12 Hard, moderately coarse textured matrix, containing moderate, well-sorted, angular, calcined flint <7 mm; moderate sub-rounded quartz <0.5 mm; sparse iron oxides. Generally oxidised.

Sandy fabrics

QU1 Hard, moderately fine textured matrix, containing common, well-sorted, sub-rounded quartz <0.5 mm; rare organic strands. Generally oxidised external surface and unoxidised core.

QU2 Hard, moderately coarse textured matrix, containing sparse/moderate, poorly-sorted, sub-rounded quartz <2.5 mm (mostly 1 mm). Generally unoxidised.

QU3 Hard, fine textured matrix, containing moderate, well-sorted, sub-rounded quartz <0.5 mm; rare possible glauconite. Generally oxidised external surface, unoxidsied core and internal surface. Sometimes red-finished.

QU4 Hard, moderately coarse textured matrix, containing moderate, sub-rounded quartz <1 mm (mostly 0.5 mm); sparse iron ore <1.5 mm; rare flint <3 mm. Generally oxidised external surface, unoxidised core and variable internal surface.

As for the Early/Middle Iron Age, all fabrics could derive from localised production centres. The presence of flint-tempered fabrics, however, which make up a small proportion of the assemblage, is unusual in Dorset in this period, and could represent a non-local source or sources. Fabric types range from a moderately sandy matrix containing sparse small flint inclusions to coarse sandy fabrics with large flint inclusions, and in some fabrics the flint is better sorted than in others: fabrics FL1, FL2 and FL12 represent a greater expenditure of labour in the preparation of the clay fabric. Such well sorted fabrics, often associated with the 'saucepan pot' form, are commonly found across Hampshire and Berkshire in the Middle to Late Iron Age (Morris 1994, 28).

The four sandy fabrics dominate the assemblage for this period and range from fine fabrics, occasionally 'red-finished' (mainly QU3) to moderately coarse-textured (QU2). The distinction between the sandy fabrics was not always discrete; in many cases the fabrics covered a wide range of variation and the fabrics QU1 and QU2 are visually very similar. Moreover, the lack of associated diagnostic vessel forms exacerbated difficulties in distinguishing the Middle Iron Age fabrics from later fabrics such as QU102 (see below). The problems of attributing sandy fabric types to ceramic phase in a region where sandy fabrics show little change through the Iron Age and into the Romano-British period has already been noted.

Forms

Diagnostic material was restricted to Tolpuddle Ball. Complete profiles are lacking and as a result distinguishing between vessel forms with similar rims has in many cases proved difficult; for example, bead rims occur on plain sided bowls, carinated bowls and jars. The classification has therefore been left indeterminate where appropriate. There are a large number of indeterminate vessel forms of which a high proportion were attributed to jar/bowl form 5. Broad characteristics are used here to differentiate between jar and bowl forms: jars are defined as 'closed' forms, i.e. with some degree of neck constriction and a rim diameter less than the maximum girth, and with a rim diameter equal to or less than the height (where calculable), while bowls are 'open' forms, i.e. little or no neck constriction, rim diameter greater than maximum girth, rim diameter equal to or greater than height. Correlations with Wytch Farm (WF) and Hengistbury Head (HH) forms are given below (Lancley and Morris 1991; Cunliffe and Brown 1987), and the occurrence of fabric types by vessel forms is listed in Table 15.

Table 15: Tolpuddle Ball Middle/Late Iron Age vessel forms by fabric

Form	*FL1*	*FL2*	*QU1*	*QU2*	*QU3*	*Total*
1	–	1	–	–	–	1
2	1	1	4	4	–	10
3	–	–	5	9	1	15
4	–	–	–	11	–	11
5	–	–	3	28	–	31
6	–	–	3	4	–	7
Rim, form unspec	1	–	5	13	–	19
Total	2	2	20	69	1	94

Form 1: Necked bowl with sharp shoulder angle; HH type BB (Fig. 49, 20)

Form 2: Shouldered jar with upright, thickened rim; WF type 125, HH type JC2.0 (Fig. 49, 21, 23, 25)

Form 3: Globular or ovoid jar with upright rim; HH type JC2.0 (Fig. 49, 22)

Form 4: Necked jar with simple upright or beaded rim; WF type 133, HH type JD4.1 (Fig. 49, 24)

Form 5: Jar/bowl with convex to rounded profile, with rounded, flat or bead rim; HH type JC2.0 (Fig. 49, 26, 27)

Form 6: Convex bowl with flat-topped rim, possibly used as a lid. WF type 116 (Fig. 49, 28)

The vessel forms for this period occur predominantly in the sandy fabrics QU1 and QU2; only four flint-tempered rims were recorded, and one in fabric QU3. The whole range of vessel forms shows a lack of standardisation, in contrast to succeeding periods (see below).

Some distinctions may be discerned between the vessel forms in fabrics QU1 and QU2, which may be chronologically significant, although overall the two fabric types were used for the same range of vessel forms. Vessel forms in fabric QU1 tend to be thicker walled and oxidised; the forms most commonly occurring are shouldered or globular/ovoid jars, both with upright rims (forms 2 and 3). In contrast, vessels in fabric QU2 are generally unoxidised, with the indeterminate jar/bowl form 5 predominating. The implications of these distinctions are discussed further below.

Decoration and surface treatments

Decoration is extremely scarce in this period. Two rim sherds, both in fabric QU1, are decorated, one with applied boss(es) (Fig. 49, 21) and one with incised or tooled horizontal lines and chevron(s) (Fig. 49, 24). Two body sherds in flint-tempered fabrics FL2 and FL3 bear shallow tooled decoration consisting of diagonal hatching and dots. This shallow tooled decoration is similar to that associated with the St. Catherine's Hill-Worthy Down tradition, found on 'saucepan pots' and rounded jars (Cunliffe 1991, fig. A:15). A small number of sherds in fabric QU2 are incised with lattice-like decoration.

The predominant surface treatment is burnishing, particularly on the external surfaces of form 3 jars in fabric QU2, and vessels in this fabric tend to be burnished internally around the upper area of the rim. Vessels in fabric QU1 are less frequently burnished, and smoothed surfaces are more common. Both fabrics QU1 and QU2 have infrequent wipe-marks on external and internal surfaces, usually restricted to the lower body and base.

A very small quantity of sherds with red-finished ('haematite-coated') external surfaces are present, in the

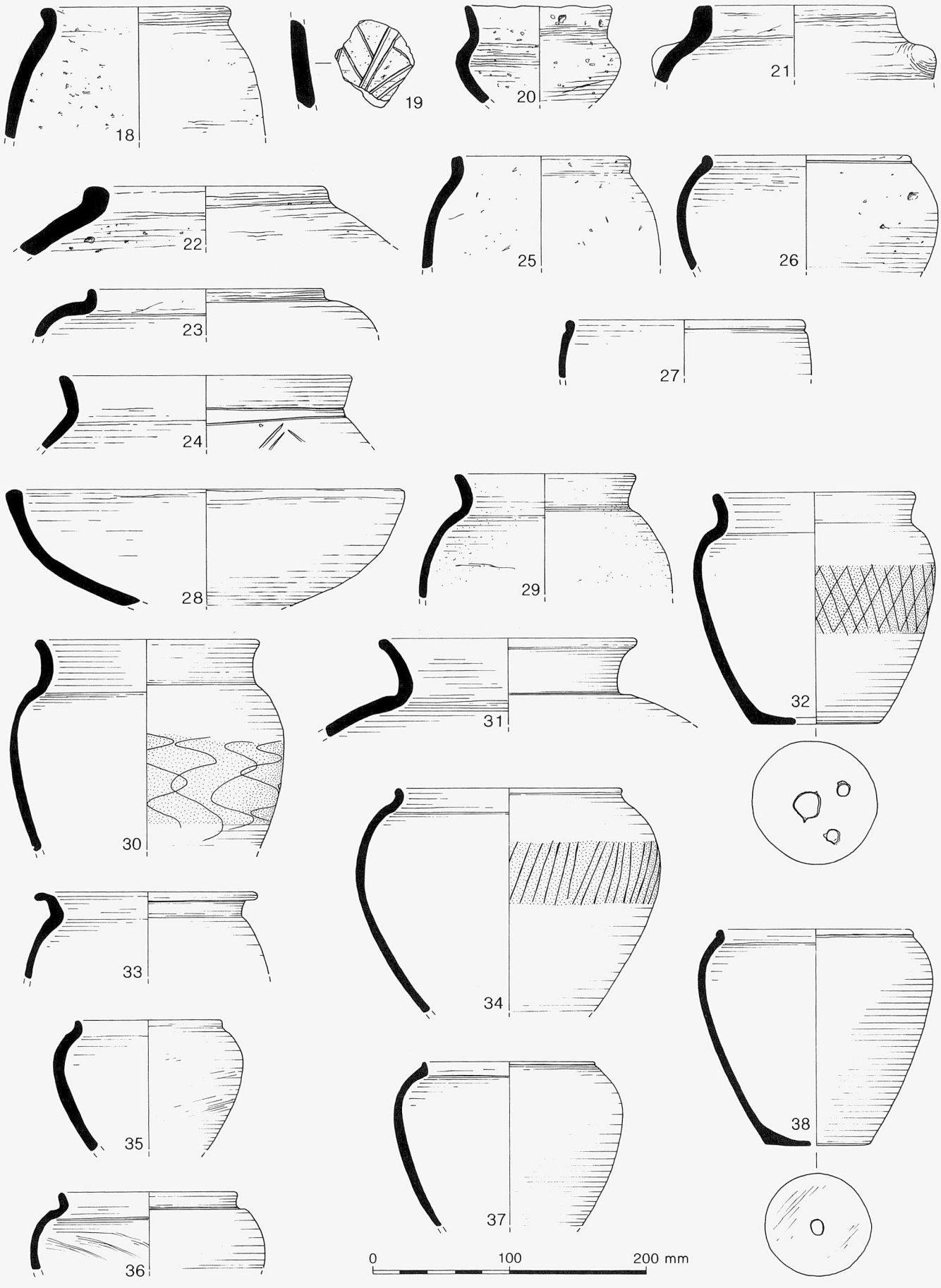


Figure 49 Tolpuddle Ball (TP93 and W2402.13): Iron Age pottery 18–38

sandy fabrics QU1, QU2 and QU3 (six sherds altogether). This is a technique which is generally associated with Early Iron Age ceramics in southern England (e.g. Middleton 1987). However, the technique continues into the Middle Iron Age in Dorset; indeed, it is recorded at Rope Lake Hole on classic Late Iron Age Durotrigian forms (Davies 1987, 155).

Residues
Surface deposits such as soot and possibly burnt food deposits were recorded on a number of vessels particularly in fabric QU2. The deposits generally occur on the internal upper body below the rim, or internally around the lower body and base. The surfaces of the vessels, particularly bead-rimmed jars, are also rather pitted or flaking, possibly caused by post-firing heating or burning, probably a result of domestic use.

Distribution
At Tolpuddle Ball, the Middle/Late Iron Age pottery was recovered mainly from the lower fills of the Phase 3 enclosure ditch (mostly from the north-east corner and terminals), the associated antenna ditch and a number of pits within the enclosure, concentrated towards the north-east corner. The quantity of pottery recovered from the enclosure ditch itself was not large, although distinctions between pottery found from upper and lower fills are visible. The lower ditch fills contained a larger proportion of flint-tempered fabrics with the sandy fabrics QU1 and QU2, and vessel forms present include jars with plain upright rims (form 2). Small quantities of flint-tempered and sandy fabrics were also recovered from the antenna ditch.

Smaller concentrations of pottery have been identified in a number of Phase 3 pits in the north-east corner of the enclosure including pits 19, 31, 33, 45, 84 and 1264, and pit 94 just to the north of the enclosure ditch. Other Phase 3 pits with moderate quantities of pottery include pit 1083 in the south-west corner (mainly fabric QU2), with smaller quantities from pit 116 (Fig. 49, 25) and pit 1095. Pit 841 produced nine sherds, mainly in flint-tempered fabrics, but associated with a Neolithic flint assemblage in mint condition (see Harding, below). The direct association of these two classes of material is difficult to account for and the pit has been assigned to Phase 1.

At the Tolpuddle Ball cemetery excavated in 1998 small quantities of Middle/Late Iron Age pottery were recovered from various ditches, pits and postholes and residual sherds came from several of the grave fills. The pottery suggests that a low level of background activity occurred in this area during the Middle/Late Iron period.

Discussion
The Middle to Late Iron Age assemblage is dominated by the sandy fabric QU2 with a smaller proportion of fabric QU1. Other sandy and flint-tempered fabrics are present in much smaller quantities. The fact that the flint-tempered fabrics are present at all may be chronologically significant, given their almost complete absence in period 3 (Late Iron Age) at Rope Lake Hole (Davies 1987, fig. 83), and from the Middle/Late Iron Age assemblage from Wytch Farm, Purbeck (Lancley and Morris 1991). Flint-tempered fabrics are, however, present at Hengistbury, occurring in Middle Iron Age saucepan pot forms, and with a putative source on the Wessex Chalkland (Brown 1987, 264, fabric C1), and the presence of similar fabrics at other Dorset sites has been noted, the implication being that there was regular contact and exchange between central Wessex and Dorset at this period (Cunliffe and Brown 1987, 306–7).

Overall, however, the assemblage shows an increasing emphasis on sandy fabrics at the expense of other types, perhaps reflecting increasing centralisation and specialisation, that is, the beginnings of a workshop industry mode of production (see Morris 1994, 28). Other assemblages which show a similar trend of sandy fabrics replacing the flint and shell-tempered fabrics of the Early to Middle Iron Age include Gussage All Saints (Wainwright 1979), Rope Lake Hole (Davies 1987) and Eldon's Seat (Cunliffe and Phillipson 1968). The potential chronological significance of the distinctions between fabrics QU1 and QU2 has been noted: it may mark a chronological progression from QU1 (first appearing in the Early/Middle Iron Age here) to QU2, as the thicker-walled vessels in QU1 are gradually replaced by thinner walled and better finished vessels in QU2, while the increasing emphasis on unoxidised firing conditions anticipates the Durotrigian industry.

In contrast to the fabrics, the vessel forms exhibit an increased variety of both jar and bowl forms. These forms are paralleled within the Middle Iron Age assemblage from Hengistbury Head (Cunliffe and Brown 1987), and in the early part of the period 3 assemblage at Rope Lake Hole (Davies 1987, fig. 81). On the basis of fabric types, vessel forms and the lack of decoration a date range of 3rd century to 1st century BC is likely for this phase.

Late Iron Age / Early Romano-British (Fig. 49, 29–38; Fig. 50, 39–57)

This period covers the more diagnostic Late Iron Age Durotrigian vessels and the form types which continue in use through to the early post-Conquest period (1st century AD). Within this period the Durotrigian industry was growing in importance, production being centred around the Wareham/Poole Harbour area (e.g. see Peacock 1973). The use of similar clay sources over time has caused some problems in distinguishing between the sandy fabrics, particularly between fabrics QU102 and E100.

The majority of the assemblage of this period was recovered from Tolpuddle Ball, almost all from the 1993 excavations. Small groups were recovered from Hill Barn and Lower Eweleaze (ten and seven sherds respectively) and stray sherds from three other sites and the watching brief (see Table 10). Fabric totals for Tolpuddle Ball are given in Table 13, and for other sites in Table 14.

Fabrics
Despite the increase in quantities of pottery in this period, the range of fabrics represented is limited to just three types, all sandy.

QU100 Hard, coarse textured matrix containing abundant, well-sorted, sub-rounded quartz <1 mm. Generally oxidised surfaces, unoxidised core.

QU101 Very hard, coarse textured matrix containing moderate, well-sorted, sub-rounded quartz <1 mm. Variable external surface, oxidised internal surface, unoxidised core.

QU102 Hard, coarse textured matrix containing common, moderately-sorted, sub-rounded quartz <0.5 mm. Unoxidised.

The dominance of sandy fabrics of Wareham/Poole Harbour origin has been observed at other Late Iron Age sites in south Dorset, such as Rope Lake Hole (Davies 1987, fig. 83) and Wytch Farm, Purbeck (Lancley and Morris 1991), and it is apparent that their importance (as reflected in their distribution) increased dramatically through the Late Iron Age, penetrating as far north as south Somerset (e.g. Ellison 1982). This development reflects the growth of centralised production with a wide distribution network, replacing the earlier more localised production, and is characteristic of developments elsewhere in southern England during the Late Iron Age (e.g. Morris 1994).

Forms

This period sees the appearance of the 'classic' Durotrigian forms; well-made and well finished vessels whose elegance contrasts with the rather more crudely made vessels of earlier periods. Increased standardisation is also apparent within the range of vessel forms. Eleven form types are defined here, and correlations with Wytch Farm (WF), Hengistbury Head (HH) and Dorchester (GY) types are given (Lancley and Morris 1991; Cunliffe and Brown 1987; Seager Smith and Davies 1993). The occurrence of vessel form by fabric type is presented in Table 16. All diagnostic forms came from Tolpuddle Ball.

Form 7: Ovoid or high-shouldered, necked jar with everted rim; WF types 108/109, HH type JD4.4 (Fig. 49, 29–33)

Form 8: High-shouldered jar with bead rim; HH type JC3.1, GY type 7 (Fig. 49, 34–8; Fig. 50, 39)

Form 9: Rounded or shouldered jar with upright or moulded rim; HH type JC3.1 (Fig. 50, 40–2)

Form 10: Shouldered jar with short, everted rim, often decorated; WF type 106, HH type JC3.1 (Fig. 50, 43)

Form 11: Globular jar with flat or triangular rim; WF type 101, HH type JC4.2, GY type 6 (Fig. 50, 44, 45)

Form 12: Convex beaker with single handle; GY type 9 (Fig. 50, 46, 47)

Form 13: Jar, countersunk handles; WF type 103, HH form JD4.41, GY types 1 and 4 (Fig. 50, 48, 49)

Form 14: Cordoned, carinated vessel with inturned neck and everted rim; HH type BD1.3 (Fig. 50, 50, 51)

Form 15: Carinated bowl with bead rim; WF type 102, HH type BC3.11, GY type 15 (Fig. 50, 52, 54)

Form 16: Shouldered bowl with everted rim; HH type BC3.6 (Fig. 50, 53)

Form 17: Shallow, shouldered bead rim bowl with footring; WF type 117; HH type BC3.5 (Fig. 50, 55, 56)

Table 16: Tolpuddle Ball Late Iron Age/Early Romano-British vessel forms by fabric

Form	*QU100*	*QU101*	*QU102*	*Total*
7	4	–	1	5
8	8	13	17	38
9	9	6	11	26
10	2	1	–	3
11	5	3	–	8
12	–	–	2	2
13	1	1	–	2
14	–	2	5	7
15	1	3	12	16
16	1	1	10	12
17	1	3	–	4
Rim, form unspec.	–	7	20	27
Total	32	40	78	150

All the Late Iron Age/Early Romano-British form types represented at Tolpuddle Ball are well paralleled within the Durotrigian repertoire, and numerous similar groups may be found throughout Dorset and beyond (e.g. Brailsford 1958; Brown 1987; 1991; Davies 1987; Lancley and Morris 1991). Of particular interest are the cordoned forms (form 14: Fig. 50, 50–51) which are copies of North French vessels. Neither of the two examples from Tolpuddle Ball is complete, but the larger illustrated example (Fig. 50, 51) could be described as a 'tazza' (Wheeler 1943, fig. 74; Brown 1987, form BD7, fig. 179). This is not a particularly common form. Brailsford observed that tazze were often found in association with Durotrigian forms (1958, 104), and there has been a tendency to regard them as non-local or 'exotic' forms. Recent scientific analysis has, however, demonstrated that of a number of examples from Maiden Castle and Hengistbury Head, some at least originated from the Poole Harbour areas. Others were imported, presumably providing the inspiration for the local copies (Brown 1991, 190). The Tolpuddle examples of type 14 vessels are all in local Wareham/Poole Harbour fabrics QU101 and QU102.

Decoration and surface treatments

Decoration increases in this period, demonstrated by a greater occurrence of shallow-tooled decoration forming bands of acute lattice within matt bands around the girth of the vessels (e.g. Fig. 49, 32; Fig. 50, 39, 49), particularly on jars of forms 7 and 8. Variants includes wavy lines (Fig. 49, 30) and parallel diagonals (Fig. 49, 34). Impressed decoration is also present in the form of 'eyebrows' (Fig. 50, 41–3) and finger-pinched clusters (Fig. 50, 44, 45) on jars of forms 9–11. All of these techniques are well paralleled within the Durotrigian tradition.

Burnishing also increases in this period, especially on fabric QU102, while the frequency of sherds with smoothed surfaces decreases. Very few traces of sooting and other residues were recorded for fabric QU102. A

Table 17: Late Iron Age/Romano-British pottery fabric totals by site (No./wt in g)

Site	*QU100*	*QU102*	*QU103*	*QU104*	*E100*	*Fineware*	*Total*
Lower Eweleaze	3/6	4/14	–	–	–	–	7/20
Home Farm	–	1/1	–	–	–	–	1/1
Burleston Down	–	1/6	1/11	1/8	–	–	3/25
N. of Tolpuddle Ball	–	–	1/9	–	–	–	1/9
Hill Barn, Tolpuddle	–	10/78	–	–	–	–	10/78
West Mead	–	1/7	1/8	–	2/7	–	4/22
Watching brief	–	12/61	7/143	–	–	1/8	20/212
Total	3/6	29/167	10/171	1/8	2/7	1/8	46/367

Excludes Tolpuddle Ball

small number of sherds in fabric QU103 were recorded with traces of soot and residue occurring mainly internally around the base and on the top quarter of the vessel. Jar bases often have one or more post-firing perforation (Fig. 49, 32, 38).

Distribution

Late Iron Age/Early Romano-British pottery from sites other than Tolpuddle Ball amounts to only 32 sherds. At Hill Barn a small group (10 sherds) in fairly unabraded condition was recovered from a natural feature in an evaluation trench. At Lower Eweleaze a few sherds were recovered from the lower colluvial horizon (sealing Late Bronze Age features). On other sites further stray sherds occurred as unstratified or redeposited material in later contexts.

At Tolpuddle Ball, the distribution of pottery is concentrated within features within the main Middle/Late Iron Age enclosure, and from features which cut the enclosure and antenna ditch. Within the enclosure pottery came from features which form two clusters in the north-east and south-west corners respectively. Several features may be noted as producing 'special' or 'deliberate' deposits of pottery. Two grave deposits were recorded: one small jar (form 8) from infant burial 568 (Fig. 50, 39; see Plate 24), and a bead rim bowl (form 15), a so-called Maiden Castle 'War Cemetery' bowl, from burial 1541 (Fig. 50, 52; see Plate 22). The latter was associated with a Colchester type brooch (Fig. 42, 5).

Other features produced relatively large quantities of pottery, including some complete or near complete vessels, some of which probably formed part of 'structured deposits'. Phase 4 pit 108, to the south of the enclosure ditch, contained 1278 sherds (5914 g), including jars with upright rims (mainly form 9) and carinated bowls (form 15) (Fig. 49, 29–31; Fig. 50, 49, 53, 57; see Plate 9). Two large jars recovered from pit 1542/1544, reconstructed by Mr P. Roberts after the excavation, include one upright rim type and one bead rim type (forms 7 and 8 respectively – Plate 46). The latter is decorated with impressed eyebrow motifs. These vessels may have been deliberately deposited in the feature.

Phase 4 pits 9 and 1093 are also noteworthy in this respect. Pit 1093 contained a 'structured' deposit including a large chalk disc carefully placed on the base of the pit, and a copper alloy brooch (SF 164: Fig. 42, 6). The pottery from this pit amounted to 62 sherds (1634 g), and included a near complete vessel, probably a jar (form unknown). From pit 9, in the north-east corner of the enclosure, came 211 sherds (1998 g), including bead rim jars/bowls and jars with upright rims (Fig. 49, 26; Fig. 50, 55), associated with two neonate burials and other disarticulated human bone; the upper fills of this feature also contained Black Burnished ware (E100).

Pit 122, by virtue of the large quantity of pottery found within it (2293 sherds; 24,278 g) might also be regarded as containing a 'structured' deposit; associated finds included an unusual range of animal bone (see Hamilton-Dyer, below Section 4). Vessel forms in this feature include large storage jars and bead rim bowls (Fig. 50, 54 and 56).

Within the enclosure towards the south-west corner a large amount of pottery was found in Phase 4 pit 1069 (1334 sherds; 5392 g) including a jar with a countersunk handle (Fig. 50, 48) and vessels with characteristic 'eyebrow' decoration and bead rim jars. Moderate quantities of pottery were also recovered from Phase 4



Plate 46 Reconstructed Late Iron Age vessels from Tolpuddle Ball (TP93): Phase 4 pit 1542 / 1544 (scale 50 mm)

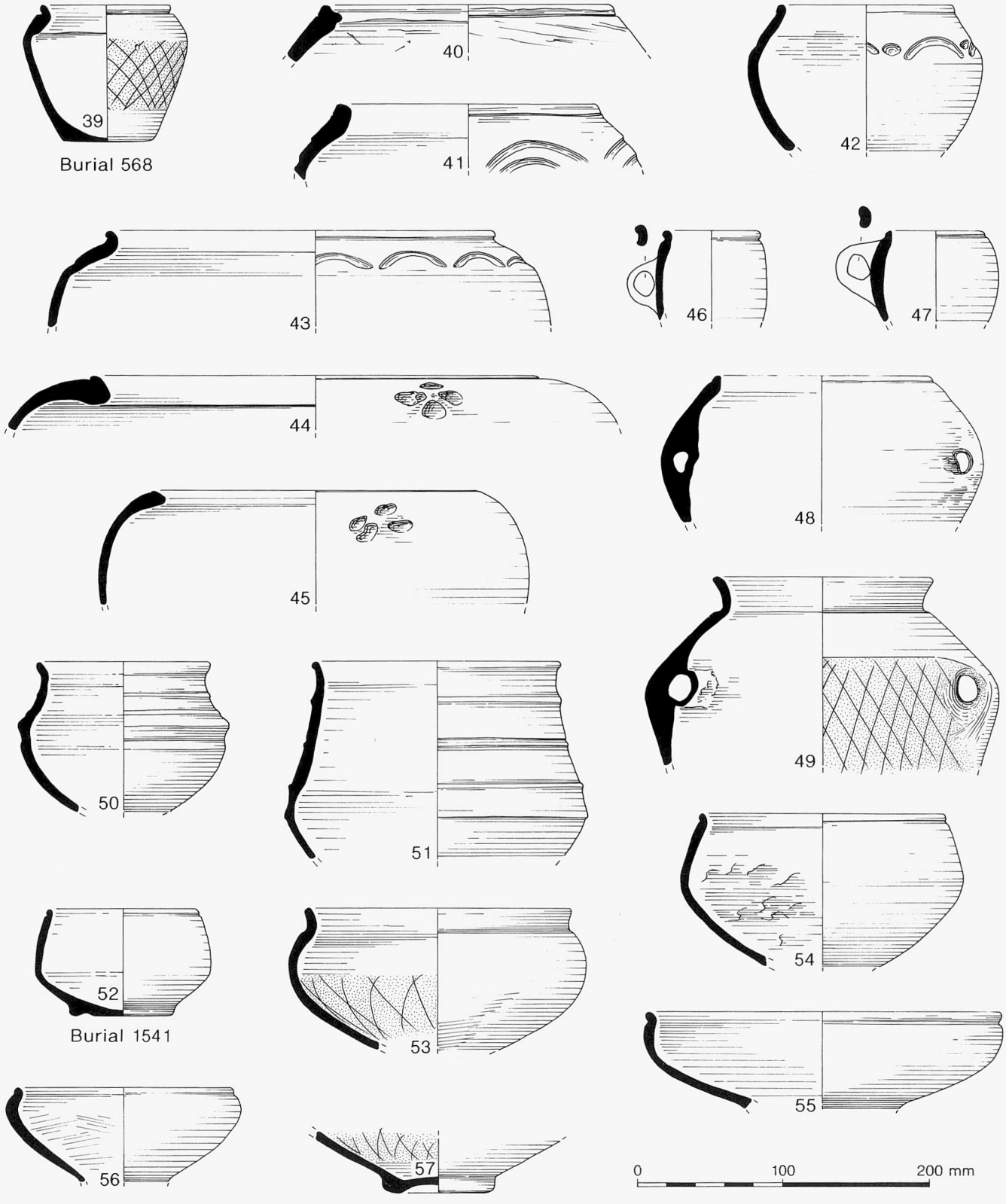


Figure 50 Tolpuddle Ball (TP93): Late Iron Age / Early Romano-British pottery 39–57

pits 90 and 1172, both of which both cut the southern enclosure ditch close to pit 1093. Pottery also came from the Phase 4 roundhouse 883, which cuts the antenna ditch, particularly from the postholes that form the entrance, and also the associated features and possible occupation deposits within the enclosed area. Within the enclosure, moderately large quantities of pottery, including necked jars with bead rims, were recovered from pits 223 (Fig. 50, 40), 363 and 231 (Fig. 50, 43) in the north-west corner, and pit 120 towards the south-east corner, including large storage jars with flat triangular rims, jars with upright rims and 'eyebrow' motifs.

Discussion
The Late Iron Age/Early Romano-British period is marked by the appearance of the range of Durotrigian products which are so characteristic of sites of this period in Dorset. The diminished range of fabric types, all sandy wares of Poole Harbour origin, reflects an increasingly centralised industry which dominated the market from at least the 1st century BC, to the exclusion of all competition in south Dorset. Vessel forms show increased standardisation, but there is a corresponding increase in the range of forms, with new handled forms (jars and beakers) appearing.

The insularity of the Durotrigian potters was not complete, however, as demonstrated by the copies of imported (north French) cordoned vessels, although in general the impact of the imported wares, numerous at Hengistbury Head, for example, is slight, in contrast to other areas such as Hampshire where forms and decorative motifs were adopted wholesale. Lattice decoration is one of the few attributes adopted by the native potters of Dorset from the imported wares. That the imports themselves are absent from Tolpuddle is not surprising, since the distribution of these is almost exclusively coastal (see Cunliffe and Brown 1987, ills. 219, 221, 223).

Romano-British (Fig. 51, 58–72)

Romano-British fabrics form almost half of the total pottery assemblage (48% for Black Burnished ware alone from stratified contexts) and range in date from the 1st to 4th centuries AD. The majority of sherds are large and in moderately good condition with the exception of the 14 sherds from the Tolpuddle Ball cemetery (1998) which are small and abraded. The pottery attributed to this period may be subdivided into finewares, consisting of imports and British wares, and coarse sandy wares. The overwhelming majority again derives from Tolpuddle Ball, virtually all from the 1993 excavation. Only 14 sherds were recovered from other sites in the form of stray material from Burleston Down, North of Tolpuddle Ball, West Mead and the watching brief (see Table 10). Fabric totals are given in Table 13 (Tolpuddle Ball) and Table 17 (other sites).

Imports

Samian
The small quantity of samian (37 sherds) includes sherds from both stratified and unstratified contexts. A Central Gaulish source is likely for most if not all of the samian, which can be dated to the late 1st/2nd century AD on the basis of the few forms present: three Drag. 18/31 platters, one of which has three post-firing perforations which may be repair holes, and one Drag. 33 cup.

Rhenish ware
Three small body sherds in a fine hard fabric with a reddish core and highly polished dark surfaces, may represent Central Gaulish type 'Rhenish' ware. The sherds were found associated with later Romano-British pottery in working hollow 178, a possible natural feature (112) and drainage gully 715. Greene (1978, 19) dates the central Gaulish fabric from the later 2nd century AD, continuing into the 3rd century AD.

Amphorae
Both of the amphora sherds are likely to be from Spanish Dressel 20 amphorae, one of the most common amphora types found in Britain, with a date range from the Late Iron Age to the 3rd century AD and used to transport olive oil from the southern Spanish province of Baetica (Peacock and Williams 1986, classes 24 and 25).

British fine wares
The bulk of the stratified fine wares can be attributed to the New Forest production centre and a smaller quantity to the Oxfordshire kilns. A small number of sherds (11 sherds) in a fine white fabric may represent products of the 1st century AD kilns at Corfe Mullen (Calkin 1935; Seager Smith and Davies 1993, 278). These are mainly small, plain, body sherds but there is one ring-necked flagon, which is a characteristic Corfe Mullen vessel form, and the most common of these forms identified at Greyhound Yard, Dorchester (Seager Smith and Davies 1993, form type 407).

New Forest wares are predominantly represented by Fulford's red-slipped fabric (1975, fabric 1b) and smaller amounts of hard grey colour-coated ware (*ibid.*, fabric 1a) are also present. The forms recorded, including unstratified material, consist mainly of indented beakers, occasionally decorated (rouletted or painted).

A small quantity of sherds have been attributed to the Oxfordshire red colour-coated fabric (Young 1977, 123). Vessel forms are scarce, as the sherds from stratified contexts are mainly small and abraded sherds but a small number of vessels were recovered from unstratified contexts and include mortaria, imitation Drag. 31 platters, and bowls of types C71 and C75, all forms which are datable to the main production phase of the Oxfordshire industry in the later 3rd and 4th centuries AD. The four sherds recovered within grave fills at the Tolpuddle Ball cemetery site (1998) were all tiny fragments and not identifiable to type.

Coarsewares
Coarsewares form the overwhelming majority of the Romano-British assemblage (over 96% by weight: see Table 13) and, of this, Black Burnished ware (E100) accounts for a large proportion (87.9%). The Black Burnished ware fabric, and its variants, are fully described by Seager Smith and Davies (1993, 249–58). No attempt has been made here to identify the variant fabrics, but the impression is that these do not form a significant proportion of the Black Burnished ware group from Tolpuddle Ball.

Coarseware vessel forms by fabric type are given in Table 18. Black Burnished ware vessel forms range in date from 1st to 4th centuries AD. The early forms continue the use of Durotrigian wares, such as everted rim jars (Seager Smith and Davies 1993, form type 1), commonly dated to the 1st century BC/1st century AD but continuing into the 2nd century AD. Jar rims become slightly more everted in the 2nd and early 3rd centuries (Fig. 51, 58, 59; *ibid.*, type 2), and the jar form

Table 18: Tolpuddle Ball Romano-British coarseware vessel forms by fabric

Form	*QU103*	*QU104*	*QU105*	*E100*	*Total*
Everted rim jar (Dorchester type 1)	–	–	–	9	9
Everted rim jar (Dorchester type 2)	–	–	–	12	12
Everted rim jar (Dorchester type 3)	–	–	–	1	1
'Dog dish'	1	–	–	5	6
Flanged bowl	–	–	–	16	16
Drop-flanged bowl	–	1	–	28	29
Storage jar, 'pie crust' rim	2	–	–	–	2
Bead rim bowl	–	–	–	5	5
Bead rim jar	3	1	2	9	15
Lid	1	1	–	2	4
Rim, form unspecified	2	–	–	6	8
Total	9	3	2	93	107

eventually developed into the characteristic later 3rd/4th century form, narrow-bodied with a widely flaring rim (Fig. 51, 60–62; *ibid.*, type 3). Jar bases may be perforated with post-firing holes.

A small number of bead rim bowls, with a range of profiles from round-bodied to straight-sided, are similar to Dorchester types 13–16 (Seager Smith and Davies 1993) and may be assigned a mainly 1st century AD date, continuing through the 2nd century and possibly into the 3rd century AD. Straight-sided dishes (Fig. 51, 63, 64; *ibid.*, type 20) have a long lifespan from the late 1st century onwards. The later bowl forms include those with flanged rims (Fig. 50, 65; *ibid.*, types 22 and 23, dated as mid-late 2nd century) developing into the characteristic Late Roman drop-flanged form (Fig. 51, 66, 67; *ibid.*, type 25, mid 3rd/4th century AD).

Other sandy fabrics may have derived from other local sources, or those slightly further afield such as the New Forest production centre. Four fabrics were identified.

QU103 Hard, coarse matrix containing abundant, poorly-sorted, sub-rounded quartz <5 mm; rare iron oxides. 'Catch-all' group for Romano-British coarsewares, both unoxidised and oxidised.

QU104 Hard, fine textured matrix containing sparse sub-rounded quartz <0.25 mm; rare iron oxides. 'Catch-all' group for fine grey wares.

QU105 Hard, coarse textured matrix containing moderate, well-sorted, sub-rounded quartz <2 mm. Generally unoxidised.

QU106 Hard, coarse textured matrix containing moderate, well-sorted, sub-rounded quartz <1.5 mm (mostly 0.5 mm); sparse ?mudstone. Generally oxidised.

Diagnostic rim forms are scarce with the bulk of the sandy sherds being plain body sherds, although there are some sherds decorated with burnished obtuse lattice. Vessel forms present include storage jars with pie-crust rims (Fig. 51, 71), a later Romano-British type, and necked jars with everted or upright rims.

Distribution

A large proportion of the Romano-British pottery from Tolpuddle Ball was recovered from possible occupation deposits associated with structures, a small stone-floored tank and a working hollow. As with the Iron Age material it was sometimes difficult to distinguish on ceramic grounds between earlier and later Romano-British features due to the continued use of similar vessel forms and the fact that many of the early Romano-British forms occurred mixed with later material. Despite the obvious reworking of deposits, however, it appears that in general the contexts associated with the construction and use of structures (occupation deposits 333 and structure 702) produced pottery of mainly early Romano-British date (1st/2nd century AD), while later pottery (3rd/4th century AD) came from occupation deposits (e.g. 27, 64, 248) which are probably associated with the abandonment and infilling of these structures.

For example, structure 702 produced 1244 sherds (10,550 g), including jars with everted rims (Dorchester type 2), straight-sided ('dog') dishes, flanged and drop-flanged bowls, mainly in Black Burnished ware. To the south of this feature, possible occupation deposit 64 (2632 sherds; 25,790 g) produced Black Burnished ware in a similar range of vessel forms, and colour-coated wares of later Romano-British type.

A large group (352 sherds; 4507 g) of mainly Late Romano-British pottery was recovered from tank 357. The pottery from this feature is predominantly Black Burnished ware with smaller quantities of other fabric types, such as moderate quantities of coarse grey and oxidised wares. Forms are predominantly of 3rd/4th century AD type, including flared rim jars and drop flanged bowls as well as straight-sided dishes and flanged bowls. Spread 27, around the tank and layer 333, produced everted rim jars, storage jars, flanged and drop-flanged bowls, forms with a date range of 2nd century onwards.

Another large group of later Romano-British pottery (1140 sherds; 9781 g) was recovered from the working hollow 178, situated south of the enclosure ditch, and from associated gully 204. Both features are dominated

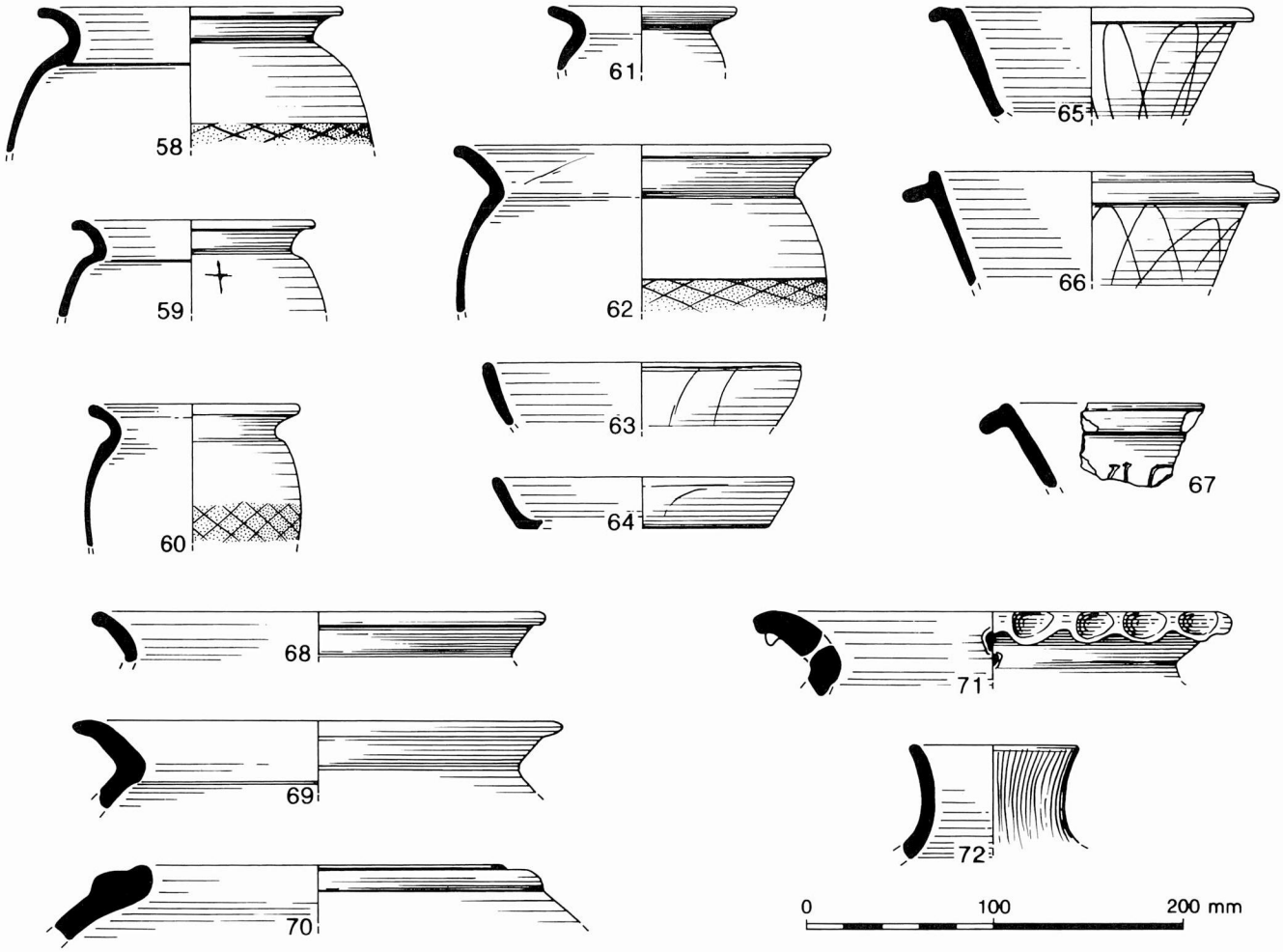


Figure 51 Tolpuddle Ball (TP93): Romano-British pottery 58–73

by Black Burnished ware with smaller amounts of coarsewares and colour-coated wares. The hollow produced a wide range of vessel forms including jars with 'pie-crust' rims.

Relatively large quantities of pottery (1454 sherds; 2975 g) from grain drier 1110 may be dated to the Late Roman period and include everted rim jars with obtuse lattice decoration, drop-flanged bowls, and colour coated wares.

To the west of the earlier enclosure, occupation deposits and possible structures/structures had been largely truncated and disturbed; pottery from this area was of a mixed character and included material with a date range of 1st century BC–4th century AD.

Discussion

This period is not surprisingly dominated by the Wareham/Poole Harbour Black Burnished ware industry (BB1). The innate conservatism of the industry is demonstrated by the continuation of many Iron Age vessel forms into the Romano-British repertoire and, perhaps most notably, in the lack of wheel technology. Despite handforming, however, this was a large and well organised industry producing high quality utilitarian wares which were widely distributed across Roman Britain.

The range of forms represented at Tolpuddle Ball is typical of the local Romano-British industry, although the division of forms between this period and the preceding Late Iron Age/early Romano-British period may be somewhat arbitrary, since several spanned both periods, which has rendered close dating of deposits problematic. The Black Burnished ware vessel forms are discussed exhaustively in terms of chronological and functional implications elsewhere (e.g. Seager Smith and Davies 1993, 249–58), and it is not necessary to repeat these discussions here. Overall, the evidence serves to indicate a continuation of the Romano-British settlement into the 4th century, with no apparent hiatus.

Some chronological sequence within the Romano-British use of the site is, however, discernible. Vessel forms suggest that the identified structures (e.g. 702, tank 357) were constructed and used within the early part of this period (later 1st century–mid 3rd century). Spreads of occupation deposits surrounding and infilling these structures, and presumably relating to their disuse and abandonment, can be dated largely to the later period (mid 3rd/4th century), although no corresponding structures can be dated to this period.

The range of wares demonstrates contacts beyond the immediate hinterland of Tolpuddle Ball. For the first

time, non-local wares, both regional and imported, appear on the site, albeit in small quantities (see Table 13). That this occurred some time after the period following the Roman Conquest is suggested by the absence of any non-local wares (such as South Gaulish samian) which can definitely be dated earlier than the very end of the 1st century AD.

The range of wares and vessel forms is typical of a small but relatively prosperous rural settlement, with an emphasis on functional wares for cooking and storage. The low occurrence of both British and imported finewares may be noted; in combination their proportion of the overall stratified assemblage is very small, just over 100 sherds out of nearly 7000 (i.e. 1.5%).

Illustrated vessels

(All TP93 unless otherwise stated)

Fig. 47

Early / Middle Bronze Age

1. Fingernail-impressed body sherd, fabric GR1. PRN (Pottery Record Number) 400, context 944, pit 945, Phase 1.
2. Beaker rim sherd, comb-impressed, fabric GR1. PRN 402, context 944, pit 945, Phase 1.
3. Comb-impressed body sherd, fabric GR1. PRN 919, context 183, pit/posthole 184, Phase 1.
4. ?Beaker expanded rim, impressed decoration, fabric GR1. PRN 1503, W2402.13, context 2749, cleaning over pit group 2897.
5. Bucket-shaped jar with plain rim, fabric GR2. PRN 1504, W2402.13, context 2749, cleaning over pit group 2897.
6. Body sherd with incised decoration, fabric GR1. PRN 1505, W2402.13, context 2749, cleaning over pit group 2897.
7. Body sherd with fingertip-impressed decoration, fabric FL16. PRN 204, context 1554, unstratified.
8. Body sherd with applied lug, fabric GR2. PRN 914, context 242, ditch 243, Phase 5.

Late Bronze Age

9. Small plain rimmed cup, fabric FL6. PRN 1500, W2402.13, context 2748, cleaning over pit group 2897, Phase 1.
10. Bucket-shaped vessel with plain upright rim, fabric FL4. PRN 1455, W2402.13, context 2665, pit 2722, Phase3/4.
11. Flared bowl with plain rim, fabric LI2. PRN 1531, W2402.13, context 2867, pit 2866, Phase 2.
12. Convex jar with finger-impressed rim, fabric FL8. PRN 1525, W2402.13, context 2810, pit 2809, Phase 2.
13. Fingertip-impressed body sherd, fabric FL8. PRN 1524, W2402.13, context 2810, pit 2809, Phase2.
14. Jar with upright rim, impressed decoration, fabric FL8. PRN 1435, W2402.13, Context 2450, posthole 2449, Phase 1.
15. Shoulder sherd with ?fingernail impressions, fabric FL9. PRN 1535, W2402.13, context 2870, pit 2868, Phase 1.

Fig. 48

Late Bronze Age (North of Tolpuddle Ball)

16. Slack shouldered jar with upright rim, fabric QU6. PRN1381, context 2007, feature 2006 (Phase 2).
17. Small jar, expanded rim, fabric QU6. PRN 1401, context 2012, pit 2011 (Phase 2)

Fig. 49

Early Iron Age

18. Ovoid jar with upright, expanded rim, fabric SH2. PRN 179, context 1432, pit 1433, Phase 4.
19. Body sherd decorated with incised lines, possibly infilled with white inlay, fabric QU1. W2402.13, PRN 1420, context 2342, ditch 2334.

Middle / Late Iron Age

20. Necked, shouldered bowl (form 1), fabric FL2. PRN 425, context 894, posthole 258, Phase 3.
21. Shouldered jar with upright rim (form 2), fabric QU1. PRN 1224, context 32, pit 33, Phase 3.
22. Globular jar with upright rim (form 3), fabric QU1. PRN 1169, context 60, pit 61, Phase 3/4.
23. Shouldered jar with upright rim (form 2), fabric QU1. PRN 835, context 1257, posthole in round-house, Phase 4.
24. Necked jar with slightly everted rim (form 4), fabric QU1. PRN 912, context 240, posthole 241, Phase 3.
25. Shouldered jar with upright rim (form 2), fabric QU1. PRN 727, context 471, pit 116, Phase 3.
26. Bead rim bowl, fabric QU2. PRN 16, context 1277, pit 9, Phase 4.
27. Rounded jar/bowl with bead rim (form 5), fabric QU2. PRN 403, context 834, pit 815/836, Phase 3/4.
28. Convex bowl with slightly thickened rim (form 6), fabric QU2. PRN 82, context 1332, pit 1360, Phase 3/4.

Late Iron Age / Early Romano-British

29. Ovoid jar with slightly everted rim (form 7), fabric QU102. PRN 483, context 107, pit 108, Phase 4.
30. High shouldered jar with slightly everted rim (form 7), burnished curvilinear decoration, PRN QU102. PRN 484, context 107, pit 108, Phase 4.
31. High-shouldered or rounded jar with slightly everted rim (form 7), fabric QU102. PRN 1086, context 107, pit 108, Phase 4.
32. High-shouldered jar with slightly everted rim (form 7), burnished lattice decoration, post-firing perforation in base, fabric QU102. PRN 1091, SF 103, context 109, natural feature 110, Phase 5.
33. Ovoid jar with everted rim (form 7), fabric QU102. PRN 1629, context 1102, pit 1103/grain drier 1149, Phase 5.
34. Jar with bead rim (form 8), burnished line decoration, fabric QU102. PRN 14, context 1276, pit 9, Phase 4.
35. Jar with bead rim (form 8), fabric QU102. PRN 109/110, context 1389, pit 1085, Phase 3/4.
36. Jar with lengthened bead rim (form 8), fabric QU102. PRN 552, context 746, pit 66, Phase 3/4.
37. Jar with bead rim (form 8), fabric QU102. PRN 108, context 1386, pit 231, Phase 4.
38. Jar with bead rim (form 8), post-firing perforation in base, fabric QU102. PRN 503, SF 174, context 1294, pit 120, Phase 4.

Fig. 50

39. Small jar with bead rim (form 8), burnished lattice decoration, fabric QU102. PRN 502, SF 100, infant burial 568, Phase 3/4.
40. Globular or shouldered jar with inturned, moulded rim (form 9), fabric QU102. PRN 921, context 222, pit 223, Phase 4.
41. Globular or shouldered jar with upright rim (form 9), impressed arced ('eyebrow') motifs, fabric QU102. PRN 911, context 224, pit 225, Phase 3/4.

42. Slightly biconical jar with short upright rim (form 9), impressed 'eyebrow' decoration, fabric QU102. PRN 326, context 1066, pit 1067, Phase 3/4.
43. Shouldered jar with short everted rim (form 10), 'eyebrow' decoration, fabric QU100. PRN 99, context 1370, pit 231, Phase 4.
44. Large jar with triangular rim (form 11), pinched 'cluster' motifs, fabric QU100. PRN 61, context 1204, unknown provenance, unphased.
45. Globular jar with triangular rim (form 11), pinched 'cluster' motifs, fabric QU101. PRN 66, context 1204, unknown provenance, unphased.
46. Ovoid beaker with applied strap handle (form 12), fabric QU100. PRN 199, context 1476, cistern/tank 357, Phase 5.
47. Ovoid beaker with applied strap handle (form 12), fabric QU100. PRN 358, context 978, enclosure ditch 979, Phase 3.
48. Ovoid jar with countersunk handle (form 13), plain rim, fabric QU100. PRN 279, context 1068, pit 1069, Phase 4.
49. Ovoid jar with countersunk handle (form 13), burnished lattice decoration, fabric QU101. PRN 504, SF 104, context 781, pit 108, Phase 4.
50. Cordoned, carinated bowl with everted rim (form 14), fabric QU101. PRN 935, context 206, feature 207, Phase 3/4.
51. Cordoned, carinated bowl ('tazza') (form 14), fabric QU102. PRN 899, context 1148, pit 1103, Phase 5.
52. Bead rim, carinated bowl (form 15), fabric QU102. PRN 501, SF 244, context 1540, burial 1541, Phase 4.
53. Shouldered bowl with slightly everted rim (form 16), burnished lattice decoration. Context 107, pit 108, Phase 4.
54. Bead rim, carinated bowl (form 15), fabric QU101. PRN 46, context 1293, pit 122, Phase 4.
55. Bead rim, shouldered bowl (form 17), fabric QU101. PRN 71, context 1308, pit 9, Phase 4.
56. Bead rim, shouldered bowl (form 17), fabric QU101. PRN 851, context 1245, pit 122, Phase 4.
57. Footring base, probably from bowl form 17, fabric Q102, PRN 490, burnished lattice decoration. Context 107, pit 108, Phase 4.

Fig. 51
Romano-British

58. Everted rim jar, burnished lattice decoration, fabric E100. PRN 153, context 1477, tank 357, Phase 5.
59. Everted rim jar, possible graffitto on shoulder, fabric E100. PRN 154a, context 1477, tank 357, Phase 5.
60. Everted rim jar, burnished lattice decoration, fabric E100. PRN 154b, context 1477, tank 357, Phase 5.
61. Small everted rim jar, fabric E100. PRN 154c, context 1477, tank 357, Phase 5.
62. Everted rim jar, burnished lattice decoration, fabric E100. PRN 154d, context 1477, tank 357, Phase 5.
63. Straight-sided dish ('dog dish'), fabric E100. PRN 161, context 1477, tank 357, Phase 5.
64. Straight-sided dish ('dog dish'), fabric E100. PRN 976, context 177, working hollow 178, Phase 5.
65. Flanged bowl, fabric E100. PRN 163, context 1477, tank 357, Phase 5.
66. Drop flanged bowl, fabric E100. PRN 159, context 1477, tank 357, Phase 5.
67. Flanged bowl with graffitto, fabric E100. PRN 974, context 177, working hollow 178, Phase 5.
68. Everted rim jar, fabric E100. PRN 157, context 1477, tank 357, Phase 5.
69. Everted rim jar, fabric QU103. PRN 1239, context 27, ?occupation deposit, Phase 5.
70. Storage jar with inturned, folded rim, fabric QU103. PRN 975, context 177, working hollow 178, Phase 5.
71. Storage jar with 'pie crust' rim, pre-firing piercing(s) under rim, fabric QU103. PRN 970, context 177, working hollow 178, Phase 5.
72. ?Flagon neck, fabric E100. PRN 977, context 177, working hollow 178, Phase 5.

Medieval Pottery from West Mead (Fig. 52), Lorraine Mepham

The medieval pottery assemblage from West Mead comprises 525 sherds (6089 g), deriving mainly from ploughsoil and underlying colluvial and midden deposits, and in much smaller quantities from the enclosure ditch. The condition of the assemblage is fair; some abrasion has taken place, but in general sherds are relatively large (mean sherd size 11.6 g). No complete profiles were reconstructable, but sufficient diagnostic sherds survive to characterise the range of vessel forms present. The range of fabrics and forms indicates that the assemblage derives from various local or regional sources, and probably covers a relatively short timespan.

Very small quantities of medieval pottery (less than ten sherds each, 19 sherds in total) were recovered from six other sites: Downtons Farm, Lower Eweleaze, Home Farm, Burleston Down, North of Tolpuddle Ball and Tolpuddle Ball (W2402.13). A further 15 sherds were recovered during the watching brief. This material is not discussed further here; details may be found in the project archive.

Methods

The pottery has been analysed and recorded following the standard Wessex Archaeology pottery recording system (Morris 1992), as outlined for the prehistoric pottery (see Laidlaw, above). A total of 14 separate fabric types has been defined on the basis of the range and size of macroscopic inclusions; these fall into three broad fabric groups on the basis of dominant inclusion type: limestone-tempered (Group LI), flint-tempered or flint-gritted (Group FL) and sandy (Group QU). A fabric type series has been deposited with the archive.

Vessel forms have been defined using rim sherds, handles and other diagnostic sherds; nomenclature for both vessel forms and component parts follows nationally recommended guidelines (MPRG 1998).

Fabrics and forms

The 14 fabric types defined are discussed here within four groups which reflect both the distinction between coarsewares and finewares, and their respective potential sources or source areas. Fabric totals are given in Table 19.

Table 19: West Mead medieval pottery fabric totals

Fabric	*No.*	*Wt (g)*	*% group by wt*	*% total by wt*
SOUTH WILTS./EAST DORSET COARSEWARES				
QU400	105	959	20.1	
QU401	188	2497	52.5	
QU402	108	1305	27.4	
Sub-total	401	4761	–	78.2
SOUTH DORSET COARSEWARES				
LI400	17	253	25.8	
LI401	8	63	6.4	
LI402	7	41	4.2	
LI403	9	122	12.4	
FL400	3	33	3.4	
FL401	2	16	1.6	
QU405	4	33	3.4	
QU406	7	67	6.8	
QU407	18	353	36.0	
Sub-total	75	981	–	16.1
WEST DORSET COARSEWARE				
QU403	47	335	–	5.5
SOUTH DORSET FINEWARE				
QU404	2	12	–	0.2
Total	525	6089		

Poole Harbour/Purbeck coarsewares

This group of coarsewares constitutes the largest part of the assemblage (see Table 19), and comprises three fabrics which appear to represent variants of a single fabric, ranging from very coarse (QU400) to moderately fine (QU402); the divisions between the three fabrics are not always clear-cut.

QU400 Hard, moderately coarse matrix; common, fairly well sorted, sub-angular/sub-rounded quartz, sometimes iron-stained, <1 mm; rare iron oxides. Handmade; firing varies from completely oxidised to completely unoxidised; 'pimply' surface finish.

QU401 As QU400 but with quartz <0.5 mm; slightly 'pimply' surface finish.

QU402 As QU400 but with quartz <0.25 mm.

Vessel forms in these fabrics are overwhelmingly utilitarian, frequently scratchmarked, and are dominated by jar forms, with smaller quantities of bowls/dishes. No complete profiles are present, but a type series has been created for these vessels using rim forms. The correlation of fabric to vessel form is presented in Table 20.

Jars

Type 1: Everted, long, slightly thickened, rounded rim; everted approximately at right angles to the body; the orientation of the rim varies from flared to almost horizontal, to give either a rounded or more upright (convex) body profile (Fig. 52, 1). Equivalent to Laverstock rim type I (Musty *et al.* 1969, fig. 7).

Type 2: Everted long, slightly thickened, rounded rim as Type 1, but with a slight lid-seating (Fig. 52, 2). Equivalent to Laverstock rim type II (*ibid.*).

Type 3: Everted, long, thickened and slightly moulded rim, sometimes with slight lid-seating, and with a more noticeable neck zone than Types 1 and 2 (Fig. 52, 3). Broadly equivalent to Laverstock rim type III (*ibid.*).

Type 4: Everted, short simple rim, squared, sometimes with groove along the top to give an almost bifid profile (Fig. 52, 4).

Bowls/dishes

Type 9 Convex bowl or dish (height:rim diameter ratio unknown) with externally thickened rim (not illustrated).

Type 10 Convex bowl or dish with triangular sectioned rim (Fig. 52, 5)

Type 11 Convex bowl or dish with marked external and/or internal thickening ('hammerhead' rims) (Fig. 52, 6-8).

In addition, a small number of jugs or pitchers were identified. These are generally at least partially glazed, with a thin and patchy clear lead glaze (Fig. 52, 15, 16). One has an applied tubular spout (Fig. 52, 14).

These coarse sandy wares are of a type which is commonly found across east Dorset and into west Hampshire and south Wiltshire from the 12th century onwards; vessel forms are consistent throughout this area of distribution and provide parallels for all of the forms defined above. Within south Dorset these coarsewares have been identified, for example, at Christchurch, Poole, Wareham, several small settlement sites in Purbeck, and at Sutton Poyntz near Weymouth (Davies 1983; Jarvis 1992, fabric 1; Hinton and Hodges 1977, fabrics C and E; Lancley and Mepham 1991; Mepham in prep.). The proportions of these wares within medieval assemblages across this region shows a clear concentration along the outcrops of the Reading Beds and London Clay running in a narrow band from Salisbury to Purbeck. These outcrops are a source of good potting clays and are known to have supported a major post-medieval pottery industry around Verwood (Algar *et al.* 1987); it is generally assumed that this industry had its origins in the medieval period. Although only one medieval production centre has so far been located in this region, at Laverstock near Salisbury (Musty *et al.* 1969), the existence of other kilns or kiln groups is postulated on the basis not only of the accessibility of suitable raw materials but also on documentary references in several parishes, notably those around Verwood, from the 13th century onwards (Algar *et al.* 1987; Spoerry 1988).

Within the area of distribution, these coarsewares show a marked degree of homogeneity. Fabric samples from Salisbury, for example, are visually (and petrologically) indistinguishable from samples from Purbeck, and indeed even chemical analysis has failed to identify consistent subdivisions within the overall range (Spoerry 1990, 11).

Table 20: West Mead: medieval vessel forms by fabric

Form	*PH/Purbeck coarsewares* QU400	QU401	QU402	*WDC* QU403	*Misc. coarsewares* QU407	LI400	LI401	LI403	*Total*
Jars									
Type 1	5	3	2	–	–	–	–	–	10
Type 2	1	3	1	–	–	–	–	–	5
Type 3	4	11	4	–	–	–	–	–	19
Type 4	1	2	7	–	–	–	–	–	10
Type 5	–	–	–	–	1	–	2	–	3
Type 6	–	–	–	–	–	1	–	–	1
Type 7	–	–	–	–	1	1	–	1	3
Type 8	–	–	–	–	1	–	–	–	1
Bowls/dishes									
Type 9	1	1	–	–	–	–	–	–	2
Type 10	–	2	–	–	–	–	–	–	2
Type 11	2	8	1	–	–	–	–	–	11
Pitchers									
Straight neck	–	2	1	–	–	–	–	–	3
Collared neck	–	1	–	1	–	–	–	–	2
Unspecified	2	3	1	2	2	1	1	–	12
Total	16	36	17	3	5	3	3	1	84

PH = Poole Harbour; WDC = West Dorset coarsewares

As for the date range of the West Mead vessels, all find parallels within the 13th century kiln assemblages from Laverstock (Musty *et al.* 1969), with the exception of the spouted pitcher (Fig. 52, 14), and the other possibly similar vessels (e.g. Fig. 52, 15), although there is no conclusive evidence that these vessels are not contemporary with the remainder of the assemblage. The spouted pitcher (a form frequently described as 'tripod pitcher' – here the term is not used since no tripod base is present) is generally regarded as a 12th century form which has a widespread distribution across southern England, and certainly their absence at Laverstock would suggest that their production pre-dated the known lifespan of these kilns. Examples in Laverstock-type coarsewares have been found in Saxo-Norman (11th/12th century) contexts at Trowbridge in north Wiltshire (Mepham 1993, fig. 38, nos. 31, 32), and a closely comparable vessel came from Ower Farm in Purbeck (Lancley and Mepham 1991, fig. 63, no. 20), but the ceramic sequence there is not closely dated.

Elsewhere in Dorset tripod pitchers are known from 12th and 13th century contexts, for example at Sherborne in north Dorset (Harrison and Williams 1979, fig. 46, nos. 18, 19), and a continuation as late as *c.*1300 is suggested on the basis of evidence from Dorchester (Draper and Chaplin 1982, 49).

West Dorset coarseware ('Hermitage-type')

This group is represented by a single fabric type, which is visually quite distinct from the rest of the assemblage.

QU403 Hard, moderately fine, slightly micaceous clay matrix with a powdery feel; moderate, well sorted, sub-rounded quartz <0.25 mm; sparse iron oxides.

This is a relatively small group within the overall assemblage, and contains very few rim or other diagnostic sherds. There is one rim from a collared neck pitcher or jug, and one thumbed base, probably from a similar vessel; the body sherds include glazed and comb-decorated sherds.

Fabric QU403 is comparable to sandy wares found across much of west Dorset from at least the 13th century (Spoerry 1990, ware S1). As for the Poole Harbour/Purbeck coarsewares, only one kiln source is as yet known, at Hermitage in north Dorset (Field 1966), but again the wide area of distribution would suggest that more than one production centre was in operation during the medieval period, and documentary references support this (Spoerry 1988).

Miscellaneous coarsewares

This group includes a range of fabric types, limestone-tempered, flint-tempered or flint-gritted and sandy. The terms 'flint-tempered' and 'flint-gritted' are used here to distinguish between fabrics to which flint has been deliberately added by the potter (fabric FL400) and those in which the flint is more likely to be naturally occurring within the clay (FL401). These fabrics are not visually homogeneous, but have been grouped together here for discussion on the basis of a presumed common source area.

Table 21: West Mead medieval plottery by context type (No. /wt in g.)

Context	*SW/EDC*	*SDC*	*WDC*	*SDF*	*Total*
Lower colluvium	13/125	9/71	1/2	–	23/198
Enclosure ditch	4/22	7/95	–	–	11/117
Posthole 3032	2/16	–	1/3	–	3/19
Upper colluvium	130/1471	17/142	8/69	–	155/ 1682
Midden deposit	384/ 1633	29/431	13/81	1/2	427/ 2147
Ploughsoil	93/ 1645	9/136	24/180	1/10	127/ 1971
Unstrat.	–	4/182	–	–	4/182
Total	626/ 4912	75/1057	47/335	2/12	750/ 6316

SW/EDC = South Wilts/East Dorset coarsewares; SDC = South Dorset coarsewares; WDC = West Dorset coarsewares; SDF = South Dorset finewares

LI400 Hard, moderately coarse clay matrix with a slightly soapy feel; sparse sub-rounded quartz <1.5 mm; sparse irregular limestone fragments <2 mm; rare iron oxides.

LI401 Hard, fine, micaceous clay matrix with a soapy feel; moderate, poorly sorted, irregular limestone fragments <2 mm; sparse iron oxides. Limestone has generally leached to give a vesicular appearance.

LI402 Hard, moderately coarse, sandy clay matrix; moderate, well sorted, rounded limestone (oolitic); moderate sub-rounded quartz <0.125 mm; rare mica.

LI403 Hard, fine, micaceous clay matrix; sparse, poorly sorted, sub-angular limestone fragments <3 mm; rare sub-angular flint <3 mm; rare sub-rounded quartz <1 mm; rare iron oxides. Limestone has generally leached to give a vesicular appearance.

FL400 Hard, moderately coarse, slightly micaceous clay matrix; sparse, poorly sorted, sub-angular flint <3 mm; sparse to moderate, sub-angular to sub-rounded quartz <1 mm; rare iron oxides.

FL401 Hard, fine, micaceous clay matrix; sparse, sub-angular flint (patinated); rare sub-angular limestone fragments <2 mm; rare mica.

QU405 Hard, moderately fine clay matrix with a sandy or powdery feel; common, poorly sorted, sub-angular to sub-rounded quartz <0.25 mm (rarely <1 mm); rare sub-angular flint <5 mm; rare iron oxides.

QU406 Hard, moderately fine, slightly micaceous, sandy clay matrix; common, fairly well sorted, sub-angular to sub-rounded quartz <0.125 mm (rarely <0.5 mm); rare sub-angular flint <2 mm.

QU407 Hard, fine, micaceous sandy matrix; sparse, poorly sorted, sub-angular to sub-rounded quartz <1 mm; rare sub-angular flint <2 mm; rare iron oxides.

Vessel forms present consist entirely of jars. Rims have been used to define four types; the correlation of fabric to vessel form is given in Table 20.

Type 5: Jar with convex body profile and everted, slightly 'dished' rim (Fig. 52, 11).

Type 6: Jar with rounded body profile, sharply everted rim and no neck zone (Fig. 52, 13).

Type 7: Jar with rounded body profile and flared neck with thickened rim (Fig. 52, 9, 10, 12).

Type 8: Jar of unknown form with flared neck and internally thickened rim (not illustrated).

A source, or a series of sources, within south Dorset seems likely for this group of fabrics. Parallels have been found, for example, within assemblages from Wytch Farm in Purbeck and Sutton Poyntz (Lancley and Mepham 1991, fabric Q405; Mepham in prep.).

Poole Harbour-type fineware

A single fabric constitutes this group, and occurs in very small quantities on the site. All sherds are glazed and are most likely to derive from jugs, possibly decorated, although none of these sherds carry decoration.

QU404 Hard, fine clay matrix with a smooth feel; sparse sub-angular to sub-rounded quartz <0.25 mm; oxidised (pale-firing); creamy white.

Glazed jugs in pale-firing fabrics comparable to QU404 are well attested in the Poole Harbour area, occurring in some quantity in Poole itself and in Christchurch (Jarvis 1992; Davies 1983), and on other sites across south Dorset, such as Dorchester and Wareham (Draper and Chaplin 1982; Hinton and Hodges 1977). These finewares are generally dated to the 13th or early 14th century, and the general scarcity of them on this site might suggest a date range in the early part of the 13th century.

Discussion

Table 21 presents a breakdown of the pottery by fabric group and by major stratigraphic component; unstratified and poorly stratified pottery (seven sherds) has been omitted. This clearly shows that the majority of the pottery occurred within the upper colluvial deposits, midden deposit and ploughsoil. The distribution of pottery through the stratigraphic sequence was closely examined to ascertain whether any trends could be discerned, and whether there was any basis for the postulation of a ceramic sequence. It may be noted, for example, that sherds of the Poole Harbour-type

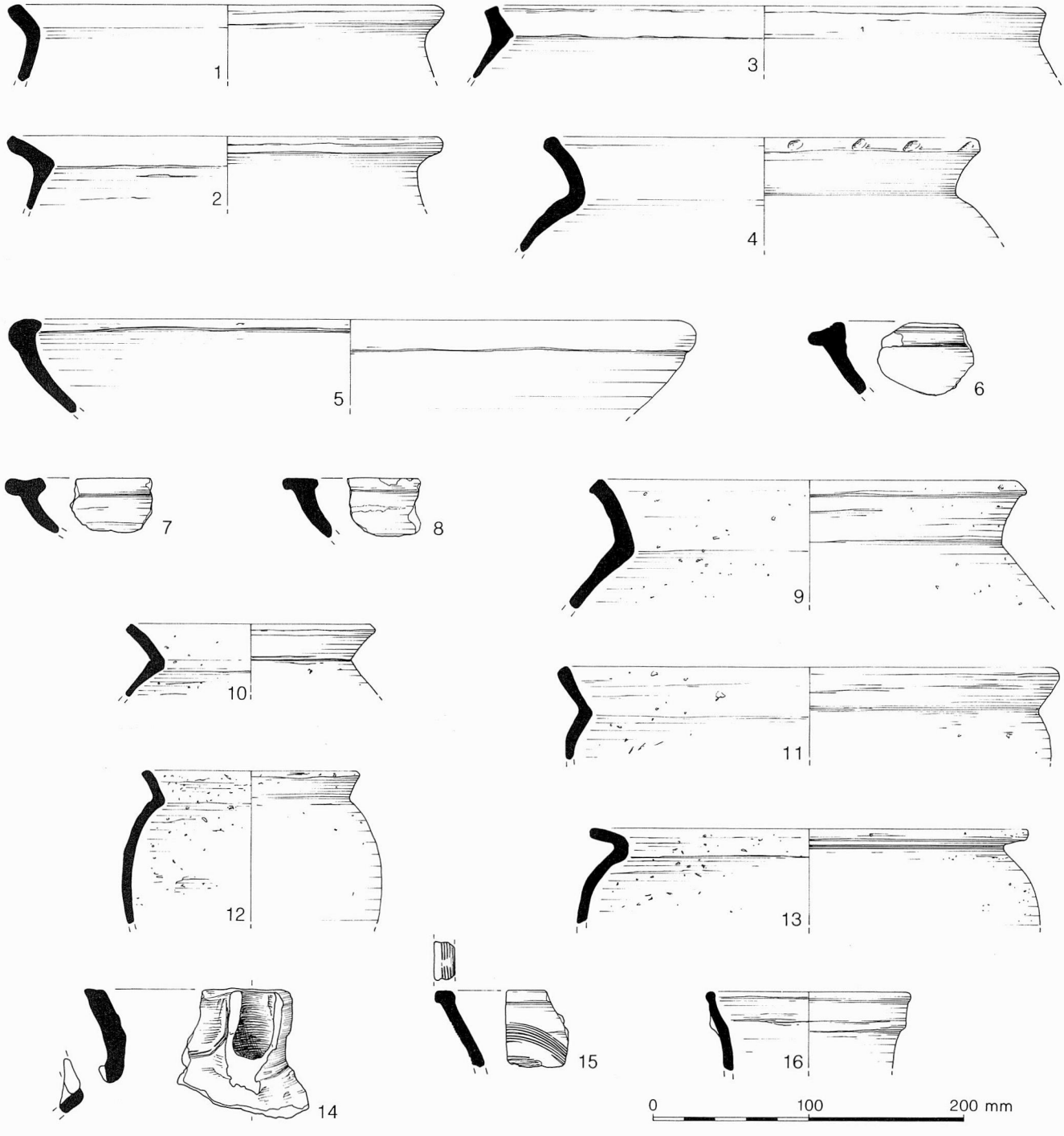


Figure 52 West Mead (W2402.16): medieval pottery 1–16

finewares are restricted to the midden deposit and ploughsoil, and that the proportion of Poole Harbour/Purbeck coarsewares increases through time at the expense of the South Dorset coarsewares. Numbers of sherds, however, are too small, particularly in the lower part of the stratigraphic sequence, to draw any firm conclusions, and the overall picture gained is in fact one of visual homogeneity which almost certainly represents a short timespan.

This pottery assemblage represents a collection of predominantly utilitarian coarsewares, deriving from a number of sources but all of which are likely to have been located within Dorset. There is very little evidence of finer serving wares, which are restricted to a small number of sherds of glazed and decorated pitchers (possibly tripod forms) and fine glazed jugs.

While the majority of the assemblage can without difficulty be assigned to a date range within the 13th century, and probably within the first half of the century, it is possible to isolate a potentially earlier element, comprising the glazed pitchers, which could be as early as 12th century. The dating of these vessels, however, is open to some debate and, given evidence from other sites in Dorset, it would be unwise to rule out the possibility that these vessels are in fact contemporary with the rest of the assemblage.

The range of fabrics and forms is typical of a small rural settlement; closely comparable assemblages have been found elsewhere in south Dorset, for example the settlements at Wytch Farm in Purbeck (Lancley and Mepham 1991). The relative lack of finewares is not surprising since outside the main urban centres these wares are scarce; on the smaller rural settlements they generally form less than 5% of the total assemblage (e.g. *ibid.*, 137; Rahtz 1959, 140).

Illustrated vessels

Fig. 52

1. Jar rim (type 1), fabric QU400. PRN (Pottery Record Number) 3, context 3001, topsoil.
2. Jar rim (type 2), fabric QU401. PRN 165, context 3121, ?midden 3004.
3. Jar rim (type 3), fabric QU401. PRN 15, context 3001, topsoil.
4. Jar rim (type 4), finger-impressed decoration on rim, fabric QU401. PRN 32, context 3001, topsoil.
5. Bowl rim (type 10), fabric QU401. PRN 164, context 3121, ?midden 3004.
6. Bowl rim (type 13), fabric QU401. PRN 22, context 3001, topsoil.
7. Bowl rim (type 11), fabric QU401. PRN 61, context 3002, colluvium.
8. Bowl rim (type 11), fabric QU401. PRN 173, context 3123, upper colluvium.
9. Jar rim (type 7), fabric FL401. PRN 98, context 3003, colluvium.
10. Jar rim (type 7), fabric LI400. PRN 48, context 3001, topsoil.
11. Jar rim (type 5), fabric QU407. PRN 111, context 3031.
12. Jar rim (type 7), fabric LI403. PRN 116, context 3052, enclosure ditch 3016.
13. Jar rim (type 6), fabric LI400. PRN 74, context 3002, colluvium.
14. Pitcher with applied tubular spout, fabric QU402; partially glazed; combed decoration on exterior and on top of rim. PRN 65, context 3002, colluvium.
15. Jug or pitcher rim, fabric QU401; glazed externally; combed decoration on exterior and on top of rim. PRN 25, context 3001, topsoil.
16. Jug or pitcher rim, fabric QU401. PRN 26, context 3001, topsoil.

Ceramic Building Material, Emma Loader

The majority of the ceramic building material was recovered from Tolpuddle Ball (TP93 and W2402.13). Only two other sites produced ceramic building material: Home Farm (one medieval hearth tile) and West Mead (two medieval plain floor tiles, two medieval roof tiles and one post-medieval roof tile). These medieval and later fragments are not considered further in this report. Tolpuddle Ball produced a total of 20145 g (307 pieces) of ceramic building material, almost all from the 1993 excavation area. The material was sorted on the basis of form and potential date. No detailed fabric analysis was undertaken. The majority of the assemblage is dated to the Roman period (97% of the total weight), with a very small proportion (3%) of later date (medieval or post-medieval). Only the Romano-British material is discussed here.

Description

The ceramic building material was divided into six categories: *imbrex*, *tegula*, combed flue tile, floor brick/tile, undiagnostic tile and undiagnostic fragments. The largest proportion of the assemblage consists of *tegula* fragments, which make up 37% of the total weight (7488 g). The second largest proportion is undiagnostic tile, making up 30% of the total weight (5974 g), though it is likely that a large amount of these fragments are *tegula* and other roof tile fragments. The remainder of the assemblage consists of *imbrex* fragments (2235 g), floor tile (2034 g), undiagnostic fragments (1844 g) and fragments with combing (450 g).

One tile stamp exists on a *tegula*. The stamp is in the form of a fancy leaf stop enclosed in a plain border. Although it is incomplete it can be matched with complete examples stamped 'NVND' from Dorchester (Bellamy 1993, fig. 94). This was probably an abbreviation of the name of the maker: *Nundinus* or *Nundinarius*, although neither name was very common and no parallels are known (Hassall and Tomlin 1983, 343).

Distribution

The largest proportion of the ceramic building material (71% of the total weight) derived from a variety of Romano-British (Phase 5) features, with 15% from the topsoil. The remaining ceramic building material derived from Late Iron Age (12%), medieval (2%) and undated features (less than 1%). The ceramic building material from the Iron Age features (Phase 3/4) is likely to be intrusive. Of the ceramic building material recovered from Romano-British contexts, the largest amounts came from occupation layers 64 (3678 g) and 248 (2232 g). The remaining ceramic building material was recovered in smaller quantities from a variety of pits, working hollows and layers.

The ceramic building material appears to be distributed fairly evenly across the site, the largest concentrations occurring in the western area of the site within probable occupation deposits 64 and 248. Possible wall footings were recorded in this area of the site, and the location of these footings is very close to the large deposit 64. The quantity and range of ceramic building material recovered here (roof, floor and flue tiles) and the presence of the wall footings confirms the presence within this area of a substantial Roman building or buildings, at least one with an underfloor heating system.

Fired Clay (Fig. 53), Emma Loader

As with the ceramic building material, the majority of the fired clay derived from Tolpuddle Ball. It was recovered from four other sites and from the watching brief in very small quantities (see Table 22). The fired clay from West Mead was from contexts of medieval date (Phase 6); all contexts from other sites were undated or unstratified. Fired clay other than that from Tolpuddle Ball is not considered further here (see archive).

Table 22: Fired clay quantification by site (wt in g)

Site	*Prehist. Phase 1–4*	*R-B Phase 5*	*Medieval Phase 6*	*Undated*	*Topsoil / unstrat.*	*Total*
Lower Eweleaze	–	–	–	8	–	8
Burleston Down	–	–	–	26	–	26
N. of Tolpuddle Ball	–	–	–	–	10	10
Tolpuddle Ball (1991/3)	134,953	4548	8	970	832	141,311
Tolpuddle Ball (1996/7)	197	–	–	8	–	205
Tolpuddle Ball Cemetery (1998)	–	–	–	13	–	13
West Mead	–	–	33	–	–	33
Watching brief	–	–	–	30	21	51
Total	135,150	4548	41	1055	863	141,657

The assemblage from Tolpuddle Ball consists of 141,311 g of fragments, all but approximately 220 g from the 1993 excavations. The vast majority are small, featureless pieces. The assemblage consists predominantly of structural pieces, rather than portable objects, although in the majority of cases the pieces are too fragmented for any positive identification to be made. Some fragments have evidence of burning, although whether they originally formed part of a hearth or oven is unknown as they lack diagnostic features, and a large number have smoothed or wiped surfaces.

Oven Fragments

The most significant deposit was a large dump of fragments within the north-eastern corner of the Middle/Late Iron Age enclosure ditch (Phase 3). This dump consists of 110,627 g (78% by weight of the total) and appears to comprise mainly large fragments from oven structure(s) – none of which were *in situ*. It is likely that this dump represents the remains of more than one oven. A number of fragments have linear wattle impressions (Fig. 53, 1) and several pieces have circular indentations. Many of the larger pieces have flat surfaces and edges (e.g. Fig. 53, 2–4). Some of these large fragments have lost their original surface, or the surface is beginning to separate from the main body of the object, and these surface fragments represent a large proportion of the overall total recovered from this context. A large amount of fragments have burnt surfaces, and several have impressions of organic material. There is no evidence of any perforations on the fragments.

Despite the large quantity of oven fragments found, it is difficult to make any reconstruction of the original oven structure(s), or of the component parts, due to the very fragmentary nature and poor condition of the fired clay, and the scarcity of 'featured' fragments. Perforated oven plates such as those from Danebury, Hampshire (Poole 1984, fig. 4.76) seem to be absent, although the pieces with curved impressions could perhaps derive from comparable objects. The few fragments with wattle impressions could represent an underlying framework for oven walls. The form of the superstructure is unknown, although it is possible that this was of similar form to one from Maiden Castle which had evidence for a domed cover (cited in Poole 1984, 115). There is no reason to assume anything other than a domestic cooking function for the oven(s), given the complete absence of evidence for any associated industrial activity.

Similar oven fragments were also recovered from Late Iron Age/Early Romano-British (Phase 3/4) pits 777 and 865 and from context 1158 (unprovenanced). One fragment from context 1158 has been identified as a possible oven plate or oven cover, with the central perforation visible, though no other perforations are present. The fragments from pits 777 and 865 are probably fragments of oven base. All the fragments from all three contexts show signs of burning, particularly those fragments from pit 865 which appear very heavily burnt.

Miscellaneous Structural Fragments

One fragment from Late Iron Age pit 9 (Phase 4) has evidence of a flat surface and a circular perforation of approximately 15 mm. This object may be a fragment from a weight or an oven plate, but it is too fragmented to identify positively.

One fragment from Iron Age posthole 241 has flat surfaces and a possible wattle impression. The fabric of this piece contains chalk and natural clay pellets. One surface is roughly finished, while the other is quite flat.

Two large fragments of daub (5476 g) were recovered from the fill of Iron Age pit/posthole 172 (Phase 3/4). The daub has been distinguished from the fired clay on the basis of the presence of wattle impressions, and also fabric – which is tempered with frequent large chalk inclusions. Wattle impressions are evident on the pieces recovered from the posthole, though whether they are the impression of horizontal rods or vertical sails is unknown. Both fragments have flat, smoothed surfaces.

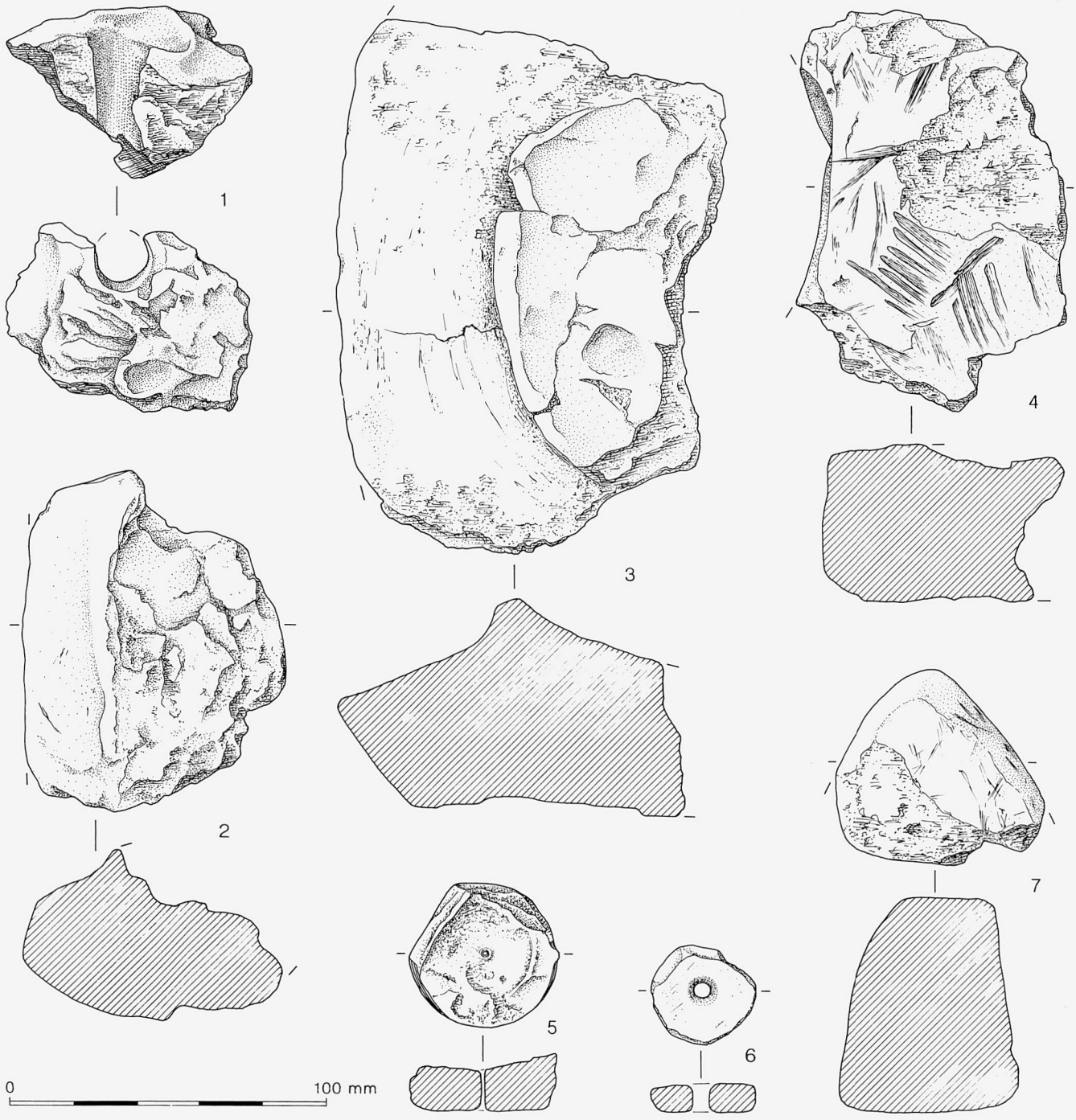


Figure 53 Tolpuddle Ball (TP93): fired clay objects 1–7

Portable Objects

Two spindlewhorls were recovered, one from Romano-British working hollow 178 (Phase 5) and one unstratified (Fig. 53, 5, 6). Both are disc like and are manufactured from pottery sherds. The spindlewhorl from the working hollow is made from a sherd of Black Burnished ware (E100). The unstratified spindlewhorl was probably made from a pot base (fabric QU102: see Laidlaw, above). These objects are commonly found on other sites of this period in the area, for example Maiden Castle, Dorset (Sharples 1991, fig 169, 7–9). One possible weight was recovered from feature 78, probably a tree throw (Fig. 53, 7). This object is quite abraded, and the original form of the weight is unknown.

Illustrated objects

Fig. 53

1. Structural fragment with wattle impression. SF 159, context 1286, enclosure ditch 53, Phase 3.
2. Structural fragment with ?wattle impression. SF 159, context 1286, enclosure ditch 53, Phase 3.
3. Structural fragment. SF 159, context 1286, enclosure ditch 53, Phase 3.
4. Structural fragment. SF 159, context 1286, enclosure ditch 53, Phase 3.

5. Spindlewhorl. Context 177, hollow 178, Phase 5.
6. Spindlewhorl. Unstratified.
7. Possible weight. Context 77, ?tree throw 78, unphased.

Roman Glass (Fig. 54), Denise Allen

The assemblage comprises 12 pieces, all recovered from Tolpuddle Ball (TP93). The group includes fragments of eight glass vessels of certain Roman date and one other whose dating is less certain. Where the original forms are recognisable they represent common Roman types, perhaps spanning the later 1st to the 3rd/4th century AD. One of the Roman vessel pieces has been re-worked for use probably as a gaming piece or counter. There is also one, or possibly two, fragments of Roman window glass, and one Roman glass bead.

The only other glass item of possible Late Roman date from the project was a small annular blue glass bead (diameter 3 mm) from grave 5159 in the Tolpuddle Ball cemetery (context 5157, Obj. 520). Beads of this type have a long currency in this country, in use from the 6th or 5th century BC to at least the 8th century AD (Guido 1978, 68). Although the bead cannot be closely dated it is compatible with the date of the cemetery (Late Roman to 7th century AD).

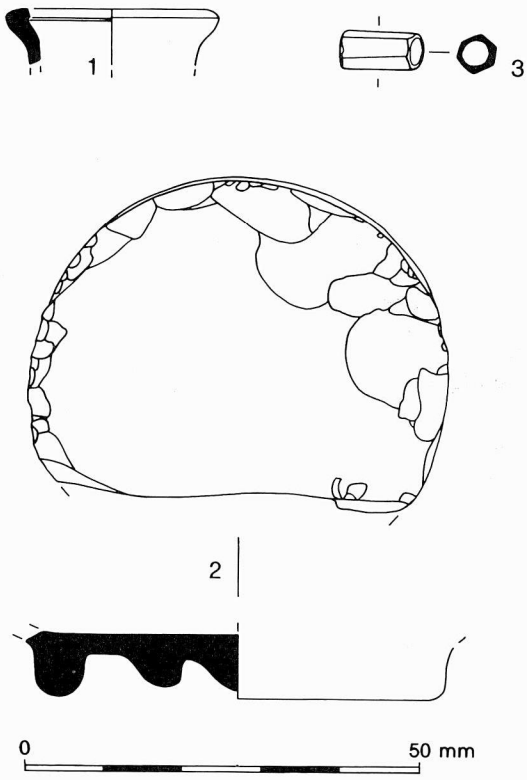


Figure 54 Tolpuddle Ball (TP93): Roman glass 1–3

Vessel Glass

Five of the Roman vessel fragments have no distinguishing features and cannot be closely identified or dated. Three are blue–green, one is pale amber and one is colourless. The remaining three vessels, together with the bead and the window glass, are discussed in more detail below.

Vessel: Fig. 54, 1 (context 1, topsoil)
A rim fragment from an unguent bottle, flask or jug of blue–green glass. The rim is outflared slightly and folded inward and downward (diameter *c.* 30 mm). This type of rim finish was used on a wide variety of vessel types during the Roman period.

Vessel: Fig. 54, 2 (SF 145, context 43, scoop/pit 201, Phase 5)
A base fragment of a cup of colourless glass. Two concentric base-rings are evident, the outer folded from the vessel wall, the inner applied as a separate coil. The central underside of the base is tooled into a raised dot. The vessel walls above the base ring have been carefully removed by grozing. The diameter of the outer base-ring is 51 mm. This base comes from a cup of a type which was the most popular glass drinking vessel from about AD 160 to 240. It had a cylindrical body, fire-rounded, slightly inturned rim, and a double base ring and has been classified as an Isings form 85b (1957, 102–3). Many examples have been cited with reference to more than 40 found at Colchester (Cool and Price 1995, 82–5, fig. 5.12). The broken vessel wall on this piece has been carefully chipped away around the outer ring, forming a disc of glass, which has subsequently been broken. The re-use of glass vessels by grozing was common in Roman times, particularly for the formation of discs in this way, presumably for use as gaming pieces or counters (*ibid.*, 167).

Vessel: not illustrated (SF 206, context 248, occupation layer, Phase 5)
A fragment of blue–green glass which has been badly distorted by fire. The original shape was apparently long and narrow (width 13 mm). The distortion of this piece is such that it is no longer clear whether it was originally solid and flat or a hollow cylinder. If the former, its most likely identification would be as the handle of a jug, flask or possibly cup. Alternatively it may represent the long, thin, cylindrical neck of an unguent bottle, flask or jug which has been flattened and deformed. Burnt glass of this type is often found in the cremation burials of the later 1st and earlier 2nd centuries AD. These can be identified as the remains of tubular unguent bottles which had some role in the funerary rites, and were then thrown on to the pyre with the remains of the deceased. Archaeologists at one time called them *lachrymatories*, thinking that they had been used to catch the tears of the mourners. Another explanation may be that they held perfumed oils which were scattered over the body. This fragment, however, could merely have been burnt accidentally.

Bead: Fig. 54, 3 (context 1, topsoil)

A long, hexagonal-sectioned bead of green glass, with longitudinal perforation and slightly pitted surfaces. Length 10 mm, maximum width 5 mm. Beads of this

type were made throughout the Roman period, becoming more popular during the later part (Guido 1978, 96–7, fig. 37, no. 9).

Window Glass

Window glass: not illustrated (context 177, hollow 178, Phase 5)
A fragment of window glass, made by casting in a flat tray or mould. The underside is matt from contact with this, the upper side is glossy. Cast, matt–glossy window glass is commonly found on Romano-British sites, and was in use to about AD 300.

Window glass: not illustrated (context 248, occupation layer, Phase 5)
An edge fragment of colourless glass, curved and folded to a neat finish. The edge is either straight, or of a diameter too large to determine. The identification of this piece is uncertain. It is perhaps most likely to be the edge of a post-medieval fragment of window glass. However, it is just possible that it is from a large colourless glass plate of Roman date.

Worked Flint, P.A. Harding

Worked flint was recovered from eleven sites and from the watching brief, totalling 6,154 pieces. In most cases the flint was found in relatively small quantities, contained little diagnostic material, and is largely considered to be residual. This material is not discussed in detail here.

Raw material derives almost exclusively from local chalk sources, although at least one bullhead flake (Burleston Down), one chert flake (Burleston Down) and one flake from a gravel nodule (North of Tolpuddle Ball) were observed. Overall it is likely that a chronological mix of technologies is present, although the lack of diagnostic material precludes close dating within a broad period of Late Neolithic to Late Bronze Age. Flakes are generally broad and display hard hammer technique, cores are biconical or variants thereof, and tools consist largely of undiagnostic scrapers. Much of this material is patinated, with varying degrees of edge damage. It is possible in some cases, however, to identify earlier (Late Neolithic) elements within the site assemblages, for example at Lower Eweleaze and Burleston Down, where end scrapers and more delicate flakes are more characteristic of this earlier period.

Four sites warrant further comment. At Tolpuddle Ball and Home Farm groups of flint in mint condition, of apparent Neolithic date, were recovered. At Lower Eweleaze flint from features sealed by colluvium was in fresh condition and could be of Neolithic date. At Burleston Down a subsoil flint scatter was investigated by a series of collection strategies; the site produced one of the largest flint assemblages, albeit redeposited and largely undiagnostic. Tolpuddle Ball (TP93) also produced limited evidence for Iron Age or Romano-British lathe tools from shale-working. Flint collected during the watching brief is also briefly discussed.

Tolpuddle Ball

The flint from Tolpuddle Ball, totalling 3228 pieces is shown in Table 23 by period, feature type and flint composition. The mean quantity of material from all contexts (nine pieces), the condition, size and provenance of material indicates that most is residual. However individual features merit attention.

Pit 841, a subcircular feature approximately 1 m in diameter and 0.35 m deep contained 307 pieces of worked flint including chips and an apparently unfinished bifacial knife. The material is in mint condition and includes delicate blades with narrow butts prepared by platform abrasion. Hammer mode is predominantly by hard hammer percussion although soft hammer characteristics are also present. A limited attempt to refit material was unsuccessful although recurring patterns within the structure of the flint suggests that a limited number of nodules are represented. There are no cores although cortical flakes indicative of core preparation are present. Additional technological features include a core rejuvenation flake. The bifacial knife which is apparently made on a thermal fragment has covering retouch across one side with a single invasive removal across the other. Some short steeply plunging flakes amongst the waste material may represent flakes removed during platform preparation of a bifacial tool of this sort. The dating of the pit is complicated by the fact that it also contained nine sherds of Middle/Late Iron Age pottery. It is arguable that the quantity, condition and size range of the flint assemblage is not characteristic of a residual group and that the pit is more likely to be of Late Neolithic date with intrusive pottery. Pit 841 has been assigned to Phase 1 on this basis

A similar quantity of flint (313 pieces) was recovered from Quarry Pit 2473. All the material was derived from the upper fills of the pit (no finds were recovered from the primary/lower fills of the chalk rubble backfill), concentrated within the lower of two spits excavated. Iron Age pottery was also found within the upper fill, although mainly in the upper spit, suggesting that the flint is residual. The flint from the upper fill is a mixed group, including a large proportion of undiagnostic flakes and cores, in condition ranging from unpatinated to heavily patinated, and including some fresh material. More diagnostic material includes one transverse arrowhead in a grey flint unlike any of the rest of the group, one piercer and four scrapers. There is some evidence for on-site knapping in the form of two refitting flakes, four retouched flakes which may be unfinished pieces, and a core possibly re-used as a hammerstone. As a group, however, there is little to indicate date range in the technology employed. The lack of datable artefactual material in the primary fills of Pit 2473 makes its dating open to interpretation. The molluscan data associated with soil fills within the chalk rubble backfill suggests that the pit was excavated in the Neolithic or Early Bronze Age and it has been assigned to Phase 1 on this basis (see Allen, Section 4).

A small group of flint (76 pieces) was recovered from the Tolpuddle Ball cemetery site (W2405.17), both from grave contexts and in various earlier ditches and

Table 23: Tolpuddle Ball worked flints by phase/context type

Phase	*Feature type*	*No. contexts*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*Comment / total*
TP93											
1	Pits	6	–	–	92	131	9	–	2	1 knife	inc. chips
	Ditches	4	2	5	31	24	1	–	1	–	
2	Pit	1	–	–	–	–	1	–	–	–	
	Ditches	2	–	–	3	4	–	–	1	–	
3	Pits	3	–	2	43	47	2	–	1	–	inc. chips
	Ditches	7	1	5	32	29	3	–	–	–	
	Postholes	3	–	–	1	6	–	–	–	–	
	Other	1	–	–	5	5	–	–	–	–	
4	Pits	12	1	5	39	40	2	1	–	–	
	Posthole	1	–	–	1	–	–	–	–	–	
	Grave	1	–	–	1	–	–	–	–	–	
	Other	5	1	–	3	4	–	1	–	–	
3/4	Pits	60	9	4	149	130	9	6	5	1 knife, 1 flake tool	
	Ditches	7	–	1	21	16	1	–	–	–	
	Other	3	–	1	17	17	–	1	–	–	
5	Pits	10	1	–	12	10	2	–	–	–	
	Ditches	5	–	–	9	5	1	–	–	–	
	Postholes	4	–	–	–	5	–	–	–	–	
	Graves	7	–	–	23	18	2	–	1	1 b&t arrowhead	
	Other	30	6	4	133	187	4	3	3	1 transverse arrowhead	
6/7	all	3	4	2	111	77	1	2	–	–	inc. 1 chert flake
undated/ unstrat.	all	27	2	4	200	187	9	5	3	1 piercer, 1 fabricator	
	Sub-total	*202*	*27*	*33*	*926*	*942*	*47*	*19*	*17*	*7*	*2018*
W2404.13											
1	Pits	2	16	7	157	114	4	9	4	1 piercer, 1 oblique arrowhead, 2 misc.	
	Ditches	2	1	–	33	7	–	–	3	–	
	Postholes	6	1	–	24	9	–	–	–	–	
2	Pits	2	–	–	14	8	–	–	–	–	
3/4	Pits	16	6	7	114	72	5	2	1	2 knives,1 hammer, 1 flake tool	
	Ditches	2	6	–	74	26	1	7	–	1 hammer	
	Graves	3	1	–	6	5	–	–	–	–	
	Other	3	–	1	15	6	–	–	–	–	
6	Other	1	2	–	28	35	–	6	1	–	
unstrat.	all	4	5	3	111	79	3	10	3	–	
undated	all	12	1	4	27	39	–	–	–	1 core tool roughout, 1 discoid	
	Sub-total	*53*	*39*	*22*	*603*	*400*	*13*	*34*	*12*	*11*	*1134*
W2405.17 cemetery											
various	all	22	1	1	36	31	5	–	–	1 axe roughout, 1 ret. burnt flake	76
Overall total			*67*	*56*	*1565*	*1373*	*65*	*53*	*29*	*20*	*3228*

1 = cores; 2 = broken cores; 3 = flakes; 4 = broken flakes; 5 = burnt worked flint; 6 = retouched flakes; 7 = scrapers ; 8 = other tools (b&t = barbed and tanged, ret. = retouched)

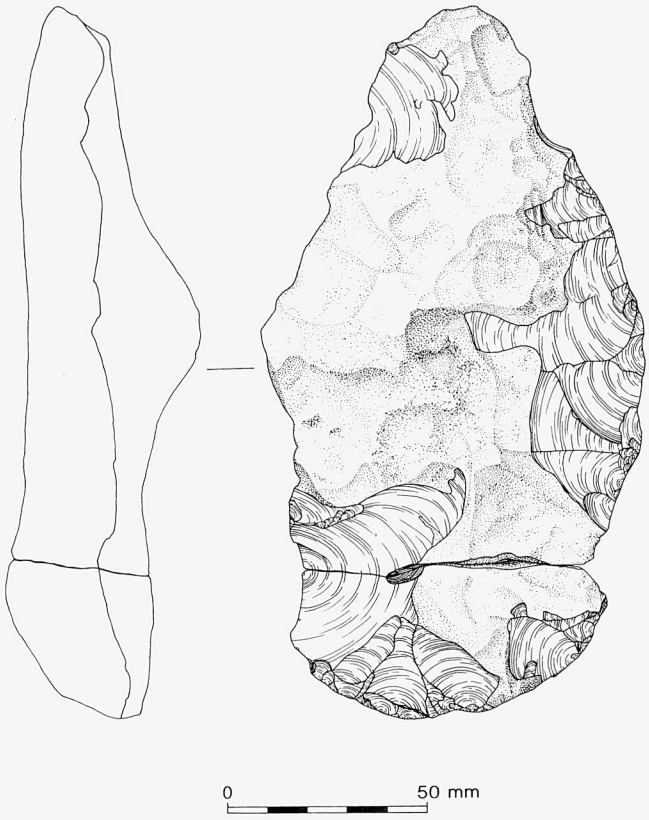


Figure 55 Tolpuddle Ball Cemetery (W2405.17): Neolithic axe roughout

postholes on the site. Most of this group is undiagnostic and evidently residual although two blades with abraded butts possibly indicate a Neolithic element. Of most interest among this group is a Neolithic axe roughout, broken during manufacture, from posthole 5146 (Fig. 55). It comprises a thin flat nodule with a thick chalky cortex and bifacial flaking around most of the circumference. The fracture, which detached one end, clearly originated from the point of percussion of one of the main flake scars. It seems likely that the two broken fragments were reused as packing in the posthole soon after the event which suggests that the otherwise undated posthole is of Neolithic date. The presence of blades with abraded butts further suggests a low level of Neolithic activity in the immediate area.

Most flint from Tolpuddle Ball is patinated, although small groups of unpatinated material and isolated unpatinated flakes also occur in association with patinated artefacts. The quantity of unpatinated material usually forms a minority of the flint from each context, although the Phase 3 features ditch 52 and pit 1069, with Phase 4 pits 119 and 120, contain more unpatinated pieces than patinated. The unpatinated material also includes two refitting fragments from a Siret fracture (accidental breakage) from Phase 4 pit 122 and two large refitting flakes from a nodule of gravel flint from Phase 3/4 pit 15. One of the largest groups, 23 pieces from pit 120, also includes two flakes which refit to a core and at least six Siret fractures which are usually associated with hard hammer percussion. This mode is confirmed by very accentuated cones of percussion including incipient cones from miss-hits. The technology is generally unsophisticated and is consistent with previous descriptions of flint working from Late Bronze Age and Iron Age contexts which is locally often associated with Iron Age shale working (Cox and Woodward 1987). A group of five unpatinated flints from tree throw 425 (unphased), which otherwise comprises patinated material, includes two probable shale working tools.

The technique of manufacture often involves snapping a flake blank by voluntary fracture (deliberate breakage) to form a strong right angled working tip. One of the pieces is consistent with tools associated with Iron Age shale working activity at Rope Lake Hole (*ibid.*, fig. 95) while the other is similar to the chisel form developed by Romano-British lathe turners to manufacture shale objects. It is therefore unclear whether the artefacts from Tolpuddle pre-date the introduction of the lathe or whether they relate to hand-turned shale working. Fragments of unworked and cut shale were found across the site, although no completed or rejected artefacts were found and there was only minimal evidence of by-products from lathe turning (see Cox and Loader, below).

Home Farm, Puddletown

This site produced a small assemblage of 201 pieces and most was recovered in topsoil contexts (see below, Table 25). Stratified material was however recovered from two pits, one of which (1201) contained a few residual pieces associated with medieval pottery. The flint from the second pit (1207), is also likely to be residual, being associated with 47 Late Bronze Age sherds (see Laidlaw, above). However, although the quantity is relatively small (40 pieces) the composition of the assemblage, which is unpatinated, appears to contradict this. The condition and presence of small, fragile pieces with fresh edges is not compatible with derived material. There are at least nine irregular blades of varying lengths including one with a faceted butt, a failed blade core and a semi-biconical core. The large, broad end scraper is burnt and made on a flake with an abraded butt. It has semi-abrupt, direct retouch at the distal end to create a regular, convex scraping edge. There are also two axe resharpening flakes of pale grey flint, one of which has a small area of grinding at the distal end. The technology and range of artefacts appears to be contemporaneous but is not typical of Late Bronze Age industries. It seems more appropriate to assign this group a Neolithic date.

Lower Eweleaze (near Bardolf Manor), Puddletown

A small assemblage of 198 pieces was recovered, both from colluvium and from a small number of excavated features (see below, Table 25). Pieces from the colluvium are mainly broad flakes, which are traditionally dated to the Late Bronze Age, although at least two pieces with abraded butts show residual elements, as does one flake with rather crude bifacial flaking. The flint is mainly grey and glossy with some 'clay-with flints' staining. There are two flake tools.

Table 24: Burleston Down worked flint totals by context type

Context type	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*Total*
Trench 4									
ditch 1341	–	–	4	5	–	–	–	–	9
Trench 5									
unstrat.: topsoil	23	9	279	147	–	13	16	1 ?discoid, 1 flake tool, 1 piercer	490
unstrat.: subsoil	2	–	40	22	–	1	1	3 misc. flake tools	69
test pits (6 no.): topsoil	3	–	16	10	–	2	–	–	31
subsoil	–	1	26	17	2	1	1	–	48
subsoil test pits (16 no.)	2	1	71	86	4	–	5	1 microdenticulate, 1 worked	171
sub-total all test pits	*5*	*2*	*113*	*113*	*6*	*3*	*6*	*2*	*250*
subsoil walking: all units	9	16	198	208	9	4	9	–	453
feature 1354	–	–	3	–	–	–	–	–	3
feature 1361	–	–	3	–	–	–	–	–	3
pit 1371	–	–	1	2	3	–	–	–	6
ditch 1376	–	–	3	10	–	–	1	–	14
sub-total: subsoil features	–	–	*10*	*12*	*3*	–	*1*	–	*26*
Overall total	*39*	*27*	*644*	*507*	*18*	*21*	*33*	*8*	*1297*

For key to flint types see Table 23

From the lower colluvium came a blade segment of a bifacial axe roughout in mint condition. The piece has fractured due to an attempt at a massive thinning blow. The apparent tranchet edge is probably unintentional. The date and provenance of this piece is of some interest. The fragment is potentially of Mesolithic date, although the possibility that it is Neolithic cannot be ruled out. The mint condition of the piece is notable given its recovery from a colluvial deposit.

Flint from the features is of a different nature and is likely to be of earlier date than the majority of the material from the colluvium, perhaps Late Neolithic. The flint is probably residual, however, since pottery date the features to the Late Bronze Age. Flakes from gully 1117 and slot 1126 are more delicate, with fresher edges. Four pieces from slot 1126 have abraded butts and are more blade-like, and from the same feature came a retouched flake with a bifacial to thin butt. Pit 1130 produced a possible broken blade with abrasion.

Burleston Down, Tolpuddle

This site produced a relatively large quantity of flint (1297 pieces), nearly all from the main excavation area (Trench 5). Flint was initially recovered from general topsoil and subsoil layers during machine stripping of the main trench and from six hand-dug test pits through topsoil and subsoil. Further flint was subsequently recovered from 16 subsoil test pits, dug in 0.05 m spits (Trench 5), from subsoil 'fieldwalking' in 10 m^2 collection units across the same area, and from a few excavated archaeological and natural features. Table 24 gives the breakdown of flint by type within each context group, more detailed breakdowns are held in the archive.

The large group recovered initially from the topsoil and subsoil (559 pieces) provides the overall pattern for the site assemblage. Nearly all of this material is patinated light blue/white, and most pieces show signs of edge damage. There is one bullhead flake and one chert flake, otherwise all flint is derived from local chalk sources.

The majority of this group consists of undiagnostic flakes and broken flakes. Cores are principally biconical or variants thereof, sometimes with secondary platforms or with one more important platform. Retouch is scarce and is all crudely executed; at least three pieces have inverse 'wedge' technique removals. One other has bifacial flaking to remove or thin the butt. The scrapers are undiagnostic, and vary in execution. All are end scrapers, three on elongate flakes and the remainder on broader flakes. Other tools are represented by one ?discoidal knife, possibly unfinished, one piercer and three miscellaneous flake tools. None of this material is diagnostic, and only a general Late Neolithic/Bronze Age date is applicable. Patination and the degree of edge damage would indicate that this is a redeposited assemblage; none is likely to represent *in situ* deposits.

Only small quantities were recovered from excavated features, most deriving from Trench 5 (35 pieces altogether). None of these pieces is diagnostic. A well-made end scraper came from ditch 1376 (Trench 5), which is dated by pottery to the Late Bronze Age. The only material from trenches 1 to 4 comprises nine pieces recovered from ditch 1341 in Trench 4, all flakes.

Table 25: Worked flint totals by context type (all other sites)

Site / context type	*No. contexts*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*Total*	*Site total*
DOWNTONS FARM											
All contexts	4	3	–	27	9	1	3	2	–	45	45
LOWER EWELEAZE											
Colluvium	2	13	2	97	38	–	–	–	2 flake tools, 1 axe roughout	153	
Subsoil features	6	–	–	25	19	–	1	–	–	45	198
HOME FARM											
Subsoil features	3	2	3	27	16	7	–	1	–	56	
Topsoil/subsoil	2	11	1	75	46	2	2	7	1 backed knife	145	201
ROMAN ROAD											
All contexts	1	–	–	4	8	–	–	–	–	12	12
N. OF TOLPUDDLE BALL											
Subsoil feature	2	3	–	6	6	1	1	–	–	17	
Natural feature/topsoil	2	8	3	79	58	1	4	5	1 piercer, 1 ?knife	160	177
S. OF TOLPUDDLE BALL											
Subsoil feature	3	12	1	30	31	1	2	2	1 broken knife	80	
Topsoil	–	–	–	1	–	–	–	1	–	2	82
HILL BARN, TOLPUDDLE											
All contexts	11	1	4	29	7	–	–	–	–	41	41
W. OF ROGER'S HILL FARM											
All contexts	1	3	–	7	10	–	–	1	–	21	21
WEST MEAD											
Medieval deposits	9	3	2	63	52	1	1	–	–	122	
Colluvium	5	2	–	50	37	2	1	1	–	93	
Topsoil	2	3	1	81	36	1	–	–	–	122	337
WATCHING BRIEF											
Surface collection	5	19	8	143	122	4	4	7	1 knife, 1 broken leaf arrowhead	309	309
Unstratified	16	17	1	127	40	5	6	4	2 piercers, 4 misc. tools	206	206
OVERALL TOTAL	74	100	26	871	535	26	25	31	15	1629	

For key to flint types see Table 23

The initial six test pits in Trench 5 produced between five (TP1) and 20 pieces (TP5), with slightly more coming from the subsoil than the topsoil. There is very little retouch and tools are represented by a single scraper. Flint from the subsequent sixteen spit-dug test pits in trench 5 produced very similar material. The five scrapers recovered include two of possible Late Neolithic date as well as a micro-denticulate. None of the other material is diagnostic. Quantities per test pit ranged from one piece to 32 pieces. The majority of the flint from these test pits was concentrated in the upper three spits, showing a distinct fall-off from spit 4 downwards (details in archive).

Subsoil walking across trench 5 produced a significant proportion of the overall site assemblage (453 pieces, representing 35%), from 23 collection units. Very

Table 26: Burnt flint quantification by site (wt in g)

Site	*Features*							
	Prehist. Phases 1–4	*R-B Phase 5*	*Med. Phase 6*	*Post-med, Phase 7*	*Undated*	*Colluvium*	*Unstrat.*	*Total*
Downtons Farm	–	–	–	1	–	–	348	349
Lower Eweleaze	10	–	–	–	–	173	–	183
Home Farm	–	–	77	–	–	–	304	381
Burleston Down	14	–	–	–	36	–	1683	1733
N. of Tolpuddle Ball	12,671	–	–	–	–	–	7495	20,166
Tolpuddle Ball (1991/3)	10,000	1182	62	276	1238	–	–	12,758
Tolpuddle Ball (1996/7)	4142	–	73	–	7627	–	1643	13,485
Hill Barn, Tolpuddle	258	–	–	–	–	–	–	258
West Mead	133	–	3604	–	752	–	837	5326
Watching brief	96	1276	–	–	5348	–	972	7692
Total	27,324	2458	3816	277	15,001	173	13,282	62,331

little of this material is at all diagnostic, but two possible Late Neolithic scrapers were found. Apart from scrapers there were no other tools. Perhaps unsurprisingly, the flint shows a concentration towards the bottom of the slope, with a gradual fall-off up-slope.

Watching Brief

Worked flint recovered from the watching brief (515 pieces in total) included 309 pieces from surface collection of a 250 m length of the easement at the eastern end of the route (see Table 25). This unstratified collection is largely undiagnostic but included an end scraper of Greensand Chert and a knife made on a reused patinated flake. The patinated and plough damaged state of the material indicates that it was redeposited and probably represents activity throughout the Neolithic and Bronze Age periods. Elsewhere, unstratified worked flint was collected from various areas along the bypass route, mostly in small quantities at any one location (details in archive).

The flint from the watching brief undertaken at South of Tolpuddle Ball includes material from ditches 5006 and 5013, the former dated by pottery to the Late Bronze Age. The retouched tools include a small convex end scraper on a flake which may be contemporary with the pottery and an end scraper of probable Late Neolithic date. The cores, which are well represented, and flakes do not indicate Late Bronze Age activity which suggests that the flint is residual or contemporary with the use of the ditches.

Burnt Flint, Emma Loader

Burnt, unworked flint was recovered from eight sites and from the watching brief, the largest quantity deriving from Tolpuddle Ball (see Table 26). Contexts which produced burnt flint range in date from prehistoric to post-medieval. This material type is intrinsically undatable, but is frequently associated with prehistoric artefacts, and is often taken as an indicator of prehistoric activity. Its function is unknown, and it is in any case unlikely that a single activity would account for every occurrence. Various interpretations for concentrations of burnt flint have been proposed, ranging from cooking pits to saunas (e.g. Barfield and Hodder 1987).

Tolpuddle Ball

A total of 26,243 g of burnt flint was recovered from a variety of features, mostly Iron Age, from the 1993 and 1996/7 excavations. Some 49% of the total weight of burnt flint was recovered from pits, with a further 35% from ditches. The remaining burnt flint was recovered from a variety of other features and contexts. Of the burnt flint recovered from pits in the 1993 excavation, 5416 g (over 80% of the total weight from pits) was from pits assigned to Phases 3–4 on the basis of other artefactual evidence. Of the remaining burnt flint, 416 g was recovered from Romano-British pits (Phase 5); 430 g was recovered from pits which contained no datable evidence, and the remaining 36 g of burnt flint was recovered from Bronze Age pits (Phase 1). Of the burnt flint recovered from ditches, 4158 g (over 90% of the total weight from ditches) was from ditches assigned to Phases 3–4 on the basis of other artefactual evidence. Of the remaining burnt flint, 100 g was recovered from a ditch dated as Bronze Age; 158 g was from ditches of an unknown date and the remaining 18 g was recovered from Roman ditches.

Burleston Down, Tolpuddle

A total of 1,733 g of burnt flint was recovered. Of this, 64% of the total weight of burnt flint was recovered during testpitting, 12% during subsoil walking and 24% from the trial trenches. Only 50 g came from stratified

features: from a Phase 2 Late Bronze Age pit 1371 (14 g) and an undated posthole 1369 (36 g).

North of Tolpuddle Ball

A total of 20,166 g of burnt flint was recovered, the largest group after Tolpuddle Ball. The provenance of the flint is of interest. The largest proportions of burnt flint (63% of the total weight), were recovered from just two pits, 2011 and 2006 (11,586 g and 1085 g respectively). Both of these features are dated to the Late Bronze Age on the evidence of pottery. The large quantities of burnt flint, particularly from pit 2011, and the association with pottery, albeit in small quantities, would suggest an interpretation for these two features as cooking pits. The remaining burnt flint (7,495 g) came from unstratified contexts during machining and cleaning.

West Mead, near Bere Regis

A total of 5326 g of burnt flint was recovered. Of the total weight, 62% was recovered during test pitting and 38% was recovered from stratified features and other contexts. The relatively high quantities of burnt flint collected on this site is interesting given the largely medieval date of the other artefacts, but it may be noted that worked flint was also recovered in some quantity, albeit largely residual, from the site (see Table 25). The fragments of burnt flint recovered from features were dispersed in small quantities across the site, showing no obvious clustering. The greatest amount (837 g) was recovered from the topsoil, the second largest proportion (619 g) being recovered from ditches. None of these ditches is dated earlier than the medieval period, although ditches 3042 and 3055 also produced residual worked flint. The remaining burnt flint was recovered from charcoal rich deposits (499 g) and postholes/pits (39 g). The overall weight of the burnt flint recovered during test pitting was 3,332g, of which 133 g came from a spit dated as prehistoric and the remainder either from medieval (2899 g) or undated contexts (300 g), although contexts 3136 and 3145 also produced residual worked flint. A minor concentration of burnt flint (2278 g) was observed in testpit 3130. The highest concentrations of burnt flint were recovered from the upper spit (70% of the total weight), with a sharp fall-off in quantities noted in lower spits.

Other Sites

At Downtons Farm only 1 g of the total came from a stratified feature (post-medieval scoop 1004). At Lower Eweleaze 80 g of the total derived from the upper colluvium and 93 g from the lower colluvium. The remaining 10 g was recovered from a ditch (4 g) and a gully (6 g), both of which contain probable Bronze Age flint. At Home Farm 77 g came from two pits (Late Bronze Age pit 1207 and medieval pit 1205). At Hill Barn borrow pit all of the burnt flint (258 g) came from a Late Iron Age/Early Romano-British feature (6006). The watching brief produced 7692 g of burnt flint, most of it from undated contexts. No concentrations were noted.

Worked Stone (Fig. 56–7), Emma Loader (with stone identifications by David Williams)

The stone assemblage comprises 73 worked objects, consisting of 39 quern fragments, seven loomweights, four mortar fragments, six whetstones, a large perforated disc, a spindlewhorl, a pestle, a fragment of *tessera*, 12 tile fragments and one architectural fragment. With the exception of five tile fragments from the medieval site at West Mead, all of the stone was recovered from Tolpuddle Ball (TP93 and W2402.13). The objects from Tolpuddle Ball are quantified by type and phase in Table 27. Full details of all objects are available in the archive catalogue.

A further 201 fragments of stone from Tolpuddle Ball are either unworked or are from unidentifiable objects. Of these, 81 fragments were recovered from Iron Age contexts (Phase 3, 4), 65 from Romano-British contexts (Phase 5), one fragment from a post-medieval context (Phase 7) and 54 fragments from unstratified and undated contexts. These fragments are not discussed further.

Some of the stone, notably the hard white chalk used for loomweights and the large disc, was presumably of local origin. The majority, however, seems to have been imported from some distance away, originating from the Jurassic, Upper Greensand, Purbeck and Bristol areas, and from the Isle of Wight.

Querns

Thirty-nine fragments of quernstone were recovered, from stratified Iron Age and Romano-British contexts and from topsoil and unstratified contexts (see Table 27). The quernstones from dated features are all glauconitic sandstone, probably from the Upper Greensand, a non-local stone type. The only recorded quern quarries are at Pens Pit on the Somerset and Wiltshire border, and at Lodsworth in West Sussex (Peacock 1987). The quarry at Pens Pit is thought to have supplied some of the Iron Age and Roman querns found in Dorset (*ibid.*, 62).

Where possible, identification of quern type has been attempted, though many fragments are either too small or lacking diagnostic features such as handle slots, making positive identification difficult. Of the fragments recovered from the topsoil, 14 lower rotary quernstones, five upper rotary quernstones and one saddle quern were identified. The remaining four pieces are of uncertain type.

Saddle Quern (Fig. 56, 1)

A single saddle quern was identified, in glauconitic sandstone, found in the topsoil (W2402.13). This object is unlikely to be later in date than Middle Iron Age, but

Table 27: Tolpuddle Ball worked stone by phase (No.)

Object	*Phase* 3	4	3/4	5	u/s	*Total*
Saddle quern	–	–	–	–	1	1
Rotary quern	2	1	1	11	23	38
Loomweight	1	3	1	1	–	6
Loomweight roughout	–	–	–	–	1	1
Mortar	–	–	–	3	1	4
Whetstone	1	–	–	5	–	6
Disc	–	1	–	–	–	1
Tessera	–	–	–	1	–	1
Tile	–	–	–	3	4	7
Pestle	–	–	–	1	–	1
Weight/whorl	–	–	–	1	–	1
Arch.	–	–	–	–	1	1
Total	4	5	2	26	31	68

Arch. = architectural

may have been reused at a later date. The quern is small, 220 mm by 145 mm, oval in shape with a slightly concave upper surface and made from greensand. There is a groove cut into the quern on one edge, approximately 50 mm in length, 15 mm wide and 10 mm deep. There are similar cut marks, though not as distinctive, at various points around the edge of the stone. These marks suggest that the quern stone was re-used as a sharpening stone.

Rotary querns

Three fragments of rotary querns were recovered from Iron Age features. Two fragments were recovered from ditch 743 (Phase 3), though whether they originate from the same quern stone is not known. The thickness and size of these fragments would suggest that they are probably from upper stone. It is uncertain whether the other fragment, recovered from pit 120 (Phase 4), is from an upper or lower stone.

One half of an upper stone was recovered from the fill of Phase 3/4 pit 1071. This piece has a diameter of approximately 300 mm, and an average thickness of approximately 50 mm. The grinding face of this stone is slightly concave, while the upper face is flat, and no tooling marks are visible on either faces or around the edge. This quern is made of fine-grained sandy limestone of uncertain origin. The date of this quern is uncertain, though it is may be dated on its association with Late Iron Age/Early Romano-British pottery. This is the most complete example of a rotary quern from the site.

Eleven quern fragments were recovered from a variety of Romano-British features. This total consists of ten rotary quern fragments and one unknown fragment, which may be from either a rotary or a saddle quern.

The rotary quern fragments consist of four possible upper stones, two upper stone fragments, one lower stone fragment and two possible lower stone fragments. The upper stone fragments have on average a thickness of approximately 40 mm, and are all flat featureless pieces. The lower stone fragments are thicker, on average approximately 100 mm. Due to the size of the fragments, any form is difficult to see. The majority of the upper stones appear to be more or less flat, while the lower stones are distinguishable by their thickness.

Loomweights (Fig. 56, 2–6; Fig. 57, 7)

Six weights were recovered (all TP93). Three are complete or almost complete, one is incomplete and two are very fragmented. Forms vary from roughly cylindrical, through subrectangular to wedge-shaped; a similar range was found at Danebury, Hampshire (Brown 1984). Weights for the complete objects range from 1240 g to 2000 g. All have countersunk perforations at one end; no wear marks were noted. Although these objects are described as loomweights it remains a possibility that some may have been used for other purposes, for example as thatchweights.

Three complete and two incomplete loomweights were recovered from Iron Age features. Four were recovered from pits – three from the Phase 4 pit 223 (Fig. 56, 2–4) and one from pit 1041 (Phase 3/4) – and the fifth from the south-west terminal of the Phase 3 enclosure (128). The loomweights from pit 223 are of particular interest on account of their manufacture and also their deposition. These three weights are all in a hard white chalk (presumably of local origin) and are exceptionally well finished, although one (Fig. 56, 2) is now very fragmentary. They were found together, apparently as part of a deliberately 'structured' deposit, in the uppermost fill of the pit (see Plate 10); other associated objects included pottery and animal bone. The loomweight from pit 1041 is also of chalk, and is very fragmentary (SF 204: not illustrated). Only the upper half of the chalk loomweight from ditch 128 survives; this weight has a burnt area around the perforation (Fig. 56, 6).

One near complete rectangular chalk loomweight was recovered from Romano-British wall 718 within terrace 702 (Fig. 57, 7), although this may be an Iron Age object incorporated in a later context. Tooling marks are clearly visible on the inside of the countersunk perforation. Two other circular indentations are also visible, one 20 mm from the circular perforation and one on the reverse side at the top edge. The purpose of these is unknown – they are both of similar diameter to the main perforation, though are less than 10 mm in depth. This weight is very carefully shaped with a regular rectangular section; one of the bottom corners has been broken off.

In addition, one probable unfinished loomweight rough-out, was recovered from the topsoil. This object, in Oolitic Limestone, has two opposed shallow circular indentations in the appropriate position for use as a loomweight (Fig. 56, 5); it is of uncertain date.

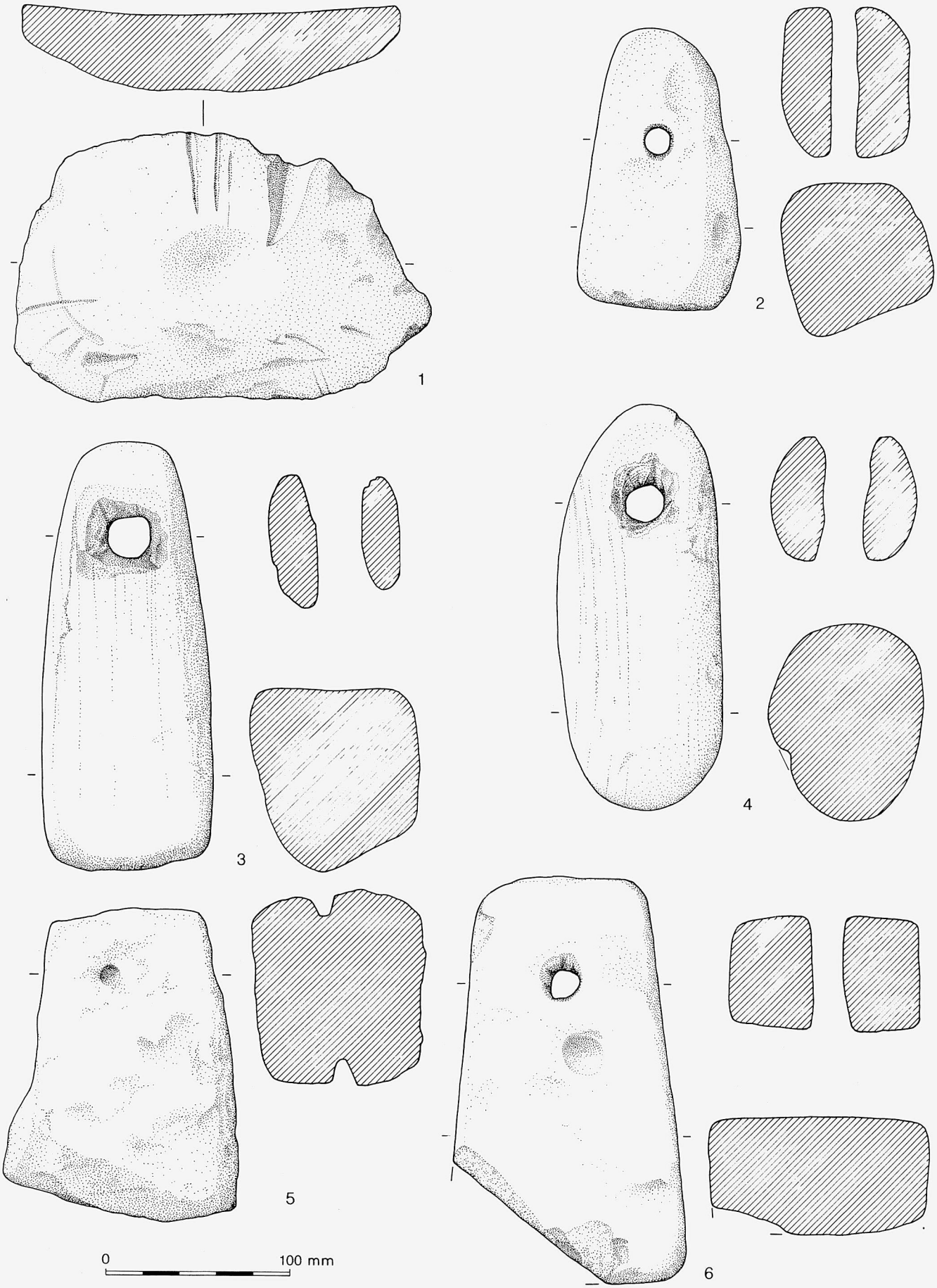


Figure 56 Tolpuddle Ball (W2402.13 and TP93): Stone objects 1–6

Mortars (Fig. 57, 8–9)

Four fragments of stone mortars, representing four separate vessels, were recovered, three from Romano-British features and one from the topsoil. One fragment is of Purbeck Marble, one Oolitic Limestone and two shelly limestone. The source of the shelly limestones is of interest since one is a Purbeck type, possibly the 'white roach' variety, but the other is from the featherbed deposits at Quarr on the Isle of White.

Two of the mortars recovered from Romano-British contexts (Phase 5) derived from wall 718 within structure 702 (Fig. 57, 8, 9). They are a common Romano-British find and of a type known to have been manufactured in Purbeck, although the identification of one mortar from limestone from the Isle of Wight may be noted. The mortars can be paralleled amongst those found in Dorchester (e.g. Mills and Woodward 1993b, figs. 81–2). The mortar recovered from the topsoil is also thought to be of Romano-British date and is comparable to a similar object found on the Dorchester By-pass Western Link (Seager-Smith 1997, fig. 116.8).

Whetstones and Honestones (Fig. 57, 10)

Six whetstones, honestones and sharpening stones were recovered from the site. All were made of fine-grained sandstone. One was recovered from an Iron Age ditch (790; Phase 3), and the rest were recovered from Romano-British hollows and depressions. There is no morphological distinction between the stones of either period. One of the stones is a very well shaped, rectangular sectioned object (Fig. 57, 10), comparable to Hengistbury Head type W1(a) (Laws 1987, 173, ill. 122, 1–6). It has been identified as probably Pennant Sandstone from the Bristol area. The remaining objects can be divided into three Hengistbury type W3 and two Hengistbury type W2.

Chalk Disc (Plate 47)

A large, perforated chalk disc was recovered from the Phase 4 pit 1093. This object (SF 159) has a diameter of approximately 400 mm, is 150 mm in thickness, weighs over 42 kg and has a central circular perforation of 80 mm diameter. No tooling marks are evident on any surfaces, which are in poor condition and laminating. One side of the chalk disc appears relatively flat, the other is uneven. The chalk is presumably of local origin.

Some parallels for this object are known, and suggestions have been made as to the function of such objects. Discs of slightly smaller diameter and generally less than half the thickness, made of chalk marl, were found at Danebury (Brown 1984, fig 7.58). Marks of burning around outer edges and/or on one surface of these discs, and in some cases the lack of a central perforation, have led to the suggestion that they functioned as oven or kiln lids (*ibid.*, 419). Previous interpretations had included flywheels as, for example, a large disc of Lias limestone found at Hod Hill (Richmond 1968, 17, pl 2B).

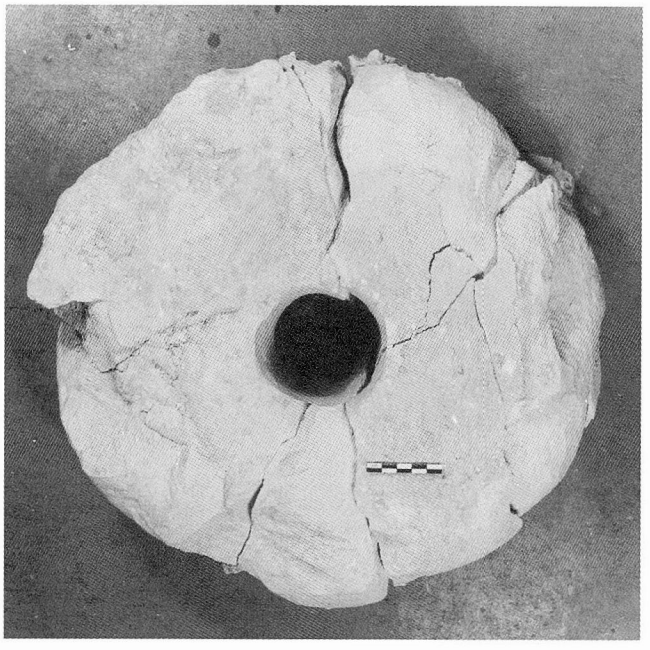


Plate 47 Chalk disc (SF 159) from Tolpuddle Ball (TP93): Phase 4 pit 1093 (scale 50 mm)

The Tolpuddle Ball disc, however, has no burnt areas and its weight would make it impractical and cumbersome as an oven lid. The dimensions may be suitable for a flywheel; the resulting momentum would result in a slow-turning wheel, suitable for the finishing of objects. There are no signs of wear marks resulting from such a use, but the post-depositional abrasion of the object might have removed these. Alternatively, its size and dimensions may have made it suitable for a pottery wheel, although there is no other evidence for pottery production on the site and, indeed, the production of wheelthrown pottery in Dorset as a whole is rare. The predominant Romano-British pottery type, Black Burnished ware, was a handmade tradition, as were its Iron Age predecessors. Since most lathes were pole lathes at this time the use of the disc as a lathe flywheel is somewhat uncertain

The context in which the object was found seems to provide the best clue for its likely function. The disc was deposited directly above the basal fill of pit 1093, together with half a large burnished pottery jar and a copper alloy brooch (SF 164). The group was evidently deliberately and carefully placed within the pit as some form of 'structured' or special deposit (see Plate 11). It would not be unreasonable to suggest that the disc was manufactured as some form of 'imitation' quern and had a symbolic rather than a functional role.

Other Objects (Fig. 57, 11–13)

Half of a fine-grained limestone weight, or spindlewhorl was recovered from Romano-British layer 248 (Fig. 57, 11). A chalk pestle was recovered from the same context (Fig. 57, 12). A large fragment of dressed fine-grained Oolitic Limestone of Jurassic origin was recovered from a pit of Romano-British date (Fig. 57, 13). The stone has

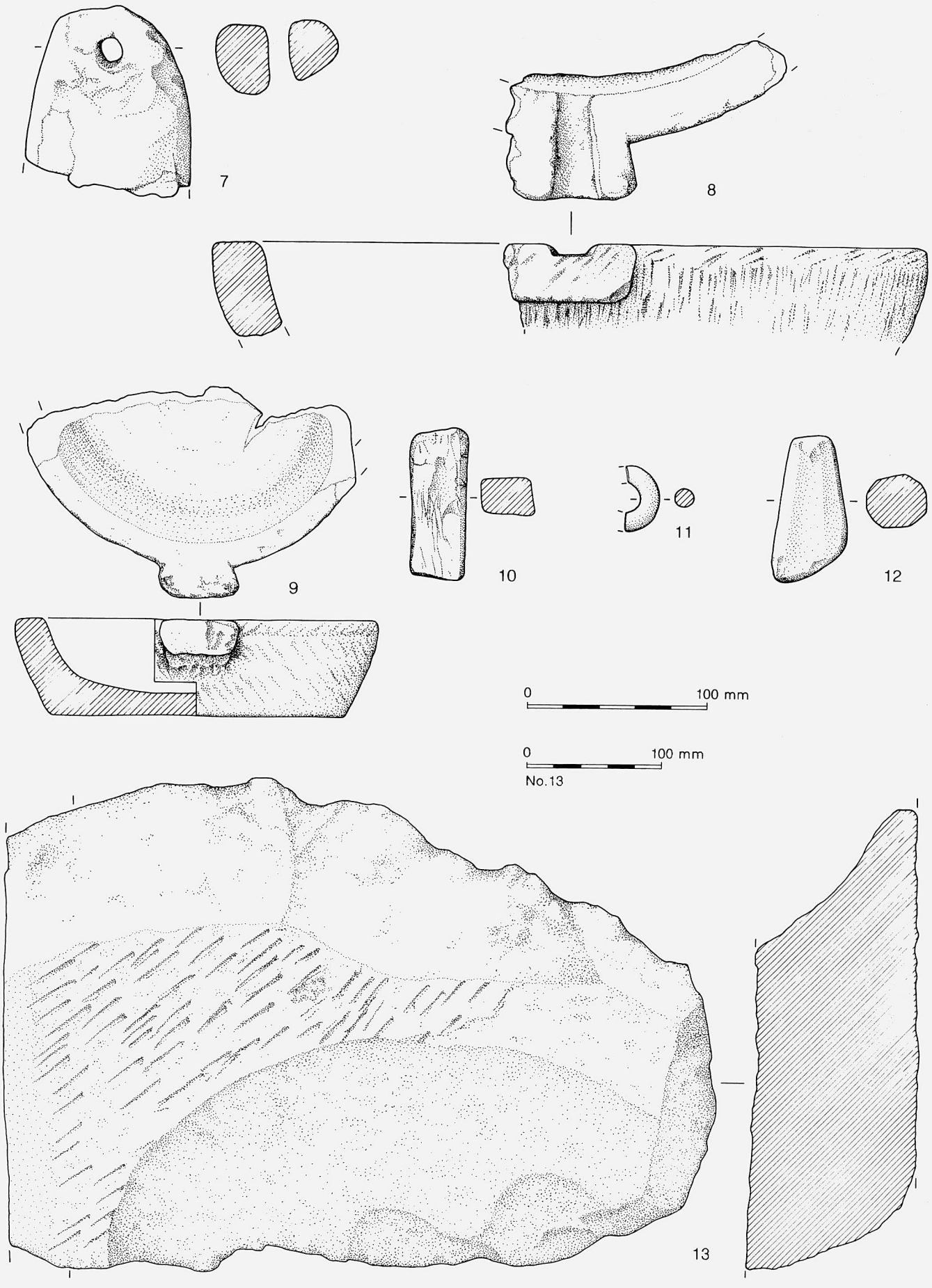


Figure 57 Tolpuddle Ball (TP93): Stone objects 7–13

tool marks on one side; it probably represents an architectural piece, later re-used. One small tessera in fine grained limestone came from Romano-British hollow 178. Three fragments of limestone roof tile were also noted, and it is possible that other small undiagnostic fragments of limestone were originally parts of tiles. These tiles have been identified as likely to be of Forest Marble from the Cornbrash. No peg holes were noted on any of the tile fragments.

Illustrated objects

Fig. 56

1. Saddle quern with sharpening grooves, glauconitic sandstone. Obj. No. 516, W2402.13, context 2300, topsoil.
2. Loomweight, chalk, weight 1240 g. SF 190, context 222, pit 223, Phase 4.
3. Loomweight, chalk, weight 2000 g; tooling marks visible on perforation, well finished. SF 189, context 222, pit 223, Phase 4.
4. Loomweight, chalk, weight 2000 g; tooling marks visible on perforation, well finished. SF 188, context 222, pit 223, Phase 4.
5. ?Loomweight rough-out, oolitic limestone, weight 2500g. SF 166, context 1, topsoil.
6. Loomweight, corner broken, chalk, weight 660g. SF 250, context 127, enclosure ditch 128, Phase 3.

Fig. 57

7. Loomweight, area of burning around perforation, chalk, weight 2000g. SF 84, context 718, Romano-British wall in terrace 702, Phase 5.
8. Mortar with pouring spout, Purbeck Marble. SF 82, context 702, Romano-British terrace, Phase 5.
9. Mortar, rim and base, lugs, shelly limestone. SF 83, context 702, Romano-British terrace, Phase 5.
10. Whetstone, micaceous sandstone. SF 229, context 1060, feature 1061, Phase 5.
11. Spindlewhorl, incomplete, limestone. Context 248, Romano-British occupation layer, Phase 5.
12. Pestle, chalk. SF 202, context 248, Romano-British occupation layer, Phase 5.
13. Large dressed stone architectural fragment, oolitic limestone, diagonal tooling marks present on one surface. SF 238 (Unstrat. no context number).

Kimmeridge Shale (Fig. 58), Peter W. Cox and Emma Loader

Shale was only recovered from Tolpuddle Ball, all but 57 g of the 11,690 g total (86 fragments) being recovered from the 1993 excavations (TP93). The source of the material is the bituminous shale beds of Kimmeridge in Purbeck which lie approximately 17 km south-east of the site. Of the shale recovered, 6991 g (59% of the total by weight) was recovered from Late Iron Age features (Phase 4); 4696 g (40%) was recovered from Romano-British features (Phase 5) and the remaining 3 g (1%) came from unstratified contexts.

The majority of the assemblage consists of unworked raw material, often laminated with rough edge fractures. Some possibly water-worn facets are present and indicate raw material collected from beach deposits. The raw material is notable in being predominantly a highly fossiliferous version of the bituminous shale which has been noted elsewhere as producing an attractive finished product, but may have been less durable. The preponderance of this type of raw material suggests that there had been some selectivity in the material brought in to the site. One of the spindlewhorls (Fig. 58, 3) appears to be made from this type of raw material.

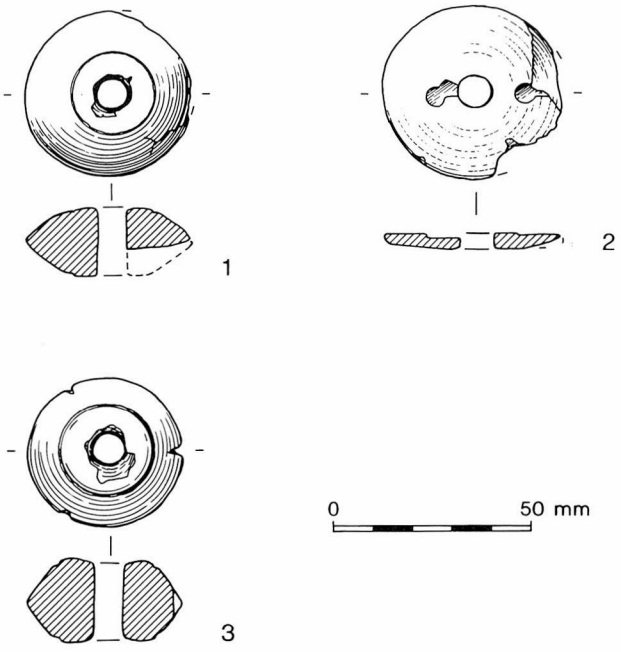


Figure 58 Tolpuddle Ball (TP93): Kimmeridge shale objects 1–3

Spindlewhorls

Three whole or fragmentary shale spindlewhorls were recovered. The first (Fig. 58, 1) was recovered from the topsoil and is of uncertain date. The second spindlewhorl (Fig. 58, 2) was recovered from Romano-British layer 333 (Phase 5). This is a laminated fragment of a two-pin lathe core, and was probably reused as a spindlewhorl. Similar reused cores are found at other sites, e.g. Wytch Farm in Purbeck and Hengistbury Head (Cox and Mills 1991, fig. 77, 10; Cunliffe 1987, ill. 117, 150). The third spindlewhorl (Fig. 58, 3) was recovered from Romano-British layer 1060. All three objects are lathe-turned, and are well paralleled on other Romano-British sites in Dorset (e.g. Mills and Woodward 1993a, fig. 142, 8–14).

Evidence for Shale working

Thirteen fragments displayed evidence of cut marks from either chiselling, snapping or cutting. These attributes do not necessarily indicate that the material was derived from shale working at Tolpuddle Ball; the raw material may have been brought onto the site simply for fuel. The lack of any part-finished objects or manufacturing waste material such as lathe cores or rough-outs which occur commonly on shale-working sites in Dorset (e.g. Cox and Woodward 1987; Cox and Mills 1991), apart from a single core probably re-used as

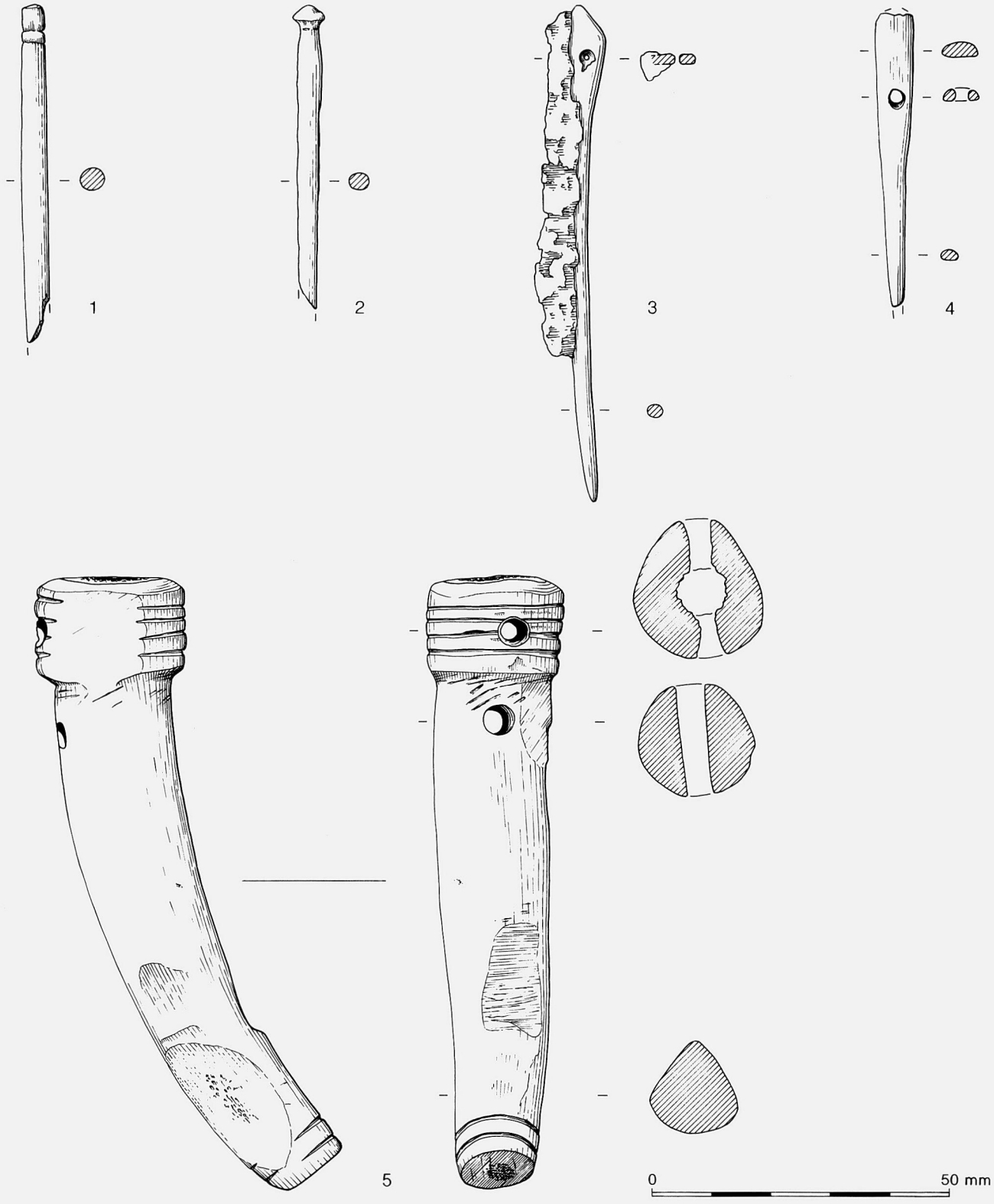


Figure 59 Tolpuddle Ball (TP93): worked bone objects 1–4; antler object 5

a spindlewhorl (see above), would suggest that there was little, if any, manufacturing of objects being undertaken on the site.

The presence of two probable shale-working tools amongst the flint assemblage should be noted (see Harding, above). These tools, from an undated context (tree throw 424), are only sufficient to suggest extremely small-scale shale working on the site. Calculating the *Shale Production Index* (PI) for Tolpuddle Ball (see Cox and Mills, 1991, 174, fig. 79) produces a value of 28 (i.e. 86 3), consistent with the recorded range for 'consumer' sites, away from the production centres in Purbeck but within the local region of the source material.

Illustrated objects

Fig. 58

1. Spindlewhorl, diameter 40 mm, central perforation 7 mm. SF 1, context 1, topsoil.
2. Spindlewhorl, flat, diameter 44 mm, central perforation 9 mm. SF 219, Romano-British layer 333, Phase 5.
3. Spindlewhorl, diameter 37 mm, central perforation 9 mm. SF 235, Romano-British feature 1061, Phase 5.

Bone and Antler Objects (Fig. 59), Emma Loader

Eight pieces of worked bone and three of antler were recovered, all from Tolpuddle Ball (TP93). The bone consists of one complete and one incomplete needle, two pins and two needle or pin shank fragments and two sheep bones with burin grooves. The antler consists of one finely worked perforated object and two pieces which are possibly antler-working waste. Five of these objects were recovered from Romano-British contexts, five from Late Iron Age contexts and one from the topsoil. The range of worked bone and antler objects is small but comparable to similar assemblages found on other sites in the area.

Bone Pins and Needles

The two bone pins have been classified according to the type series from Colchester, Essex (Crummy 1983, 19–25) and Greyhound Yard, Dorchester (Woodward 1993a). Both pins are incomplete. The first pin (Fig. 59, 1), from Phase 5 gully 715, is comparable to Colchester type 2 and Greyhound Yard type 2. The head of the pin is incomplete, making any positive identification difficult though a date of mid 1st to late 2nd century AD might be suggested. The second pin (Fig. 59, 2) is comparable to Colchester type 3C and Greyhound Yard type 7, both dated to the 3rd–4th centuries AD; this pin came from Romano-British occupation layer 248 (Phase 5).

Two bone needles were recovered. The first (Fig. 59, 3) is complete, rounded in section with a flattened angular head with a drilled circular head; iron corrosion products adhere to the shank. This object, which came from Phase 3/4 pit 21, is comparable to Danebury class 5 needles (Sellwood 1984, fig. 7.32) which are dated to the Late Iron Age. The second needle (Fig. 59, 4) is incomplete; part of the shank and tip are absent and the head is incomplete. A comparable example is known from Greyhound Yard, Dorchester (Woodward 1993a, fig. 103, 44). This object was recovered from the topsoil.

The remaining two shank fragments (not illustrated) could be either from pins or needles and may also be of Romano-British date, though positive dating is not possible due to a lack of diagnostic features; both were recovered from Romano-British contexts (Phase 5).

Antler Object – Possible Linch-pin

A complete worked antler object (Fig. 59, 5) was recovered from Phase 3/4 pit 815/836. It has a maximum length of 110 mm, and tapers from a diameter of *c.* 23 mm to 10 mm. It has bands of transverse grooves at each end and two holes drilled through its wider end. The antler is noticeably worn in areas. In shape and size the object bears a resemblance to antler cheek pieces but the lack of a central perforation and areas of heavy wear perhaps make this unlikely. The object is remarkably similar to one found in the Charioteer's Barrow, Arras (Yorkshire) also of antler (Stead 1979, fig. 4 and pl. 8a) which has been identified as a linch-pin, that is, an object used to secure a wheel to its axle. Similar antler objects have also been recorded at Meare Village East, Somerset (Coles 1987, fig 3.32) although these differ in the positioning of the holes. Alternatively the object might conceivably have acted as a handle or some sort of tool since it fits comfortably in the hand.

Possible Antler-working Waste

Red deer antler fragments deriving from Pit 66 (Phase 3/4) and occupation layer (Phase 5) could represent the waste from antler working. Both pieces consist of point crowns, with at least one tine sawn off.

Miscellaneous Objects

Two sheep metatarsi from Iron Age pit 35 (Phase 3/4) and Romano-British working hollow 178 (Phase 5) each have two opposed longitudinal grooves along their length; their function is unknown. Part of a perforated object came from Iron Age pit 9 (Phase 4); part of one perforation, and possibly part of a second, are visible, but the function of the object is unknown.

Illustrated objects

Fig. 59

1. Incomplete bone pin. SF 196, context 248, Romano-British occupation layer, Phase 5.
2. Incomplete bone pin. SF 106, context 790, drainage gully 715, Phase 5.
3. Complete bone needle. SF 161, context 1242, pit 21, Phase 3/4.
4. Incomplete bone needle. SF 248, context 1, topsoil.
5. Possible linch-pin, antler, SF 110, context 792, pit 815/836, Phase 3/4.

Human Bone from Tolpuddle Ball, Jacqueline I. McKinley

Introduction

The human bone from the project comprises two main groups – the Iron Age and Romano-British settlement near Tolpuddle Ball excavated between 1991 and 1997 (TP91, TP93 and W2402.13) and the nearby Late Roman and post-Roman cemetery excavated in 1998 (W2405.17). The bone from the first group was fully analysed and reported before the discovery of the cemetery. Partly for this reason and partly in view of the importance of the cemetery the two groups are reported separately below. The rarity of the cemetery site was felt to justify publication of a detailed report. A glossary for both reports is provided below and more detailed explanations of some pathological conditions and diseases are provided in the reports where appropriate.

The skeletal remains from a post-medieval roadside burial recorded during the watching brief near Roger's Hill Farm (W2402.19) are reported separately in the site report above (Section 2).

Glossary

abscess lesion	cyst formed in bone as a result of destruction due to infection
aetiology	the cause of disease (study of)
ankylosis	abnormal bony fusion of a joint
anterior	front
aposteal (joints)	joint between dorsal facets of vertebrae
arthritis	class of joint diseases resulting in inflammation and destruction of cartilage and bone; associated lesions may include eburnation, cyst formation, pitting, osteophytes and ankylosis
atlas	first cervical vertebra
attrition	wear from abrasion during use
axis	second cervical vertebra
brachycranic	broad or round headed
bregma	junction of sagittal and coronal sutures
buccal	pertaining to the inside of the cheek
calcified	mineralisation of non-osseous material within the body
calculus	calcified plaque deposits (on the teeth)
capitate	largest carpal bone, in lower row
caries	inflammatory destruction of bone
carpal bones	bones of the wrist; eight bones arranged in two rows
cervical	pertaining to the neck: e.g. cervical vertebrae; the margin between the root and crown of a tooth
cnemic	pertaining to the lower leg (*see* platycnemic)
congenital	term applied to conditions existing at birth
coronal	cranial suture
cranial index	degree of round-headedness or long-headedness
cribotic	sieve-like
cribra orbitalia	'sieve-like' pitting in the roof of the eye sockets possibly resulting from iron deficiency anaemia
cusp	projection or point on occlusal surface of tooth
cyst	abnormal spherical lesion, filled with fluid or semi-solid material, may occur in any body organ or tissue
degenerative disc disease	pitting in the vertebral body surfaces following the breakdown of the intervertebral disc, may be accompanied by osteophyte formation on the surface margins
deltoid	pertaining to the deltoid muscle of the arm, originating in the scapulae and inserting in the proximal portion of the humerus; action includes abduction, flexion and rotation
diffuse idiopathic skeletal hyperostosis (DISH)	characterised by exuberant 'dripped wax' osteophytes on the anterior and right lateral aspects of the vertebral column, particularly in the thoracic region, causing fusion of one or more vertebrae. Extraspinal manifestations may include hyperostosis at ligament attachments in the pelvis, calcaneum, patella and ulna olecranon
dimorphism	the occurrence of two forms in members of the same species, e.g. sexual dimorphism between males and females
dolichocranic	narrow or long-headed
dorsal	the back
eburnation	polishing of bone at joints where destruction of the intervening cartilage allows bones to rub together
enamel pearl	small spherical formation of enamel on tooth crown or root
endocranial	interior surface of skull
epiphysis	the centre of ossification e.g. articular surfaces of a long-bone, separated by cartilage from the diaphysis to allow for bony growth in the immature individual
eurycnemic	upper range in platycnemic index indicative of a broad medio-lateral shape to the tibia shaft
exostoses	bony out-growths usually at sites of muscle/ligament attachments
foramen	opening in a bone or membrane
gluteal tuberosity	tuberosity in the dorsal side of the proximal lateral femur shaft, area of attachment for series of hip and thigh muscles, primarily the gluteus maximus
hydatid cyst	cyst caused by larvae of the tapeworm *Echinococcus granulosus*. Infection may be via direct contact with dogs or contamination of pasture, crops and drinking water with infected dog faeces
hypervascularity	abnormally high vascular (blood vessel) activity
hypoplasia	deficiency of growth of an organ or limb
interosseous	between bones
kyphosis	excessive posterior curvature of the spinal column

labial	of the tongue
lambda	junction of the lambdoid and sagittal sutures
lambdoid	cranial suture between parietals and occipital bone
lesion	changes in the body tissues as a result of disease or trauma
ligament	flexible bundle of fibrous tissue, binding joints together and connecting bones and cartilage
lingual	of the tongue
lumbar	five large vertebrae forming the lower part of the spine above the pelvic girdle
lunate	carpal bone, upper row
lytic	destructive, generally with reference to a lesion
mandible	'U-shaped' bone comprising the lower, moveable portion of the jaw
mastoid bone	lower part of the temporal bone of the skull with process for muscle attachment
maxilla	lower facial bone also comprising upper part of the jaw
meningeal membranes	membranes lining the interior of the skull and enveloping the brain
mesocnemic	mid-range in platycnemic index
mesocranic	having an average medium ratio of the breadth of the skull to the length
neonate	newborn infant
neural	pertaining to the nervous system
non-metric trait	aspect of (usually variation in) body
occipital 'bunning'	'bun-like' protuberance of the occipital bone (back of skull)
occlusal	the biting surface of a tooth
orbit	eye socket
os acromiale	non-fusion of the acromion epiphyses of the scapula; possibly a developmental defect or result of trauma in immature individual
ossicle	small bone, usually in addition to the norm in the skull vault
ossified	become bone
osteoarthritis	disease of the joints resulting in inflammation and destruction of both cartilage and bone, associated lesions include eburnation, osteophytes and pitting
osteomyelitis	pyogenic infection of the bone or bone marrow, may be introduced directly due to trauma or from other foci in the body via the bloodstream. Bone is thicker and denser than normal. There may be a 'honeycombing' with granulation or fibrous tissue or pus, and sequestra are commonly present within cavities in the bone. A sinus track may lead to the surface of the skin. The long-bones are most commonly affected
osteophyte	bony growth that may develop around margins of any articular surface. Lesion may occur alone or as a feature of a disease such as osteoarthritis
osteoporosis	abnormal rarefaction of bone, without any changes in the shape of the affected bone, resulting in weakening of the structure. Largely age related phenomenon, particularly common in post-menopausal women
periapical	immediately adjacent to apex [of tooth root]
periodontal disease	a gum infection which may lead to resorption of the bone forming the supportive structure for the teeth, with consequent loosening of teeth and exposure of more of the tooth surface to caries attack
periosteum	fibrous vascular membrane covering of bones, except at articular surfaces
periosteal	pertaining to the periosteum
platycnemic index	degree of mediolateral flattening of the tibia
platymeric index	degree of anterio-posterior flattening of the femur
porotic	'pit-like'
proximal	closest to the head
pseudo-facet	abnormal articular surface
pyogenic	pus producing
rarefication (of bone)	structural loss as in osteoporosis
resorption	process of destruction and removal of bone by specialised cells (osteoclasts)
robusticity index	expressing the relative size of the (femur) shaft
sagittal	midline: pertaining to the junction of the two parietal bones along the top of the skull
scaphoid	carpal bone, upper row
Schmorl's nodes	destructive lesions resulting from a rupture in the intervertebral disc allowing the nucleus pulposus to protrude into the vertebral body
shovelling (of teeth)	developmental defect in maxillary incisors, tooth crowns taking a 'shovel-form' with curved margins; the degree of shovelling may vary
sinusitis	infection within the facial sinus cavities
spina bifida occulta	incomplete ossification of vertebra leaving the posterial spinal membrane and cord partially exposed
spondylolysis	non-fusion of the superior and inferior articular processes of the fifth or, less commonly, the fourth lumbar vertebrae. If the fibrous tissue bridging the gap stretches or gives-way, the consequent vertebral displacement constitutes one (the most common) variety of spondylolisthesis
squatting facet	small extensions of the distal articular surface on to the anterior aspect of the tibia, talus and other bones
sternal	pertaining to the sternum ('breast-bone')
supernumerary teeth	extra teeth
suture	a junction between two bony surfaces within the skull

symphysis	a point of junction; usually applies to the junction of paired bones (pubis, mandible)
thoracic	12 vertebrae forming central area of spine, to which ribs articulated; vertebrae and ribs encasing the thoracic cavity
thyroid cartilage	located at the front of the throat surrounding the larynx
trabecular bone	spongey or cancellous bony tissue; form present a framework of opposed struts designed to be of maximum value in withstanding pressure and tension, e.g. in vertebral bodies and articular ends of bones
tuberosity	a rounded eminence
vascular	pertaining to blood vessels
wormian	extra ossicle between sutures of the vault
zygomatic bones	arch extending dorsally to temporal bone from the malar (cheek bone and process lateral to eye socket)

Methods

Age was assessed from the stage of tooth development (van Beek 1983) and ossification/epiphyseal bone fusion (Gray 1977; McMinn and Hutchings 1985; Webb and Suchey 1985), the length of long bones (Bass 1987), the pattern of degenerative changes in the pubic symphyses (Brooks 1955), assessment of the sternal-end ossification in the ribs (Iscan *et al.* 1984; 1985), tooth wear patterns (Brothwell 1972a) and the general degree of other age-related changes to the bone (e.g. Bass 1987). Basic age categories used are as listed below. Where insufficient evidence was present to aid age assessment there may be overlaps between categories, alternatively further detailed breakdown of categories was possible in some cases (as provided in Tables 28 and 31).

Basic category	*Age range*
foetus/neonate	<6 months
infant	6 months–4 yr
juvenile	5–12 yr
subadult	13–18 yr
young adult	19–25 yr
mature adult	*c.* 26–45 yr
older adult	*c.* 45 yr+

Sex was ascertained from the sexually dimorphic traits of the skeleton (Bass 1987; Schutkowski 1993). As with age assessment, a combination and scoring of traits were used in order to overcome any methodological bias or variations in sexual dimorphology within the group. Levels of reliability reflect the quantity and quality of available traits on which to base the assessment. Cranial, platymeric, platycnemic and femoral robusticity indices were calculated according to Brothwell (1972a) and Bass (1987). Stature was estimated using Trotter and Gleser's regression equations (1952; 1957). Pathological lesions and morphological variations were recorded and diagnoses suggested where appropriate. Anatomical terminology is in accordance with Gray (1977) and McMinn and Hutchings (1985).

Full details of all identified bone are held in the archive reports, including detailed descriptions of morphology and pathological lesions by context.

Tolpuddle Ball Iron Age and Romano-British Burials

Human bone from 36 contexts from Tolpuddle Ball excavations was received for osteological analysis. The bone was recovered from the site during various stages of the project and the circumstances of the recovery of the human bone are detailed above in the site report (Section 2). In summary, fourteen graves were excavated and the remains of nine other individuals (all neonatal or infant) were recognised in post-excavation assessment and analysis, together with disarticulated human bones from various contexts. Table 28 and Fig. 26 summarise the human bone data and its recovery. A report on a single skeleton discovered during the watching brief approximately 100 m north of the main site is also included at the end of this report (burial 5067, included on Table 28). Since this burial does not appear to be directly associated with the main group of burials excavated between 1991 and 1997, measurements and pathological data from this skeleton are only included where specified.

Disturbance and general condition of the bone

The recorded depth of graves varied from 0.06 m to 0.90 m; two being less than 0.10 m deep, five between 0.20 m and 0.40 m and five greater than 0.50 m; there is no record of the depth of six graves. Only the two very shallow graves (cuts 7 and 49) were noted in excavation as having suffered any post-depositional damage, both as a result of ploughing; this resulted in substantial fragmentation and, in one instance, some loss of bone. Bone from four other burials was heavily fragmented, two from graves of *c.* 0.30 m depth and two from graves of unknown depth – although the condition of the bone suggests these were also relatively shallow. In general, the level of fragmentation seems to be primarily related to the depth of the grave.

That a degree of disturbance to graves occurred in antiquity is demonstrated by the presence of some redeposited bone amongst those from *in situ* burials. Several fragments of neonatal bone were found in context 60 (the burial of a >31 year old adult), denoted 60B by the writer; the fragments recovered did not correspond with those from any of the known neonatal burials and must, therefore, represent redeposited remains from a disturbed grave. A fragment of ulna recovered from 802 could conceivably correspond with the skeletal remains from context 3 or 60; however, there are no features cutting the former context and the latter is 250 m away. Fragments of redeposited juvenile/subadult bone, which do not correspond with any known burial, were recovered from a pit fill (context 14) within the Phase 3 Iron Age enclosure. These remains must have been redeposited from a totally destroyed grave, or one not uncovered in excavation. The fresh appearance of the bone suggests it was not exposed for any length of

Table 28: Tolpuddle Ball (Phases 3–5) human bone. Summary of Iron Age and Romano-British contexts

Context[$]	*Feature / deposit*	*Phase*	*Age (yr)*	*Sex*	*Approx. recovery (%)*	*Excavated burial*	*Burial recognised in post-exc. assessment*	*Probable burial recognised in post-exc.*	*Identified indivdual*	*Recovered from animal bone*	*Notes*
TP91											
7/3[$]	grave 714	5	45+	?M	76	*	–	–	–	–	Shallow grave
TP93											
1	topsoil (unstrat.)	–	<6 mth		5	–	–	–	*	*	–
14	?pit 15	3/4	9-15		1	–	–	–	*	*	redeposited, not a known burial
52[$]	encl. ditch 2894	4 or 5	<6 mth		12	–	–	*	–	*	–
54	structure 702	5	19+		<1	–	–	–	–	*	–
60[$]	pit 61	3/4	26+		40	*	–	–	–	–	=SF 165
60B	pit 61	3/4	<6 mth		1	–	–	–	–	*	–
64	structure 702	5	<6 mth		1	–	–	–	–	*	–
191A	ditch 192	1	19+		<1	–	–	–	–	*	redeposited bone
458[$]	grave 49	3/4	26+	??F	35	*	–	–	–	–	= 48, shallow grave
546[$]	pit 547	5	<6 mth		56	--	*	–	–	–	–
568[$]	cut 569 (?grave)	4	<6 mth		25	–	*	–	–	–	with pot (grave good)
802[$]	grave 803	5	35-45	??M	92	*	–	–	–	–	coffin
826[$]	grave 740	3/4 or 5	19-25	F	84	*	–	–	–	–	?structure
908[$]	grave 822	5	31-45	F	96	*	–	–	–	–	coffin + infant 1559
1038[$]	pit 1039	5	<6 mth		15	–	–	*	–	*	–
1078	pit 1079	5	<6 mth		<1	–	–	–	–	*	?? = 1038
1102	grain drier 1149	5	<6 mth		<1	–	–	–	–	*	–
1279	pit 9	4	<6 mth		<1	–	–	–	–	*	?? = 1280
1280A/B[$]	pit 9	4	<6 mth (2)		60/40	–	–	**	–	*	–
1286[$]	encl. ditch 2894	3/4	<6 mth		55	–	*	–	–	–	–
1307	pit 9	4	<6 mth		<1	–	–	–	–	*	?? = 1280
1308	pit 9	4	<6 mth		4	–	–	–	–	*	?? = 1280; inc. 1309
1315	encl. ditch 2894	3/4	31+		1	–	–	–	–	*	?? = 1541

Table 28 (continued)

Context[$]	*Feature / deposit*	*Phase*	*Age (yr)*	*Sex*	*Approx. recovery (%)*	*Excavated burial*	*Burial recognised in post-exc., assessment*	*Probable burial recognised in post-exc.*	*Identified individual*	*Recovered from animal bone*	*Notes*
1348[$]	grave 7	4	45+	F	71	–	–	–	–	–	toe ring; incl. context 6
1357[$]	grave 1359	3	<6mth		92	*	–	–	–	–	–
1387[$]	gully 1050	5	<6 mth		40	–	–	*	–	*	–
1403[$]	pit 45	3	<6 mth		35	* (sample)	–	–	–	* (add'l)	collapsed section. SF 203; = 44
1413[$]	grave 1414	5	<6 mth		60	*	–	–	–	–	–
1494[$]	grave 80	3/4 or 5	31-45	M	95	*	–	–	–	–	incl. 79
1541[$]	grave (no cut no.)	4	31+	F	96	*	–	–	–	–	brooch, pot (grave goods). SF 243, incl. 1540
1559[$]	grave 822	5	6-12 mth		24	–	*	–	–	* (add'l)	with adult 908
W2402.13											
2313[$]	grave 2305	3/4	13-15		95	*	–	–	–	–	–
2672[$]	grave 2670	3/4	31-45	M	98	*	–	–	–	–	–
W2405											
5067[$]	grave 5066	5	31-45	?F	80	*	–	–	–	–	W. brief. Hobnails & coin (AD 330-345)
Total	1 x TP91					3 neonates	3 neonates	5 neonates	1 neonate	16 'new' contexts	
35 contexts	31 x TP93					1 subadult	1 infant		1 juvenile/ subadult		
24 burials	3 x WA					11 adults					
						26 individuals					

[$] = burial; ? = probable; ?? = possible

Table 29: Tolpuddle Ball human bone. Range and mean stature estimates

Group	*Phase*	*Sex*	*No.*	*Range*	*Mean*
Middle/Late Iron Age and R-B burials*	3–5	females	4 (80%)	1.55–1.73 m (5 ft 3/4 in–5 ft 8 in)	1.61 m (5 ft 3 3/4 in)
	3–5	males	4 (100%)	1.63–1.76 m (5 ft 4 in–5 ft 9 3/4 in	1.69 m (5 ft 6 1/2 in
	3–5	unsexed	1 (100%)	F: 1.53 m (5 ft 1/4 in); M: 1.59 m (5 ft 2 1/4 in)	
Late Roman and post-Roman cemetery	5A	females	11 (79%)	1.46–1.67 m (4 ft 9 3/4 in–5 ft 5 3/4 in)	1.56 m (5 ft 1 1/4 in)
	5A	males	7 (86%)	1.61–1.78 m (5 ft 3 1/2 in–5 ft 10 in)	1.69 m (5 ft 6 1/2 in)
	5A	unsexed	1 (50%)	F: 1.62 m (5 ft 3 3/4 in); M: 1.64 m (5 ft 4 1/4 in)	

* excluding watching brief (5067)

time. Six other contexts contained fragments of bone which were redeposited in antiquity, probably from one of the other identified burials, though it was not always possible to establish a conclusive link. In only one instance, 1102, was any of this redeposited bone weathered, implying that most of the bone was not exposed for any length of time before reburial.

The percentage of skeletal recovery from the burials ranged from about 12% to 98%; 22% of the burials being represented by more than 95% of the skeleton (see Table 28). There is no consistent pattern between the level of skeletal recovery and the depth of graves, condition of the bone, age or sex of the individuals. Lower levels of recovery were noted amongst those neonatal burials not recognised in excavation in 1993 (average 39% recovery). This was probably due to incomplete recovery during excavation of small bones not recognised as human and exacerbated by a lack of sampling within these contexts.

Bone from 17 contexts was all, or in some parts, worn and degraded, that from 11 of these contexts and four others also being root marked. Although the bone in the two very shallow graves (burials 1038 and 1387) had suffered noticeably, as had neonatal bone from two of the *in situ* burials identified in analysis (i.e. these were probably also very shallow graves), there is no other apparent consistency in either the depth of graves, location of graves nor burial position amongst those skeletons affected. The bone from the two burials in coffins (802 and 908, see Fig. 27) was all in good condition. Only a very small minority of the redeposited bone was weathered, indicating that most of the bone disturbed in antiquity had been reburied fairly rapidly. Numerous criteria may affect preservation (Henderson 1987; Mant 1987) and it is probable that there were undetected variables within the burial micro-environment. These aspects are discussed further below in the Tolpuddle Ball Late Roman and post-Roman cemetery report

Staining to bone and gnawing

Staining was noted on specific bones from two inhumation burials. In 1348 (>45 year female) there was green staining on the shafts of the left first, second and third proximal foot phalanges (details in archive). The staining was caused by a copper alloy ring (Fig. 42, 11) which went around the first and second phalanges (Plate 20). In burial 1541 (31–45 year female) there was green, copper alloy staining over a localised area of the right mandible. The staining was due to the presence of a copper alloy brooch (Fig. 42, 5), probably placed at the right shoulder and against which the mandible had rested during burial, the body being crouched on its right side.

Two neonatal long bones from context 60 had rodent gnaw-marks across the shafts. It is probably significant that these bones were amongst the few which were obviously redeposited.

Skeletal indices

Cranial Index

It was possible to calculate the cranial indices for six individuals (32%), three females and three males. The mean index was 72.6 for the females and 74.8 for the males, both in the dolichocranial range. There was, however, quite a large variation between individuals, with two males and one female in the dolichocranial range, one female and one male in the mesocranial range.

Stature estimation

Calculations of stature estimation were made for nine adults (90%) excluding the watching brief burial to the north (5067, see below). The mean values (Table 29) are the same as (males) or just slightly higher (females) than those recorded by Wells (1982) at Cirencester (Romano-British); the female range is higher at either end than at Cirencester, that for the males being broader at Cirencester. The mean values are slightly higher for both sexes than at the Romano-British cemetery at Poundbury, Dorchester (Molleson 1993), though again, perhaps not surprisingly for a more 'urban' based cemetery there is much greater variation in the height of individuals. The means and range of heights are greater at Tolpuddle Ball than recorded from the Romano-British cemetery at Boscombe Down, Wiltshire (McKinley forthcoming), particularly for the females, although the overall ranges are the same at both sites.

Platymeric and platycnemic indices

The platymeric index was calculated for nine adults (90%) and the platycnemic index for eight (80%), excluding the watching brief burial to the north (5067, see below). Seven individuals were within the platymeric range including three females and three males, with two within the eurymeric range including

one female and one male. At Cirencester, Wells (1982) noted that about half the population was platymeric as were most individuals from Poundbury (Molleson 1993). There was more variation within the platycnemic index, with one male in the platycnemic range, two males and one female in the mesocnemic and four individuals in the eurycnemic. The one male with platycnemia did have squatting facets, but so did four other individuals, which appears to negate any link between the two conditions in this instance if both are, as suggested (Brothwell 1972a; Molleson 1993), a result of adopting a squatting posture.

Sexual dimorphism

Whilst there is invariably a certain degree of overlap in traits between the sexes, there were two instances in this group where there was a strong contradiction between traits. In burial 802 (Phase 5, 31–45 yr, ??male), whilst the metric and skull traits indicated a male, the pelvic traits, generally considered the most reliable, gave contradictory indications on either side. In 826 (Phase 3/4 or 5, 19–25 year female) the metric traits and pelvis indicated a female but many of the skull traits were strongly masculine.

Demography

Five of the 25 individuals from the main site were identified by the writer during analysis and it is perhaps, therefore, unwise to assume that all those buried were recovered in excavation. It may be noted, for example, that one group of burials was recovered from within an approximately 4m long segment of the Phase 3 enclosure ditch 2894 (see Fig. 26). The enclosure ditch was only 20% excavated it is therefore possible that further burials were preserved within the unexcavated portions of the ditch fill.

The date range of the burials potentially extends over a minimum 500 year period from the 2nd century BC (and possibly earlier) to the later 4th century AD. A chronological summary of the demographic data is given in Table 30 which includes the individual recorded during the watching brief (see below). There appear to be two clusters of burials, a Middle/Late Iron Age cluster in the excavated north-east corner of the Phase 3 enclosure ditch and a Romano-British one approximately 25m east of the enclosure. However, the numbers of burials within each group are small and there are both overlaps and outliers.

The 25 individual identified from the main site (excluding the watching brief burial 5067) comprise ten adults and 15 immature. There are similar numbers of males and females and a range of ages from neonatal to older adult. Other than the one young adult identified being female (burial 826), there was no significant variation in the age of adults according to sex. The overall demographic structure indicates small 'domestic' burial areas, probably associated with a single farmstead community. The relatively small numbers of individuals represented and the wide date range for the burials precludes further demographic comment.

The relatively high number of neonatal skeletons (12 individuals) should perhaps not be viewed as unusual. Brothwell (1972b) suggested that in a 'normal' archaeological population one may expect to see between a 4:1 and a 4:3 ratio of infants of less than one year to the total number of individuals under 20 years (NB. the figures were misquoted in the original paper, correct figures confirmed pers. comm.). What is unusual is actually to *recover* this number of neonates (see below, discussion).

There was one conclusive dual burial (Romano-British, Phase 5), that of an adult female (908) and infant (1559) who were buried together in a coffin. The remains of the infant were recognised during post-excavation assessment by Liverpool University (White n.d). It was possible, by careful examination of the site photographs, to locate the original position of the infant skeleton (see Fig. 27). The body of the female was originally laid on its right side within the coffin, the infant placed in front at thigh level with the left hand of the adult overlaying it. The upper body of the adult had subsequently slumped forward during decomposition. A second, possible dual burial was that of two neonates within one of the lower layers (1280) of Late Iron Age Pit 9 (Phase 4). Unfortunately, since the neonates were not recognised in excavation there is no contextual evidence to support or negate such an interpretation, and the bodies may have been deposited as separate events. The quantity of bone and lack of weathering suggests they were *in situ* burials.

Dental disease

A total of 176 erupted permanent teeth were recovered and 245 permanent, erupted tooth positions were counted. *Ante mortem* tooth loss tends to increase with age and may be related to one or more factors e.g. excess wear, diet and dental hygiene. Tooth loss was evident in eight individuals, three females and three males. A total of 43/245 teeth were lost (17%). A higher rate of tooth loss was noted in most areas of the female dentitions, the largest difference being observed in the maxilla. Other than where tooth loss was extensive, the molars and premolars were primarily affected. The overall percentage of tooth loss was the same as at Boscombe Down (McKinley forthcoming), both being considerably higher than the 8.5% noted by Wells at Cirencester (1982) and the 13% recorded at Alington Avenue, Dorchester (Waldron forthcoming). The greatest difference was noted in the female dentitions.

Tooth loss tends to increase with age and may be related to one or more factors e.g. excess wear, diet and dental hygiene. Dental calculus harbours the bacteria which predispose to periodontal disease and the development of dental caries. All the adult dentitions had some level of calculus deposit, mostly mild (a few millimetres) with some medium to heavy (covering the occlusal surface). Some degree of periodontal disease was also noted on all the adult dentitions.

Carious lesions were noted in five dentitions, two females and three males. The overall rate was 14%, 10% for the females, 24% for the males. Almost all the lesions were in the molar teeth (87%), with 8% in the premolars and 4% the canine. The majority of lesions appeared to be cervical in origin although many lesions were too gross to judge their origin. The higher rate observed in the male dentitions should be measured against the higher rate of *ante mortem* tooth loss in the females.

The overall rate of caries is greater than the general rate of 9.3% for Romano-British groups quoted by

Table 30: Tolpuddle Ball human bone. Demographic distribution

Site / Period	*Phase*	*Neonate (<6 mth)*	*Infant (6 mth–4 yr)*	*Juvenile (5–12 yr)*	*Juvenile / subadult*	*Subadult (13–18 yr)*	*Young adult (19–25 yr)*	*Young / mature adult*	*Mature adult (26–45 yr)*	*Mature / older adult (26+ yr)*	*Older adult (45+ yr)*	*Total*
TP91, TP93, W2402.13, W2405 (w. brief)												
Middle Iron Age	3	2	–	–	–	–	–	–	–	–	–	2/8%
Late Iron Age	4	3	–	–	–	–	–	–	–	1F	1F	5/19%
M/L Iron Age	3/4	1	–	–	1	1	–	–	1M	1F, 1u/s	–	6/23%
Romano-British	5	4	1	–	–	–	–	–	2F*, 1M	–	1M	9/35%
MIA–R-B	3–5	2	–	–	–	–	1F	–	1M	–	–	4/15%
Sub-total for group		12	1	0	1	1	1F	0	3M, 2F*	2F, 1u/s	1F, 1M	
		← 15 immature →					← 11 adult →					26*
% of immature/adult		80	6.5	0	6.5	6.5	9	0	45	27	18	
% of total group		46	4	0	4	4	4	0	19	11	8	
W2405.17												
Late Roman and post-Roman cemetery	5A	1	14	4	2	4	3F, 1M 2 u/s	1F, 1 u/s	8F, 3M	1F	1F, 4M	
		← 25 immature →					← 25 adult →					50
% of immature/adult		4	56	16	8	16	24	8	44	4	20	
% of total group		2	28	8	4	8	12	4	22	2	10	

* 1F = watching brief burial (5067); u/s = unsexed

Molleson (1993) and the low rate of 2.3% for the Alington Avenue burials (Waldron forthcoming). The Tolpuddle Ball rates are relatively to that of 15.8% at Poundbury, which Molleson (1993) judged to be high, and are less than the 17% seen at Boscombe Down (McKinley forthcoming). Dental caries is closely related to diet and the arguments presented by Molleson for the effect of poor diet on the oral health of individuals at Poundbury (1993, 182–4) no doubt also hold true for those at Tolpuddle Ball.

Five dentitions had abscess lesions, two females and three males, all in the same dentitions in which carious lesions were observed. The overall rate was 13%, 17% for females, 14% for males. The majority of lesions were in the molar sockets (51%), with 30% in the incisor sockets. The latter cannot be linked clearly with caries and may be related to excess tooth wear. There was almost no difference in distribution between the sexes. The rate is higher than noted in other Romano-British cemeteries.

Dental hypoplasia is a developmental defect in the tooth enamel formed in response to growth arrest in the immature individual; predominant causes are believed to include periods of illness or nutritional stress (Hillson 1979). Slight hypoplasia was noted in the enamel of two female and two male dentitions and that of the unsexed subadult.

Deficiency disease

Cribra orbitalia is believed to result from a metabolic disorder connected with childhood iron deficiency anaemia. Molleson (1993) argued that vitamin C deficiency and intestinal parasites (leading to iron loss) may also have played a contributory role. Of the 15 individuals for whom the orbital vaults were available for examination, only one (adult male) showed slight pitting in the left vault.

Trauma

Direct evidence of trauma in the form of fractures to bone was noted in the remains of three individuals: one female and two males. The two males both had a fractured rib, one in the left, the other in the right side. Most fractures of the rib result from direct injury (Adams 1987) such as a fall against an hard object and they frequently represent the most common fracture site in archaeological populations (e.g. Wells 1982; Molleson 1993; McKinley forthcoming). Molleson argues (1993, 199) that the higher rate amongst males demonstrates their greater involvement in physical activities such as ploughing, building and fighting. One of the males (burial 7/3) also had fractures at three other sites, the right zygomatic arch (cheek) and the left proximal and distal fibula. The anterior end of the zygomatic arch shows non-fusion, but unfortunately since the maxilla was not recovered the full extent of the trauma is not known. The injury indicates that the individual had suffered a blow to the side of the head. One adult female (908) had a well-healed, though slightly misaligned fracture in the neck of the left fifth metacarpal. Such fractures are not uncommon and generally result from either a fall on the hand or a blow to the knuckles (Adams 1987).

Infection

Infection of the sinus cavities may occur in consequence of primary foci within the sinus cavities or a nasal infection. Secondary sinusitis may also develop following an upward spread of infection from a maxillary dental abscess, transmitted via a fistula in the floor of the antrum (Wells 1977). Two individuals (2762 and 1494) had lesions in the base of the antrum (maxillary sinus). Infection in the mandibular canal was observed in four individuals, all associated with dental abscess lesions, manifest as new bone within the canal or destructive lesions leading to the enlargement of one or other mental foramen.

Infection of the periosteal membrane covering bone may lead to the formation of periosteal new bone. Infection may be introduced directly to the bone as a result of trauma, develop in response to some adjacent soft tissue infection, or spread via the blood stream from foci elsewhere in the body. Four individuals had lesions in one or more bones including two males, one unsexed adult and a young infant. In 1494 (adult male) lesions were seen in the maxilla and mandible where they were associated with dental abscesses, infection from which had spread to the adjacent facial bone. The same individual had infection-associated lesions in the antrum and mandibular canal. The right tibia and fibula from 802 both have small areas of periosteal new bone along the distal interosseous ligament attachment with slight exostoses which may indicate a traumatic origin for the lesions. A fibula shaft from the infant burial 1559 has lesions indicative of osteomyelitis, the extensive periosteal new bone on the right tibia shaft probably being associated with the infection of the fibula. Lesions indicative of osteomyelitis were also noted in a neonatal left humerus (context 1).

Joint disease

Details of the percentage distribution of lesions within the vertebrae are held in the archive. A total of 209 vertebrae were counted (discounting the neonates) including 94 female and 97 male. No lesions were noted in the immature individuals.

Osteoarthritis is manifest by eburnation of the joint surface and/or pitting in association with osteophytes on joint surface margins. Certain joints tend to be affected more frequently than others, for example the hands, vertebral facets, hips and knees (Rogers *et al.* 1987; Rogers and Waldron 1994). The aetiology is complicated including the effects of age, mechanical alteration through activity or injury, and genetic predisposition. Spinal lesions were noted in one female and four males. Between 1–9 vertebrae were affected in the female, 1–4 in the males. The cervical region was most commonly involved in both sexes, with higher involvement in both the cervical and thoracic regions for the female than for the males. The rate was higher than that of 6.8% (almost equal rates between the sexes) noted by Wells (1982) at Cirencester, but generally lower than at Boscombe Down (McKinley forthcoming) with females 15%, males 26%.

Extra-spinal manifestations of osteoarthritis were noted in the remains of seven individuals, three females and four males. Between 6–16 joints were affected in the

females, 3–12 in the males. Although there was a general increase in the number of joints involved per skeleton with age the 'older adults' did not consistently have more lesions. Extensive and often severe osteoarthritic lesions were noted in many of the joints of the right hand of the adult female 1541. The lesions observed in the right 2nd middle phalanx are consistent with those described for erosive osteoarthritis, which, although still referred to as such, is now believed to represent a severe stage of normal osteoarthritis (Rogers and Waldron 1994).

Lesions associated with degenerative disc disease are most commonly found in the mid- and lower cervical, upper thoracic and lower lumbar regions of the spine and the prevalence of the disease increases with age (Rogers and Waldron 1994). The potential effect of the condition on the mobility of the affected individual is outlined by Waldron (1993, 77–78). Lesions were noted in three female and four male spines. There was a noticeable difference between the sexes, both in the overall occurrence and in the distribution of lesions which suggests different stress factors affecting the two groups (data in archive). The observed occurrence of degenerative disc disease among the assemblage is similar to that recorded in the rural Romano-British cemetery at Boscombe Down (McKinley forthcoming).

Schmorl's nodes most frequently occur in the vertebrae subject to greatest mechanical stress at points in the normal curvature of the spine (Manchester 1983). Lesions were noted in two female and three male spines, each with lesions in between 2–8 vertebral bodies. Lesions were most common in the lower thoracic region with none above T5. The higher rate noted for the male spines (19% compared with 4% in the female) corroborates the implication for greater stress on the male spines indicated by degenerative disc disease. Less variation between the sexes was noted in the (larger) Romano-British cemeteries at, for example, Boscombe Down (male to female 17% : 11%) and Cirencester (male to female 8% : 6%).

Smooth bony fusion of the right auricular surfaces was recorded in 2672 (male, 31–45 years) and the T5–8 have a ridge of new bone down the anterior centre of the bodies, with more exuberant new bone of the right sides of T3–4. The lesions are not incompatible with those observed in Diffuse Idiopathic Skeletal Hyperostosis (DISH), though the lack of actual bony fusion in the spine suggests, if the diagnosis is correct, that the disease was in the early stages. There is little evidence for exostoses (often associated with the condition), but there was calcification of the thyroid cartilage. The prevalence of DISH increases with age, is more common amongst males and may be associated with diabetes and obesity (Rogers and Waldron 1994).

Other destructive lesions (including pitting) and new bone formation (osteophytes) associated with joints are often difficult to classify, but some may represent the early stages of osteoarthritis. The prevalence of lone osteophytes increases with age (Rogers and Waldron 1994). Five female and four male spines had lone lesions on vertebral body surface margins or in the anterior atlas-axis joint The distribution of lesions shows noticeably less involvement of the cervical and thoracic spine amongst the females (data in archive). Lone extra-spinal osteophytes were recorded in ten individuals and were generally within the same joint groups affected by osteoarthritis (see above).

Miscellaneous conditions

Other conditions, including calcified soft tissue, exostoses, vertebral body collapse (possible tumour), cysts, pitting and other destructive lesions, pseudo-facets and hypervascularity were all recorded among the skeletal material. Full data and quantification are held in the archive report.

Fragments of calcified soft tissue were noted in four skeletons; three individuals had calcification of the thyroid cartilage (the cricoid cartilage also being involved in one case) and one other individual had some calcified rib cartilage. Such ossification may be age related or associated with one of several diseases (e.g. DISH, see above).

Causative factors for exostoses, or enthesophytes, include advancing age, traumatic stress, or various diseases (Rogers and Waldron 1994, 24–5). It is not always possible to be conclusive with respect to the aetiology of particular lesions. All ten adults had exostoses at between 2–13 sites within the skeleton. Lesions were noted more frequently within the male skeletons and there tended to be an increase in the number of lesions amongst the older individuals. A possible link with other conditions could only be suggested for two individuals, 802 (trauma) and 2672 (DISH).

In 802 (male, 31–45 years), slight collapse of the centre–anterior of the superior surface of the T6 was associated with erosive lesions in the dorsal portions of both body surfaces. There was no associated new bone and no similar lesions in the adjacent vertebral body. The lesions may have been due to a tumour. A destructive lesion in the left half of C4 from 1541 (female, >31 yr) may also represent a tumour.

Cysts, pitting and other destructive lesions may develop in response to a number of conditions and it is not always possible to ascertain the specific cause of individual lesions. The majority of these lesions were seen in joint surfaces (data in archive) and are most likely to represent the early stages of some form of joint disease. In adults, solitary bone cysts (Adams 1986) occasionally occur in the carpal bones, most frequently the scaphoid or lunate. Two examples of this type of cyst (908 and 458) and one possible example (1348) were recorded.

Morphological variations

Morphological variations or non-metric traits represent variations in the skeletal morphology and may, with other predisposing factors, indicate genetic relationships within a 'population' (Berry and Berry 1967). There are, however, problems both with the applicability of recording methods and the uncertain heritability of traits (Tyrrell, pers. comm.). Some traits have been attributed to developmental abnormalities, for instances extra sutural ossicles (Brothwell 1972a, 95–8) and 'squatting' facets' which are most often attributed to being formed in response to the adoption of prolonged periods spent in a squatting posture (Brothwell 1972a, 92; Molleson 1993, 156).

Lambdoid wormian bones were noted in 50% of skulls from Tolpuddle Ball, with squatting facets in 40% of skeletons with tibiae (male and female). The possible causes of *os acromiale* are uncertain and include developmental defect or trauma (Stirland 1984). One adult female (908) had unilateral non-fusion on the right side (8%), a low frequency compared with the maximum quoted occurrence of 15% (*ibid.*).

A four-cusped mandibular first molar, an anomaly observed in *c.* 3–7% of dentitions and most frequently in females (Andrews 1996) was observed in one female dentition. Several less common variations were noted. Two individuals had non-fusion of the posterior arch of the atlas. Rib facets were observed in both sides of one C7. Failure to develop the anterior-lateral part of the transverse neural arches in the C7 was seen in two individuals. It may be significant that both these individuals also had occipital bunning (not shared by any other individuals) and were near neighbours (2 m apart).

Late Roman Burial 5067 (W2405: watching brief)

Approximately 80% of the skeleton of an older/mature adult (*c.* 31–45 years) was recorded during the watching brief in June 1998 to the north of the main Tolpuddle Ball excavation area (see Fig. 8). Some fragments of redeposited skull were retrieved but the maxilla and much of the vault are missing due to machine truncation (see Plate 23). The skeleton is probably that of a female. The burial is dated to the later 4th century AD by the presence of a coin on the floor of the grave. A full report on the skeleton including details of pathology is held in the project archive.

With the exception of the skull, which was eroded, the bone was in good condition, with a slightly 'fossilised' appearance. There was some dark staining at the distal end of the right radius indicating the former presence of some organic material (e.g. leather, fur).

The estimated stature of the individual is 1.53 m (5 ft 4 in). The platymeric index is 77.2 (Platymeric), the platycnemic index is 74.3 (Eurycnemic) and the robusticity index (femur) is 12.6.

Ante mortem tooth loss (9%) of the right second premolar is likely to have been due to a dental infection, the adjacent tooth (M1) exhibiting a gross carious lesion (25%) which had destroyed the entire tooth crown. A dental abscess (9%) was also observed in the right M1 socket. The occlusal tooth wear was light. The rates are indicative of a relatively poor diet and poor level of dental hygiene. Light pitting and osteophytes were noted in and on the margins of joint surfaces but these may not be taken as indicative of specific degenerative joint diseases (Rogers and Waldron 1994). Neither the latter nor the limited exostoses noted, indicate a strenuous life-style. The spine in particular was almost devoid of lesions. Spondylolysis is believed to result from injury or stress fracture in the immature individual (Adams 1986). It is demonstrated by the separation of the inferior articular processes and the spine from the rest of the vertebra, usually occurring in the fifth lumbar vertebra, as was recorded in this instance. *Spina bifida occulta* is a minor form of the congenital disease. It is characterised by a defect in the bony spinal canal but does not produce any significant symptoms (Manchester 1983).

Discussion

A total of 26 individuals was identified from Tolpuddle Ball excavations and the watching brief to the north. The burials ranged in date from Middle/Late Iron Age (Phase 3) to Romano-British (Phase 5), a probable overall span of 2nd century BC to late 4th century AD. The numbers of burials within the Iron Age (Phases 3 and 4) and Roman periods (Phase 5) are fairly even (13 and 9 individuals respectively), as are the numbers of immature individuals and adults present in the two periods (see Table 30). The small number of individuals represented in any one phase (or period) and the wide overall date range precludes any detailed demographic analysis

Some interesting observations may be made on the location of burials in the two main periods of occupation (i.e. Middle/Late Iron Age and Romano-British). The Iron Age burials (Phases 3, 4 and 3/4), including both adults and neonates, but particularly neonates, are clustered in the north-eastern area of the enclosure, including within the enclosure ditch itself (see Fig. 15 and 26). In all, nine burials make up this group, four adults and five neonates. This part of the enclosure may be regarded as the main burial area during the Middle/Late Iron Age. The outliers for this period are four adult burials (all Phase 3/4) and one Phase 4 neonate. One of the former lies within the enclosure (burial 60A) but the others are dispersed (see Fig. 15).

The three Romano-British adult burials from the excavation lay close together some 30m east of the enclosure and away from the main area of Romano-British activity on the site (see Fig. 23). One of these burials, that of a female, included an infant. The other four Romano-British neonate burials all lay away from this group, dispersed across the settlement area. Two of these burials were associated with structures. The relative absence of neonatal individuals from Romano-British burial areas is not unusual and their burial (or disposal) within the proximity of the living rather than the dead, whilst not exclusive, is well recorded. In Roman times infants of less than 40 days old were not considered 'human' and did not necessarily qualify for burial in the same manner as other members of society (Scott, 1997 TAG session *The archaeology of infancy and infanticide*). For example, there were 6% neonates of the 33% immature individuals from the Late Roman cemetery at Poundbury (Molleson 1993) and 4.4% from the 17.4% immature individuals at Cirencester (Wells 1982).

There is limited scope for drawing conclusions from the pathological lesions observed within a small group of individuals widely dispersed over time. In general, there are indications for a relatively poor diet and level of dental hygiene, particularly amongst the females. There is also a general implication that there was a considerable difference both in the degree of mechanical stress and the focus of that stress, particularly within the spine, between the males and females, which probably reflects differences in occupational activity.

Finally, it may be noted that the discovery of a later 4th century AD adult inhumation approximately 100 m

north of the main excavation areas (burial 5067, see Fig. 8) is very unlikely to be an isolated burial. It suggests that further burials of Late Roman date are preserved in the vicinity, extending beyond the construction area of the A35 bypass.

Tolpuddle Ball Late Roman and Post-Roman Cemetery

Human bone from 48 *in situ* inhumation burial contexts was received for osteological analysis, representing 50 individuals. In two very small graves (5299 and 5300) no human bone was noted in excavation but young infant bone was recovered from the wet-sieved residues of the grave fills which were subject to whole-earth recovery. Table 31 summarises the sex and age determinations. Full details of all identified bone are held in the archive including descriptions of morphology and pathological lesions by context.

Disturbance and general condition of the bone

There was no direct evidence of plough damage to graves but the area had clearly been subject to ploughing over a long period and some level of truncation is likely to have occurred. The recorded depth of the graves ranged from 0.05 to 0.51 m. The majority (20) were between 0.10 and 0.20 m deep, with one less than 0.10 m (5298) and 16 greater than 0.30 m (see Appendix 3). Seven graves in the south and south-western part of the cemetery were recorded as being truncated to some extent during machine striping. These graves ranged in depth from 0.05 to 0.20 m and the level of skeletal recovery from them ranged from 1% in the shallowest, to 65% in the deepest. No fresh (recent) breaks, however, were observed in the bone from these specific graves. Plough damage and/or animal disturbance may, therefore, be responsible for the low levels of skeletal recovery from some of these graves.

Limited areas of disturbance were noted in 26 burial contexts (*c.* 54%) and most post-depositional disturbance appears to have been the result of animal burrowing Fragments of animal bone were recovered from five grave fills together with the human bone (see Site Report, Section 2; Hamilton-Dyer, Section 4). Animal disturbance was noted in half these graves. Burial 5162, however, was not obviously disturbed and the fragment of pig mandible recovered from amongst the foot bones (rather than the grave fill) may represent a deliberate deposit.

Redeposited human bone was recovered amongst the *in situ* skeletal remains in seven graves which ranged in depth from 0.15 to 0.49 m (Table 31); animal disturbance was evident in five. The redeposited bone from two graves could be linked with adjacent burials (5085 and 5118), with one other possible redeposition from a neighbouring grave (5167). In the remaining four cases, the relevant bones were not missing from any near-by grave and no link could be established. Whilst redeposition from one of the excavated graves as a result of animal activity could not be conclusively ruled out in two cases (5111 and 5140), in the remaining two graves (5123 and 5262) the disturbance appears likely to have occurred in antiquity. The neonatal bone redeposited in grave 5123 cannot be linked with the very poorly preserved remains from grave 5175 *c.* 5 m to the north, which represent the only neonatal/young infant burial identified (duplicate bones). The dispersed distribution of neonatal bones amongst those of burial 5122 (male, >45 year) does not suggest they were *in situ* – this does not represent a dual burial such as that from the TP93 Romano-British burial group *c.* 160 m to the east (908/1559). Similarly, the presence of several fragments of young adult bone in burial 5261, dispersed amongst the infant remains, implies a more substantial disturbance probably occurring at the time of burial. The possible presence of other graves which may have been disturbed by the insertion of subsequent burials, but indications of which were totally eroded by the time of excavation, cannot be totally excluded. The condition of the redeposited bone in each instance suggests that it was not exposed for any great length of time prior to redeposition.

Bone from 65% of the burials was heavily fragmented, particularly the skull vaults; a further 29% were moderately fragmented (minimum one break in each long bone and other larger bones) the skull being heavily fragmented in about half of them. The depth of the grave was of little consequence in relation to the degree of fragmentation, similarly heavy breakage of bone being noted in the deepest and shallowest graves. The majority of the breaks were fresh and may have resulted from machines tracking across the site (i.e. during stripping) and/or during manual excavation.

The percentage of skeletal recovery from the burials averaged 64%, with a range of *c.* 1–98%. Less than 50% recovery was made from 14 graves, all except one of which contained infant or juvenile remains, with greater than 90% recovery from 16 graves. There was no consistent pattern between the level of skeletal recovery and depth of the graves or the sex of the individual, but there was a clear link with age and the condition of the bone. Skeletal recovery from 97% of infant and 33% of the juvenile burials was less than 50% and generally reflected poor bone preservation.

The condition of the bone varied considerably. Bone from 13 graves was in good condition, including that from two burials with <50% skeletal recovery. Five graves contained bone which was slightly eroded or worn. Differential preservation was noted in the remains from nine burials, bones from one side of the skeleton or specific skeletal elements showing poor preservation, though no consistent patterns emerged. This indicates variations within the individual burial environments, probably, at least in some cases, as a result of unpreserved inclusions within the grave, for example, organic material (Mant 1987, 71), in this case possibly packing or grave goods. The bone from three burials (5140, 5149, 5241) was noted to be very dry, with fine surface cracking and flaking; these burials represented three of the four in which there appeared to be evidence for a coffin. The bone from 16 graves was badly eroded; 69% of these burials were those of immature (<12 yr) individuals. There is no apparent link between the condition of the bones and either the depth or location of graves, nor the burial position. The two factors which may clearly be demonstrated to have had an affect on bone preservation are the age of the

Table 31: Tolpuddle Ball Phase 5A human bone. Summary of Late Roman/post-Roman contexts

Context	*Approx. % recovered*	*Age (yr)*	*Sex*	*Comments / other finds*
5070	65%	18-25	male	–
5082	80%	25-30	male	–
5085	55%	31-45	female	redeposited juvenile bone (?=5096); animal bone
5091	1%	18-45	unsexed	animal bone
5094	45%	18-30	?female	animal bone
5096	20%	*c.* 7	–	–
5104	90%	18-25	female	–
5108	56%	31-45	female	–
5111	85%	31-45	female	redeposited subadult/young adult bone; dark staining on mandible
5114	90%	31-45	??female	–
5118	85%	18-25	female	redeposited adult bone (?= 5108)
5122	98%	>45	male	redeposited neonatal bones. ?Disturbed in antiquity
5125	30%	3-4	–	–
5130	90%	13-15	–	–
5135	60%	>45	?male	animal bone
5140	85%	31-45	female	redeposited adult bone
5142	75%	9-12	–	–
5149	95%	13-15	??male	dark staining on skull and left side of body
5152	96%	31-45	male	–
5155	35%	*c.* 4	–	–
5158	85%	12-13	–	small blue glass bead (Obj. 520)
5162	95%	18-25	?female	animal bone
5164	28%	3-4	–	–
5167	75%	3-4	–	redeposited subadult bone (??=5229)
5184	98%	18-25	unsexed	dark staining on femur
5189	28%	18 mth-2 yr	–	–
5192	35%	*c.* 4	–	–
5198	98%	>45	female	–
5201	45%	5-8	–	–
5202	75%	>45	male	–
5207	77%	9-15	–	–
5209	5%	18 mth-2 yr	–	–
5213	95%	13-15	–	–
5218	95%	31-45	female	–
5227	92%	25-30	female	–
5229	92%	*c.* 13-14	–	–
5238	97%	31-45	male	–
5241	96%	25-30	female	–
5244	55%	6 mth-2 yr	–	–
5249	50%	6-8	–	–
5253	94%	>45	male	dark staining on skull and femur
5256	80%	>30	female	–
5261	28%	30 mth-3yr	–	redeposited young adult bone. ?Disturbed in antiquity
5266	45%	2-3	–	dark staining on occipital bone
5271	85%	*c.* 4	–	–
5298	1%	3-4	–	–
5299	<1%	6 mth-4 yr	–	–
5300	1%	<2	–	–
48 contexts				

? = probable; ?? = possible

individual – infant and juvenile skeletons being generally poorly preserved – and the presence of a coffin. Two of the graves containing infant remains (0.10–0.24 m deep) showed no evidence of skeletal remains in excavation, the small quantities of bone being recovered from sieved residues of the grave fills. No bone at all was recovered from two other features (5172 and 5187), which clearly represented infant graves. With respect to the differential preservation noted elsewhere, it is known that numerous criteria may affect bone preservation (Henderson 1987; Mant 1987) and it is probable that there were undetected variables within the microenvironment of the burial.

Staining to bone

Dark brown staining was observed on parts of specific bones from five burials (Table 31), three adults, one subadult and one infant. The skull vault was most commonly affected, as well as parts of the femora and the mandible. In 5149, many of the bones from the left side of the skeleton were stained. Dark staining of this type indicates the former presence of some form of organic material. In most cases an item of clothing may be indicated (such as a hat or leggings), though in 5149 the body may have been laid or wrapped in something, for example a shroud or animal skin. The type of wrappings afforded an apparently 'undressed' corpse in this period are discussed by Samson (1999), including clothing requiring no in-organic fastenings and/or shrouds. The latter may have been similar to those illustrated in medieval monumental brasses showing a naked corpse wrapped in a cloth fastened at the head and foot (Norris 1992).

Skeletal indices

Cranial Index

In consequence of the high degree of fragmentation to skull vaults (see above) and occasional warping during burial, it was possible to calculate the cranial indices for only eight adults (17%), including three females and four males. The overall mean index was 72.7 (SD 3.5); 72.9 (SD 5.1) for the females and 73.5 (SD 2.2) for the males, all within the dolichocranial range. Five individuals were within the dolichocrany range, three in the mesocrany, both sexes occurring in both groups.

The figures are very similar to those obtained from the Late Iron Age and earlier Romano-British burials to the east, those for the females being almost identical, which suggests little change in homogeneity of the population over time. The figures were consistently lower than those from Poundbury, which were firmly mesocrany (Molleson 1993, 167). The tendency towards long-headedness corresponds with the general trend in the Anglo-Saxon period (Marlow 1992); the figures from Tolpuddle Ball being very close to those from the cemetery at Norton, Cleveland (Marlow 1992) and North Elmham, Norfolk, (Wells 1980) though in the latter a substantial minority were brachycrany.

Stature estimation

Calculations of stature estimation were made for 19 adults (79%) and are included on Table 29 (above). The standard deviation was 0.05m for both males and females. The range for both sexes is larger than was noted in the Iron Age and Roman burials to the east (see above), probably due to the larger numbers of individuals, but the average height for females is less by 60 mm, that for the males being the same. The ranges are consistently shorter and the means generally slightly lower than those from various Romano-British and Anglo-Saxon cemeteries covering a similar period, e.g. Poundbury means 1.61 m females, 1.66 m males (Molleson 1993, 167–8); Norton, females 1.64 m, males 1.73 m (Marlow 1992). At Ulwell (Waldron 1988), the ranges were smaller than from Tolpuddle, but this is probably due to the smaller numbers for whom stature was estimated (poor bone preservation), the mean heights being very similar (female 1.59 m, male 1.71 m).

Platymeric and platycnemic indices

The platymeric index was calculated for 21 adults (87%) and platycnemic index for 16 (67%); range 68.6–93.0, mean 81.1, SD 6.9 (full details in archive). Sixteen individuals were within the platymeric (76%) range and five within the eurymeric range (24%), with males and females in both groups. There was noticeably less homogeneity within the male group than amongst the females. The figures are again very similar to those from the earlier burials to the east, reinforcing the implication for a homogeneous population.

Measurements from most tibiae fell within the eurycnemic range (56%), with 38% in the mesocnemic group and one male (5122) in the platycnemic group; range 61.6–80.8, mean 71.8, SD 6.2. Although the actual figures differ, the relative distribution within the ranges again match closely with those from the earlier burials further east. There is no link between squatting facets and platycnemia such as has been indicated elsewhere (Brothwell 1972a; Molleson 1993). Although small squatting facets were noted in several tibiae (54% of adult tibiae), they were not present in the one individual within the platycnemic range.

Robusticity Index

This index was calculated for 12 adults, including four males and seven females. There was clear dimorphism between the sexes, the male indices ranging 12.3–14.1 with a mean of 13.0 (SD 1.0), the female ranging 11.0–12.9 with a mean of 11.9 (SD 0.7).

Sexual dimorphism

Many of the sexually dimorphic features of the skull were not particularly well distinguished in this group, some being unusually gracile in both sexes, others uncharacteristically robust. All the crania were relatively thin, with only one instance (5253) of a male cranium being noticeably thicker than those of the females (and all the other males). The external occipital protuberance and supra-orbital ridges were not particularly pronounced in any of the males' skulls, being of only moderate size even in 5253. With the exception of 5253, where the mandible is a massive, heavy bone, most are relatively light, both males and females having slightly squared mental protuberances (chin) and relatively obtuse angles. The lateral flaring of the bone at the angles (and rami) is what most clearly distinguished the male and female mandibles.

Both sexes tend to have very large mastoid processes, those of several of the females being of a size which would count as a male trait in most other assemblages, and occurring even where the rest of the skull was noticeably gracile. Some of the male mastoid processes are of massive proportions. The mastoid process forms the area of insertion for the *sterno-cleidomastoideus*. The action of this muscle is on the lateral and rotational movement of the head (used uni-laterally), and (used bi-laterally) the flexion of the neck, elevation of the chin and superior movement of the sternum in deep inspiration (Stone and Stone 1990). What particular activity may lead to such implied strong development of these muscles without affecting the other neck muscles and their attachments, is difficult to deduce.

Whilst the general size and robusticity of the rest of the skeleton, in the majority of cases, displayed a clear sexual dimorphism – as demonstrated, for example, by the robusticity index – it was noted that most of the femora and humeri had relatively pronounced gluteal tuberosities and *linea aspera* (femur), and deltoid tuberosities (humerus). The implication is that both sexes were physically active, though other evidence suggest the activity was not of a particularly strenuous nature (see below). The sexual dimorphic traits of the pelvic girdle were generally clearly distinguished.

Demography

The archaeological evidence suggests that the entire cemetery was within the area of the excavation. However, given the very shallow surviving depth of several of the graves, it is possible that further graves may have been totally eradicated over time. The presence of redeposited human bone in several of the graves (discussed above), at least two of which could not be linked with any of the neighbouring burials, reinforces this possibility.

The radiocarbon dates (Site Report, Section 2) extend from the Late Roman period to the late 7th century and the compact and orderly nature of the cemetery (there were only two intercutting graves, 5165 and 5131) suggest that the graves were visible throughout the use of the cemetery. The respect given to preceding graves also suggests continuity in the population burying their dead here.

The demography of the group is included on Table 30 (above). Fifty (including two redeposited) individuals were identified, 50% of which were immature and 50% adult. The number of immature individuals is higher than in the small Iron Age and Romano-British burial groups to the east. There was a dearth of neonatal remains; the only conclusively neonatal bones recovered were redeposited amongst an adult male burial (5122). The youngest individuals identified from the *in situ* remains that could be closely aged were between 18–24 months (5189, 5209, 5244); a few fragments of neonatal/young infant (0–2 yr) skull being recovered from the wet-sieved fill of grave 5175 (context 5300). Whilst it is possible that the two graves from which no bone was recovered (5172 and 5187) may have been those of neonates, this would still represent a very small number given that in a 'normal' [archaeological] population one would expect to see a ratio of between 1:4 and 3:4 infants of less than one year to the total number of immature individuals (Brothwell 1972b). That the population was producing infants is witnessed by the fact that there are young infants in the assemblage, which raises the question, where were the neonates being buried? As already noted, even where bone did not survive infant grave cuts were evident (0.10–0.24 m deep); though it is possible that some shallow graves, including those of young infants, may have been completely eradicated over time. If neonates were not being buried in the main cemetery, were they being buried elsewhere in a separate cemetery or was there a continuation of the Romano-British practice of disposing of young infants outside a cemetery environment (see discussion above)? At Ulwell in Purbeck 20% of the assemblage comprised immature individuals and only one of the 57 burials was aged under five years (Waldron 1988). At Ulwell, moreover, there were no appropriately-sized empty grave cuts, indicating the apparent exclusion of young infants from the cemetery, unless, as with grave 9 (Cox 1988, fig. 3) all such burials were made into the fill of an existing grave and were subsequently lost due to truncation.

With the exception of the apparent under-representation of neonates, there is a full range of ages within the cemetery, 10–12% surviving into older adulthood – about average within archaeological populations. Distribution within the immature ranges is as one would expect given the varying susceptibility to diseases in childhood; the highest percentage of deaths falling in the infant categories (30%), becoming progressively less in the juvenile (12%) to subadult (8%) ranges (Table 30). More females than males were identified amongst the adults (56% and 32% respectively), though it should be noted that the 12% unsexed adults could all be males. Although the median age range for both females and males was in the 31–45 year range, there were apparent differences between the sexes at either end of the adult age ranges. Of the adult females, 21% had died before their 25th year compared with 12% of the males, and 50% of the males were in the >45 years category compared with only 14% of the females. A higher death rate amongst adult females, linked to the various potential complications associated with childbirth, is well documented.

The age and sex distribution within the cemetery does not suggest that the rows formed 'family-plots', there being rows comprised of just females or immature individuals as well as instances of more than one male burial adjacent to infant graves (see Fig. 32). Although there was a row of female burials at the west end and small groups of immature individuals were present in the cemetery, the overall distribution indicates that the cemetery did *not* incorporate specific areas for single-sex burials or for particular age ranges since both sexes and all ages were spread across the cemetery. The combination of skeletal homogeneity, spatial distribution and dating evidence suggests that members of a single 'extended' family or farmstead were burying their dead within the cemetery over a long period of time. The continued use of what may be seen as a Late Romano-British burial tradition at a time when more flamboyant burial rites were being practised elsewhere in England (further east), also supports the implication

of the Tolpuddle Ball cemetery representing the burial ground for an indigenous group of people rather than recent arrivals.

Dental disease

A total of 767 erupted permanent teeth were recovered and 768 permanent, erupted tooth positions were counted. *Ante mortem* tooth loss was evident in three individuals, one female and two males. A total of 30/767 teeth were lost (4%), with a slightly higher rate in the maxilla (4.6%) as compared with the mandible (3%), but no significant difference between the left and right sides. Other than where tooth loss was extensive, only the molars were affected. The rate for females (0.5%) was considerably lower than that for the males (13.1%); one male (5202) losing all except five teeth *ante mortem*. Although the cause may be viewed as solely the product of old age in this instance, the same degree of *ante mortem* tooth loss was not seen in other older adults. The overall rate of tooth loss is considerably lower than that recorded from the earlier burials to the east (see above) and from other late Romano-British sites, for example Boscombe Down and Alington Avenue (rates quoted above), being closer to the 6th–8th century Anglo-Saxon cemeteries at Ulwell (Waldron 1988) and Bitterne Road, Southampton (McKinley 1998) at *c.* 5% and 7% respectively.

Calculus deposits were noted in most adult dentitions (74%), and in those of two subadults, two juveniles and one infant. Coverage was mostly mild–medium (one-eighth to half of crown), with heavy deposits in three dentitions (>two-thirds of crown, up to 4.6 mm), though none encroached on to the occlusal surface. Periodontal disease was observed in 26% of the adult dentitions, (29% female, 25% male); five (71%) also had carious or abscess lesions, but there was no consistent link between the conditions, the latter two also occurring in the absence of periodontal disease.

Carious lesions were noted in twelve permanent dentitions, including eight female (57%) and three male (25%), and in three deciduous dentitions. The overall rate in the permanent dentitions was 3.8%; females 5.1%, males 4.5%, immature 2.4%. All the lesions were in the molar teeth, where they are generally most common (Hillson 1990, 294). Lesions were both occlusal (41%) and cervical (31%) in origin, with both types sometimes occurring in one tooth (3%). In 24% of cases, destruction of the tooth was too severe to be able to judge where the lesion had originated. The occlusal lesions were mostly small cavities within the fissures, and lesions in general varied in severity from this small size to complete destruction of the tooth crown and separation of the root branches, with an even distribution across the range. With the obvious exception of the lesions in the deciduous dentitions, all except one of the individuals affected was >31 years old. The difference in rates between the sexes was minimal; in the 31–45 yr range females were affected to a greater extent than males. No lesions were noted in the male maxillary teeth. Various studies have shown the disease to affect females to a greater degree than males (Hillson 1990, 287), so the slightly higher prevalence amongst the females is not unexpected.

The overall caries rate is lower than the general Romano-British rate of 9.3% (Molleson 1993) and considerably less than that recorded from the small later Iron Age and Romano-British burial groups to the east. Relatively low rates were also recorded from the post-Roman cemetery at Ulwell (Waldron 1988) and the 6th–8th century cemetery at Bitterne Road, Southampton (McKinley 1998) at *c.* 1% and 6% respectively. The implication is for a substantially improved quality of diet – particularly protein intake – for those individuals using the Tolpuddle Ball cemetery compared to the earlier occupants represented in the small burials groups to the east.

Nine permanent and one deciduous dentition had abscess lesions; six female, two male, one unsexed adult and one juvenile (deciduous). In all except two of the dentitions (5184, 5202) the abscesses were directly associated with carious lesions. There had been extensive *ante mortem* tooth loss in 5202, and the tooth from the affected socket was missing, so it is not known whether it was carious or heavily abraded. The abscess formation in the buccal side of the mandibular right M3 socket in 5184 could not be associated with any other dental lesions.

The overall rate of abscess lesions within the permanent dentitions was 2%; 4% for females, 1% for males. With a single exception (first premolar, 5202), all the lesions were in the molar sockets; though it may be significant that all the molars from 5202 had been lost *ante mortem*. Only the left mandibular sockets were affected in the males (4%). In the females the distribution was predominantly mandibular (4.6% of mandibular sockets, 2% maxillary) and on the left side (7% left, 2% right). The periapical infection had tracked further into the supportive structure in 5094 and 5114. In 5094, a sinus in the lingual surface of the mandibular body indicated the spread of infection from a periapical infection in the right M2; slight periosteal new bone on the labial surface adjacent to the sinus showed there had been infection of the soft tissues. In 5114, the infection

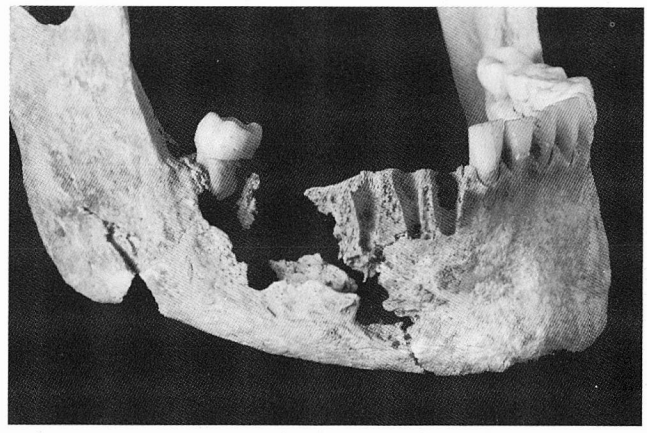


Plate 48 Skeleton 5114 (female, 30–45 yr), right anterior-lateral view of the mandible; destructive lesions and periosteal new bone associated with the spread of infection from a periapical tooth abscess

had tracked inferiorly into the mandibular canal, with new bone along the right side and an enlarged mental foramen. There was also periosteal new bone on the buccal and lingual sides of the body of the mandible (Plate 48).

In accordance with other dental conditions, the rates for abcesses are generally lower than from the earlier, adjacent burial groups, showing close similarities with some late Romano-British (Waldron forthcoming) and contemporaneous post-Roman cemeteries (Waldron 1988; McKinley 1998). Slight dental hypoplasia (1–4 shallow groove/crown) was noted in the enamel of six female, five male and three unsexed permanent dentitions, a minimum of two crowns in each dentition.

The relatively high percentage of occlusal caries originating in the fissures – as opposed to formation in association with excess wear in the enamel – is not a pattern commonly seen in archaeological material, being more familiar in modern dentitions (Miles 1969; Hillson 1990, 290). Further comments on dental disease within the cemetery group, particularly the evidence for noticeably light levels of dental attrition, are included in the general discussion below.

Deficiency disease

The overall rate of occurrence of *cribra orbitalia* was 28%, with greater involvement of the left side (left 33%, right 23%). The condition was more common in the females (24%) than the males (8%), but most common in immature individuals (44%). The majority of lesions were in the light grade, porotic range (Robledo *et al.* 1995, fig. 1), with a small number in the cribotic range and one (infant) in the high grade trabecular range. The rate is identical to that noted at Poundbury (Molleson 1993), both being lower than the 37% from the Late Romano-British rural cemetery at Boscombe Down (McKinley forthcoming) and the 60% from the 6th–8th century cemetery at Bitterne Road, Southampton (McKinley 1998). A much lower rate was noted among the earlier burials to the east.

Higher rates amongst females and immature individuals may be expected given that they require the greatest amounts of iron in consequence of menstruation, pregnancy, lactation and growth requirements (Robledo *et al.* 1995); the wide difference in the rates observed between these two groups and the adult males suggest that these factors may have been of significance in this instance. There is no consistent link between low protein, cereal-rich diets and high prevalence of *cribra orbitalia* (Robledo *et al.* 1995), nor between the absence of the condition and protein-rich diets; the low prevalence of dental disease indicates that the diet in this population was more likely to have been protein-rich. This suggests that dietary inadequacy was not a major contributory factor to the occurrence of the condition in this assemblage. That the population did suffer from intestinal parasites is indicated by the recovery of fragments of hydatid cysts (see below) from amongst the skeletal remains of two individuals (5135 and 5256). The elderly male (5135) showed no signs of *cribra orbitalia*, slight porotic lesions being present in the orbits of 5256 (female, >31 years).

Trauma

Direct evidence of trauma in the form of fractures to bone was noted in the remains of three individuals (6%), one female (7%) and two males (25%). Only one fractured rib (left; 0.3%) was observed in the Tolpuddle Ball cemetery assemblage (5122; male >45 yr). The same individual had also sustained a mid-shaft fracture in the left clavicle and the two well-healed lesions possibly resulted from the same traumatic incident. Fractures to the clavicle generally result from a fall onto the shoulder or, occasionally, onto the outstretched hand (Adams 1987). A second male (5082) also had a mid-shaft fracture in the left clavicle, making this the most common fracture site (7%).

A considerably higher proportion of individuals from the much larger cemetery at Poundbury (18% females, 37% males; Molleson 1993) and the comparably sized cemetery at Boscombe Down (32%; McKinley forthcoming) had fractures, though lesions were observed in only *c.* 10% of individuals from Alington Avenue in Dorchester (*c.* 60 burials; Waldron forthcoming) with similar proportions from the earlier Tolpuddle Ball burials.

The frequency of fractures is comparably very low and none were of a severe nature. There is some slight indication that males were involved in marginally more strenuous activities than the females, but neither appears to have experienced substantial physical stress.

Infection

Sinusitis

Two individuals had lesions in the antrum (maxillary sinus; 9%). The older adult male, 5202, had heavy lesions over the walls and floor of both, especially the left. Mild lesions were noted in the floor of both maxillary sinuses in 5226 (female, >31 yr). The rate is comparable with the 6.8% average for Anglo-Saxon assemblages quoted by Wells (1977).

Parasitic infection

Fragments of calcified material recovered from amongst the bones of two burials are believed to represent the remains of hydatid cysts. Ten fragments of calcified tissue were recovered from the lower thoracic/lumbar region of burial 5135, comprising a pale brown shell/case *c.* 0.4 mm thick forming a series of small, discontinuous spherical forms, around a chalky white substance (Plate 49). A single fragment (7 x 10 mm) of similar colour, form and thickness, was recovered from amongst the right hand bones (over lower left ribs) of 5256. The form and location within the excavated skeletons corresponds with descriptions in Ortner and Putschar (1985, 232, figs 367 and 368) of material believed to be the mineralised shell of a hydatid cyst, formed in consequence of an infestation by the tapeworm *Echinococcusa granulus*. The aetiology and pathology of the infection is detailed by Ortner and Putschar (*ibid.*, 229–33) and discussed by Manchester (1983), the necessary criteria being the presence of dogs and the herding of domesticated animals, infection occurring either as a result of direct contact with the former, or

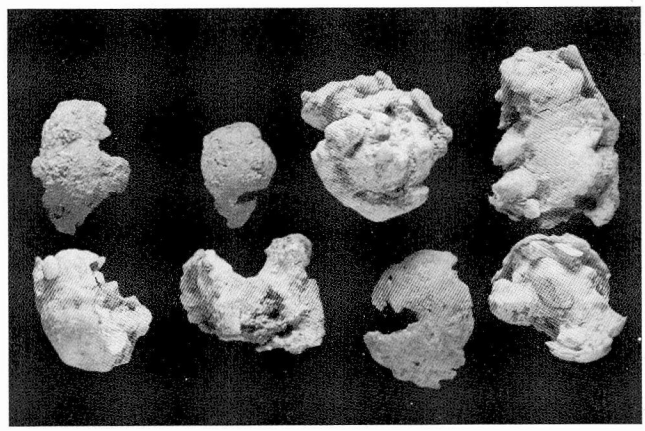


Plate 49 Skeleton 5135 (male, >45 yr), fragments of hydatid cyst, associated with tapeworm infestation (scale 2:1)

contamination of pasture, crops and drinking water with faeces from infected dogs.

Skeleton 5256 does not have any lesions indicative of external evidence of the disease but destructive lesions in the lower thoracic-lumbar spine of 5135, including angular kyphosis, are of a similar nature to those occurring as a result of the infection (Ortner and Putschar 1985, 231). However, there was no involvement of the transverse processes and posterior elements, and the lesions are more likely to have resulted from tubercular infection.

Only three other examples of a hydatid cyst are known by the writer to have been recorded in Britain to date; one from the chest cavity of an early Romano-British skeleton at Orton Longueville, Cambridgeshire (Wells and Dallas 1976), one from the abdominal area of a Romano-British skeleton from Boscombe Down, Wiltshire (McKinley forthcoming), and one from the abdominal area of a medieval skeleton from Winchester (Price 1975; Manchester 1983). Hydatid cysts are rarely recovered from archaeological excavations and the parasitic infection indicated is likely to have been far more widespread than the scant evidence recovered suggests; children in particular would have been susceptible to intestinal disease (Robledo *et al.* 1995).

Endosteal new bone

Extensive areas of fine-grained endosteal new bone were observed over much of the basal half of the skull from 5164 (3–4 yr). The lesions indicate an infection within the meningeal membrane (*dura mater*), the extensive nature of which is likely to have been at least a contributory factor in the death of the individual. Similar, but more confined, lesions were observed in the occipital sinus groove in skeleton 5227 (female, 25–30 yr).

Tuberculosis

Angular kyphosis and bony ankylosis in the T12–L2 vertebrae of skeleton 5135 had resulted following the gross destruction of the T12–L1 vertebral bodies, the internal lytic lesion exiting via the vascular forama and sinuses in the anterior body surfaces (Plates 50 and 51). The anterior collapse was focused in the T12, with smooth bony fusion of the T12 and L1 bodies and aposteal joints, leaving the superior surface of T12 at a 45° angle. The first and second lumbar were fused via smooth bony 'bridges' extending from the anterior lateral margins of both sides of the bodies, with re-

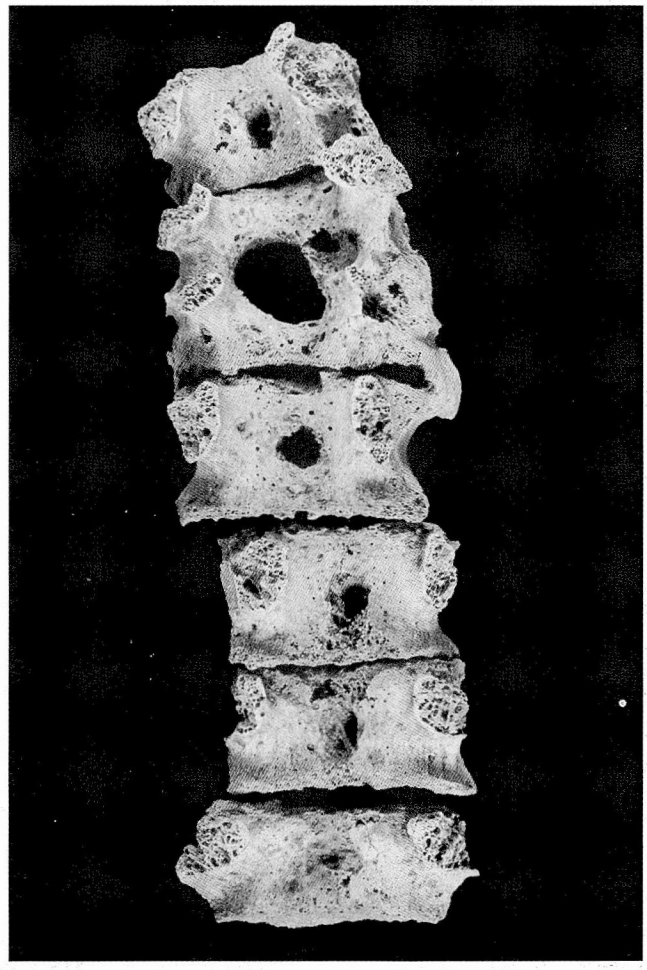


Plate 50 Skeleton 5135 (male, >45 yr), tuberculosis; dorsal view of T11–L5 showing destructive lesions, anterior collapse and ankylosis

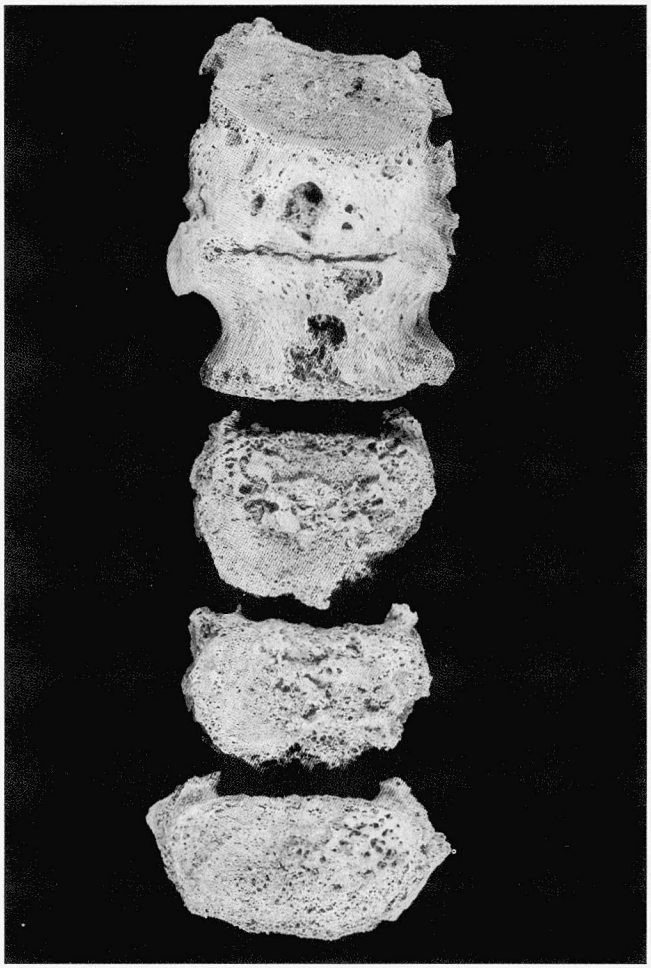


Plate 51 Skeleton 5135 (male, >45 yr), tuberculosis; (upper) anterior view of T12–L1 showing collapse of vertebral body, bony ankylosis and anterior sinuses; (lower three) superior body surfaces of L3–5 showing infectious changes

duction in the disc space, and heavy pitting and disorganised new bone creating a 'melted' appearance in the adjacent body surfaces. The same pitting and new bone was also observed in the L2–5 body surfaces. The T11 and L2 vascular forama were enlarged and there were a series small dished depressions around the anterior surface of the T11. All the vertebrae were noted to be moderately osteoporotic, and several loose fragments of trabecular bone were recovered.

The location and form of the lesions are typical of the skeletal changes seen in tuberculous infection (Ortner and Putschar 1985, 145–9; Rogers and Waldron 1994), the aetiology of which is discussed by Manchester (1983, 39–40), infection being via the ingestion of infected milk or cattle flesh. The same type of pitting and new bone as noted above was seen in the inferior surface of one upper-middle thoracic vertebra from 5082. In the absence of any associated lesions, however (the entire spine was recovered), diagnosis is limited to non-specific infection.

Pyogenic arthritis

There is smooth bony ankylosis of the left ?3rd/4th proximal inter-phalangeal finger joint from 5111 (adult female), with *c.* 10° palmar-wise angulation of the middle phalanx (Plate 52). An x-radiograph showed rarefaction of bone at the proximal end of the middle phalanx, with irradication of the joint surfaces. The lesions are characteristic of pyogenic arthritis (Rogers and Waldron 1994, 88), which in the absence of associated traumatic lesions probably resulted from the spread of infection from a septic focus elsewhere in the body.



Plate 52 Skeleton 5111 (female, 30–45 yr), pyogenic arthritis; lateral view of left ?3rd/4th proximal and middle finger phalanges showing smooth bony ankylosis of proximal inter-phalangeal joint

Periosteal new bone

Six individuals – three females, two males, and one subadult – had periosteal new bone in one or more bones (details in archive). Lesions in the metatarsal of 5122 were probably related to soft tissue trauma. Fairly thick areas of periosteal new bone were noted over the visceral surfaces of a minimum of four left ribs from 5108, predominantly at the dorsal ends of the shafts, with similarly extensive lesions in one right rib. The lesions, affecting *c.* 31% of the ribs from this individual, are indicative of a respiratory infection (Wakely *et al.* 1991).

The confined area of periosteal new bone on the anterior border of the right tibia shaft from 5082 may have formed in response to infection of a soft tissue injury overlaying the bone which is close to the surface. A similarly confined area of new bone in the right femur

Table 32: Tolpuddle Ball Cemetery human bone. Percentage rate of joint disease in areas of the adult spines

	Female				*Male*				*Unsexed*	
Vertebrae	*o.p.*	*Sch.*	*ddd*	*o.a.*	*o.p.*	*Sch.*	*ddd*	*o.a.*	*Sch.*	*ddd*
cervical	9	–	–	–	19	–	11	6	–	–
thoracic	8	8	–	3	29	22	8	–	8	–
lumbar	8	10	4	4	32	7	17	12	20	20
sacral	–	–	–	–	62	12	25	12	–	–

o.p. = osteophytes (lone lesions); o.a. = osteoarthritis (intra-vertebral); Sch. = Schmorl's nodes; ddd = degenerative disc disease; affected joints given as a % of the total number of joints recovered/counted

distal shaft from 5130, is more likely to be the result of infection spread from foci elsewhere in the body.

Joint disease

Table 32 shows the percentage distribution of lesions within the vertebrae. A total of 570 vertebrae were counted, including 251 female, 158 male, 25 unsexed adult and 136 immature. Only one lesion – slight pitting in a thoracic articular process facet – was noted in the immature spines.

Spinal lesions indicative of osteoarthritis were noted in three female (21% of females) and three male (37% of males) skeletons, with an overall prevalence of 3%, 2% for females, 6% for males. Between 1–4 vertebrae were affected in the females, 2–5 in the males. The thoracic and lumbar areas were almost equally affected in the females, the lumbar and sacral in the males. There was a clear correlation between the age of the individual and the number of vertebrae affected (i.e. an increase with age), which is probably largely responsible for the higher rate amongst the males.

Extra-spinal manifestations of the condition were noted in the remains of 12 individuals (24% of all individuals), including six females (43% of females) and four males (62% of females). Between 1–5 joints were affected in the females, 1–7 in the males. The severity of lesions varied, most being relatively slight to mild, the most severe lesions – extensive bone destruction, eburnation and remodelling of contours – occurring in the hip joints of two males >45 yr (5135, 5122). Table 33 shows the rates recorded. As with the other lesions in this class, the number of joints affected per individual tended to increase with age, but the increase was not consistent. The rates were consistently higher in the males than the females, partly as a result of there being more males in the >45 yr range. The proportionally high involvement of the hip joints is a common observation in archaeological assemblages, reflecting the susceptibility of these weight-bearing joints to the development of the disease.

Table 33: Tolpuddle Ball Cemetery human bone. Percentage rate of occurrence of extra-spinal osteoarthritis

	Right				*Left*		
	Total	*F*	*M*	*Un*	*Total*	*F*	*M*
temporo-mandibular	3	–	17	–	–	–	–
costo-vertebral	4	3	6	–	6	6	4
sacro-iliac joint	8	–	25	–	4	9	–
scapula (shoulder)	5	–	14	–	11	–	33
hand:							
carpals	1	–	–	17	–	–	–
carpo-meta.	–	–	–	–	2	–	7
meta.-phal.	–	–	–	–	1	–	4
hip	15	11	37	–	18	18	37
knee	5	14	–	–	12	–	29

Un = unsexed; phal. = phalangeal; meta. = metacarpal

The rates recorded are generally lower than those from other Late Romano-British sites, with fewer joints affected per individual in the same age range and less extensive lesions. For example, at Boscombe Down (McKinley forthcoming) the prevalence rate for spinal lesions was 18%. Slightly lower rates were noted in the Iron Age and Romano-British burials to the east of the Tolpuddle Ball cemetery while the 6.8% rate from Cirencester (Wells 1982) was similar to that noted here. Extra spinal lesions were also observed at a considerably lower rate than from elsewhere, e.g. 61% of females from Boscombe Down had lesions in up to 30 joints per individual, 92% of the males in up to 26. Considerably more lesion sites were involved in the Iron Age and Roman burials to the east – up to 30 in the females and 26 in the males. Higher rates amongst males compared with females are a consistent trait throughout, and are generally taken to reflect the varying physical demands of different workloads (Molleson 1993, 201–3).

Lesions indicative of degenerative disc disease were noted in one female (7%) and four male (50%) spines, and in the spine of the unsexed young adult. The overall prevalence was 4%, 0.8% for the females, 12% for the males. Lesions were concentrated in the lower spine (Table 32). Although the higher prevalence amongst the males may partly be explained by the greater number of males >45 yr, by no means all lesions occurred in the older adult spines (though they were most extensive in 5122, with nine affected vertebrae), nor were all the older adults affected. The rates were again considerably lower than those noted in other Late Romano-British cemeteries.

Schmorl's nodes were noted in four female (29%) and five male (62%) spines, and in that of the unsexed young adult. Between 1–7 vertebral bodies were affected in each individual, the maximum number in an older adult male. The overall prevalence was 6% (6% for the females, 11% for the males). No lesions were seen above T3, those in the male spines being concentrated in the thoracic region, the lumbar showing slightly greater involvement in the females. Individuals across the adult age ranges were affected. The rates were similar to those noted at Cirencester by Wells (1982: 5.6% females, 7.7% males), both being lower than at other contemporaneous sites and the 16% observed at Bitterne Road, Southampton (6th–8th century; McKinley 1998).

Three vertebrae (T12, L5 and L6) from 5122 (male >45 yr) have partially collapsed anteriorly with a loss in height of 3.6–5.5 mm. The condition is most likely the result of senile osteoporosis (Adams 1986, 111–13). Data on the distribution of other destructive lesions (including pitting) and new bone formation (osteophytes) associated with joints are held in archive. Eight female (57%) and seven (87%) male spines had lone lesions on vertebral body surface margins or in the anterior atlas-axis joint (see Table 32); the overall prevalence was 11%, 8% for the females, 28% for the males. Extra-spinal lesions were seen in 13 individuals and were noted at between 1–10 sites in the males and 1–8 sites in the females (data in archive). There was a tendency for the number of sites affected to increase with age.

Consideration of the extent and apparent severity of the lesions in this category creates the impression of a group of people who were engaged in activities involving a relatively low level of physical demands. The joint disease rates are consistently lower, or within the lower ranges of those recorded from other broadly contemporaneous cemeteries, apparently being most compatible with those from Cirencester (Wells 1983). The variation noted at Tolpuddle Ball between the earlier burials groups to the east and the cemetery group may be indicative of a shift in agricultural practice, for example from predominantly arable farming to animal husbandry. Alternatively it is possible that the individuals represented in the cemetery were largely involved in other, more sedentary activities. Another factor may be that this particular group of individuals was not as susceptible to joint disease as other groups.

Whilst there is a correlation between the age of individuals and the prevalence of almost all the conditions within this group, which, at least in part, explains the higher rates recorded for the males, there is also an indication that the latter experienced a slightly more physically strenuous existence than did the females, and that those stresses acted on different parts of the body – the lower spine and the shoulders being two potential areas of extra stress. These latter sites are those affected by the carrying of heavy loads, and both sexes were observed to have strongly developed deltoid (flexion at shoulder) and thigh muscles.

Miscellaneous conditions

Fragments of calcified rib and thyroid cartilage were recovered from two burials, 5238 (male 31–45 yr) and 5253 (male >45yr). Twelve adults, six females (43%) and six males (75%) had exostoses at between 1 and 7 sites within the skeleton. Lesions were observed at 11 sites, most commonly in the calcaneum (five) and patellae (four). The number of sites affected increased with age and lesions were noted at more sites in the male skeletons than in the female. In the majority of cases, the aetiology of specific lesions could not be ascertained and they are most likely to reflect age-related, 'normal' physical stresses on the skeleton. Lesions in 5122 (older male) were confined to the left side of the skeleton (three sites), the same side in which all three minor bone fractures were noted and the exostoses may reflect soft tissue damage in association with the traumatic events. The largest number of sites with exostoses were noted in skeleton 5238 (male, 31–45 yr), from which fragments of calcified thyroid and rib cartilage were also recovered. This individual may represent what has been termed a 'bone former' (Rogers and Waldron 1994, 53), with a predisposition to excess bone formation. Six individuals, five females and one male, had solitary bone cysts, most commonly in the scaphoid and capitate.

Morphological variations

Retention of deciduous ('milk') teeth and impaction of permanent teeth are relatively common (Hillson 1990, 320); both conditions were seen in the mandible and maxilla of 5207 (Plate 53), which showed impaction of the canines and premolars – the latter being less common than the former (*ibid.*). Retention of one deciduous tooth was noted in three other dentitions. The absence of one or more third molar is known to be inherited in some way and has been found to carry with it an increased chance of other teeth being absent, most commonly the second incisor and second premolar. In three of the four dentitions with retention of deciduous teeth, a second premolar was absent and all were missing at least one third molar (5184, 5207 and 5229). Two skeletons from which a permanent tooth was absent (maxillary canine and second premolar) also had one 'pegged' maxillary second incisor. Three out of the four individuals within this group of dental defects (5184, 5198 and 5207) were buried in adjacent graves in a row in the north-west of the cemetery. Whilst the



Plate 53 Skeleton 5207 (9–15 yr), anterior view of mandible showing anomalous eruption and impaction of teeth

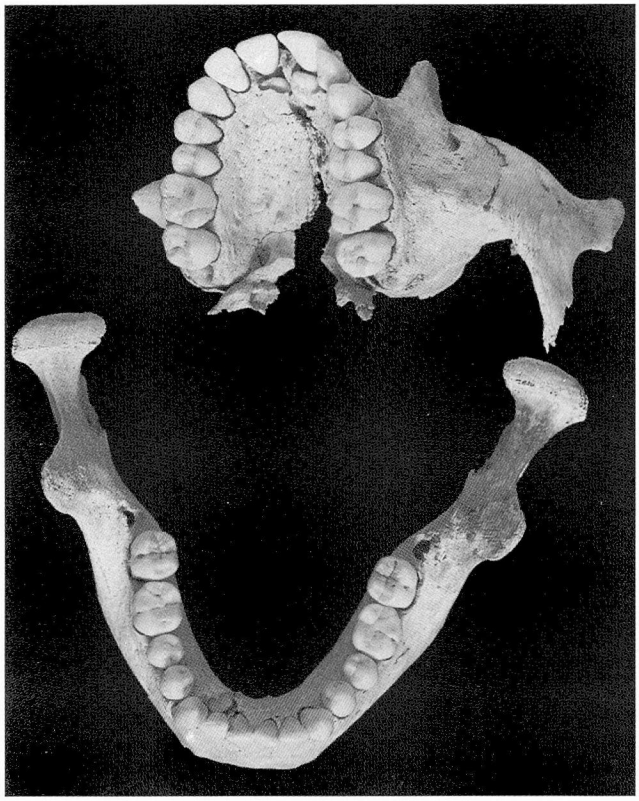


Plate 54 Skeleton 5213 (13–15 yr), occlusal surfaces of mandible and maxilla showing supernumerary teeth erupting behind maxillary 1st incisors and mandibular right 2nd incisor

various attributes may indicate a genetic link such evidence cannot be taken as conclusive.

Five other types of dental variation were noted (data in archive), including variations in cusp numbers, shovelling of the maxillary second incisor, enamel pearls and supernumerary teeth. Almost full size, erupting supernumerary teeth were present palatial to the maxillary first incisors and the right mandibular second incisor in 5213 (Plate 54). Rarer than tooth absence, extra teeth tend not to be as well developed as those from 5213, and frequently do not erupt (Hillson 1990, 270). A four-cusped mandibular first molar was observed in one female dentition (*c.* 2%), an anomaly observed in *c.* 3–7% of dentitions, most frequently female (Andrews 1996).

Lambdoid ossicles were noted in ten skulls (25%), including two (5227 and 5241) with three large ossicles at the lambda, and one (5118) with an ossicle at the right bregma. One individual also has an ossicle in the coronal suture (5184). Small squatting facets were observed in 54% of adult tibiae.

Evidence for *os acromiale* was recorded in two individuals. One male (5238) and one female (5162) showed uni-lateral non-fusion on the right side (*c.* 17%). The percentage rate is just slightly above the maximum quoted occurrence of 15% (Stirland 1984).

Several less common morphological variations were noted. Two individuals showed non-fusion of the posterior arch of the atlas, a condition recorded in two individuals from earlier burials to the east. There was also incomplete fusion of the spine in the L5 from 5256. In skeleton 5118, the vertebra situated between the C6 and T2 carried the characteristics of both a cervical and thoracic vertebrae; the right rib facets were present while the left side had no facets but a neural foramen. Dual transverse foramina were noted in the C5–6 from 5114.

Discussion

The assemblage gives the impression of an indigenous group of individuals, probably from the same general pool as those represented in the earlier burials to the east (TP93 and W2402.13). Those using the Late Roman and post-Roman cemetery evidently continued with the same Romano-British burial tradition, possibly even unaware of the more ostentatious funerary dress and artefacts being used by the Saxon incomers further east. The lack of personal ornamentation or surviving grave goods need not necessarily reflect a religious orientation (Samson 1999), merely the continuation of a well-known and familiar tradition.

An interesting aspect of the cemetery population is the noticeably light level of dental attrition observed. For example, using Brothwell's attrition charts (1972a, 69), a consistent under-ageing by *c.* 10 years would have been obtained. There was relatively little exposure of dentine even in the older adult dentitions. The light attrition rates suggest a diet which excluded or was light in un-refined cereals and other coarse foodstuffs. The rates of various dental diseases were consistently low, showing similarities with some Late Romano-British and 5th–8th century AD cemeteries, and contrasting markedly with those from the earlier Tolpuddle Ball burials to the east. The main factor affecting dental disease is diet (Hillson 1990, 283) and dental hygiene is also likely to have been of consequence. Different dietary intakes will increase (carbohydrate, sugars) or decrease (proteins) the activity or presence of acid-producing bacteria. Hillson (1990) gives the presence of dental plaque (indicated by calculus in archaeological material) and carbohydrates in the diet as pre-requisites for caries formation. The detrimental effects of poor diet on the oral health of the individuals buried at Poundbury were discussed by Molleson (1993, 182–4); the poor nutritional value of a diet based largely on cereals and vegetables being cited as the cause of the high rates of caries recorded. Conversely, the low rates of periodontal disease, caries and abscess lesions obtained from the Late Roman and post-Roman population at Tolpuddle Ball suggests a diet not over-dependant on carbohydrates and inclusive of a good level of meat-based proteins. One further possible factor contributing to the low rates of dental disease may be that this group of individuals was predisposed to be more resistant (Hillson 1990, 287).

Although not necessarily direct descendants, there are indications to suggest that the same general pool of people had been living and dying in this area since the Iron Age. What changed were lifestyle and where and how the dead were buried. The cemetery assemblage shows indications of improvements in diet (as already discussed) which became more refined and protein-rich. Together with the evidence for lower levels of fractures and joint disease this suggests a slight change in the economy, with a subtle shift to less physically stressful

activities. This may reflect a change from mixed agriculture (i.e. arable and pastoral) to one more based on cattle or sheep husbandry. The occurrence of tuberculosis may be linked to cattle-herding, as may the evidence for parasitic infection. Such speculation remains tentative in the absence of supportive or contradictory evidence from an associated settlement.

Evidence for direct genetic links between individuals is tenuous, though the sharing of several morphological variations between a few of the females, for example 5118 and 5218, may be significant. Some genetic links would be expected in a long established, small rural cemetery of this type, apparently being used by members of the same extended family or farmstead occupants. Interestingly one adult male, 5253, appears to fall outside the general homogeneity of the cemetery assemblage and the earlier Tolpuddle Ball burials. This male displays a markedly different skull morphology and may represent an 'incomer' among the group.

Section 4. Environmental Evidence

Introduction, Michael J. Allen

The archaeology of the chalk downland landscape around Dorchester is very well understood and recent major programmes of environmental analyses have enabled some large palaeo-landscape and palaeo-economic models to be developed for that area (Evans 1991; Allen 1994; Allen 1997b). By contrast, the palaeo-environmental framework of the landscape zone to the east of Dorchester, including the Piddle Valley and its interface with the Hampshire/Poole Basin, is far less understood. This is largely a reflection of the lack of opportunities for archaeological survey and excavation.

The Tolpuddle to Puddletown bypass enabled the examination of a 9 km east–west transect embracing many of the same periods of occupation recorded for the Dorchester area. It provided an opportunity to provide detailed palaeo-environmental information from outside the immediate environs of the Dorchester 'core' landscape, and to test some of the models of land use and landscape reconstruction proposed for Dorchester.

The bypass traverses a more complex topography and geology than Dorchester. It does not merely encompass chalk downland (mainly Upper Chalk), but also Tertiary deposits of Plateau Gravels and Reading Beds on the high ground and expanses of River Gravels and (more locally) alluvium in the major valleys. Although the majority of the bypass route is over calcareous deposits on Chalk, many of the excavations were conducted in areas with weakly or non-calcareous deposits (e.g. Burleston Down, West Mead).

The route therefore traverses a wide variety of ecotones in terms of geography, topographic aspect, geology, pedology, hydrology and ecology. This has resulted in varying and selective biases in the preservation of the palaeo-environmental record. Furthermore, excavated archaeological evidence was disparate both spatially and chronologically.

It did not prove possible, therefore, from the environmental evidence, to reconstruct the development of this landscape mosaic and associated land use in the way that has been achieved for samples of more uniform landscapes, for example Dorchester (Allen 1997b), the Purbeck heathlands (Cox and Hearne 1991), Avebury (Smith 1984; Evans *et al.* 1993; Allen and Powell 1996) and Stonehenge (Cleal and Allen 1995; Allen 1997c). Instead, the environmental evidence from the A35 project provides information on the nature of land use and economy in specific locations and in defined periods. Despite these constraints the data can be used to both test existing environmental models and provide an overview of the development of local land use and economy.

Environmental Sampling

Prior the start of the 1996 (DBFO) fieldwork it was recognised that the preservation of palaeo-environmental materials over the route was likely to be highly variable, especially for bone, shells, snails and pollen. The potential for charred remains (charred seeds and charcoal) was anticipated to be more consistent, its occurrence related to the nature and intensity of activity within each excavated area. Manual excavation (which produced the bulk of the animal bone) was augmented by the retrieval of additional smaller material from soil samples.

Wessex Archaeology's main sampling strategy was the recovery of bulk soil samples (usually 10 litres) for charcoals and charred plant remains. These samples were taken from well-dated and sealed features and layers from excavated sites and from the watching brief. It should be noted that several sites comprised shallow, poorly-preserved subsoil features (e.g. Lower Eweleaze, Home Farm and Burleston Down). Where deposits suitable for bulk sampling did exist, sampling aimed to encompass all excavated phases and a range of feature types. At Burleston Down and Tolpuddle Ball, where long temporal sequences were available, suites of samples for land snails were also taken. Although the potential for pollen preservation was judged to be low, monolith tin samples suitable for pollen analysis were taken of specific sequences at Burleston Down and West Mead.

In all, 35 bulk samples (325 litres) were taken from seven sites and the watching brief (two samples), along with 53 snail samples and two pollen monoliths. Full details on the sampling strategy and the samples taken are held in the project archive. Samples were processed using standard methods, the flot being retained on 0.5 mm mesh and residues on 1.0 mm mesh. All flots were scanned under a microscope and the data were used to assess the presence and diversity of remains in relation to the archaeological context. The results of the assessment are contained in the A35 Post-Excavation Assessment Report (Wessex Archaeology 1997a).

Liverpool University data (TP93)

Three categories of environmental data existed for the 1993 excavations: marine shells (oyster), animal bone and soil samples. At the hand-over of the project to Wessex Archaeology (1996), the oyster shells had been fully reported on and the animal bone had been assessed. The 160 soil samples had not, however, been processed or assessed. The soil samples were all bulk ones (generally 10 litres). They were taken for varying purposes, mostly for charred plant remains and snails but also for artefacts (e.g. flint-working debitage) and human remains. The severe limitations in the mollusc samples from the Liverpool University excavation were addressed by Wessex Archaeology in the Assessment Report (Wessex Archaeology 1997a, 5.2).

A preliminary appraisal of the potential for charred plant remains was undertaken in May 1997. This involved processing and assessment of 17 priority samples and the results were included in the

Table 34: presence of environmental evidence by site

Site ref.	*Name (W–E)*	*Land snails*	*Pollen / micro-scopic*	*Animal bone*	*Oyster shell*	*Charred plant*	*Charcoal*
W2402.5	Lower Eweleaze						*
W2402.8	Burleston Down	*	*	*			
W2402.10	Roman Road			*			
W2402.12	N. of Tolpuddle Ball					*	*
W2405.17	Tolpuddle Ball Cemetery			*		*	*
TP93	Tolpuddle Ball 1993			*	*	*	*
W2402.13	Tolpuddle Ball 1996/7	*		*		*	*
W2402.16	West Mead		*	*	*	*	*
W2405	Watching brief			*			

Assessment Report. Following this, all the remaining samples were transferred to Wessex Archaeology in November 1997 (150 samples were transferred in total, 24 were unaccounted for). A review was undertaken of the contexts and features sampled, their date and likely potential to address palaeo-environmental aspects of the site, its landscape, land use and economy. This review was undertaken in conjunction with the stratigraphic analysis of the site and its overall interpretation which was by then well advanced. The outcome of the review was that a further 32 samples were identified as priority samples and 29 of these were processed (three were unaccounted for) In all, 46 bulk soil samples (representing 800 litres of soil) were processed and assessed and all those which were of environmental potential were submitted for detailed specialist analysis.

Environmental Themes

The environmental evidence for the project can be divided into two major themes: (i) the landscape and its changing nature and modification over time, and (ii) the exploitation of resources, that is, economic evidence. The reports are presented by material type and largely contribute to either (and sometimes both) of these two themes. Land snails and pollen provide information on the physical landscape. Animal bone, marine shells, charred plant remains and charcoal largely provide economic evidence. Table 34 provides a summary of the presence of environmental data for each site.

Land Snail Evidence, Michael J. Allen

Samples for land snails were taken from two sites (Burleston Down and Tolpuddle Ball) and provide an overall chronological span from the Lateglacial to the Iron Age, with limited evidence for later periods. Specific emphasis has been placed on the fortuitous discovery of a rare Allerød phase soil at Burleston Down and also on the earlier prehistoric (Neolithic and Bronze Age) contexts at Tolpuddle Ball. The analytical programme aimed to provide a general overview of the local landscape and enable comparison with the more detailed regional scenario suggested for the Dorchester environs (Allen 1997b) – this is discussed further below (Section 5).

Sampling, Laboratory Methods and Analytical Programme

A total of 54 samples was taken from the two sites and samples of 1000 g to 1500 g were processed following the standard methods outlined by Evans (1972). The flots (0.5 mm) generated by processing were assessed by scanning under a x10–x30 stereo-binocular microscope to provide information about shell preservation and species representation. The numbers of shells and the presence of taxonomic groups were quantified as ranges. There is some inherent bias in this method as many shells will not float and will only be present in the unextracted residues. Shells recorded in the flot are those less likely to break (i.e. larger robust species and very small species). Nevertheless this assessment method does enable an indication of shell preservation, assemblage composition and (with sequences of samples) change through time may also be detected. Further details of the assessment methodology and aims are held in the archive. All fully analysed samples are presented in Tables 35–9 and in diagrammatic form (Figs 60–2) as histograms of relative abundance. Mollusc nomenclature follows Waldèn (1976) and Kerney (1976).

Burleston Down: the Lateglacial Environment and Evidence for Holocene Woodland Clearance

Trench 3 within a large dry valley at Burleston Down (see Fig. 33 for location) revealed a 1.15 m deep sequence of Post-glacial colluvium in the valley bottom over

typical chalky periglacial solifluction, or meltwater, deposits commonly referred to as Coombe Deposits. Examination of the large plateau-edge 'lynchet' (evaluation Site O), both from its topographic and geomorphic form (see Plate 30) and by the results of the trenching, indicated that this landscape feature irepresents a large palaeo river-cliff within the base of the dry valley, possibly originating as a result of glacial meltwaters or of significantly earlier (geological) date.

Meltwater deposits were revealed at the base of the river cliff in the valley bottom (Fig. 33, Section A – context 1347 and below). The upper portion of these deposits comprised alternating broad bands of soft chalky marl and chalk gravels similar to late Devensian deposits reported from dry valleys in south-east England by Kerney (Kerney 1963; Kerney *et al.* 1964; Kerney *et al.* 1980). At Burleston these periglacial meltwater deposits were separated by a dark humic buried soil (Fig. 33, Section A – context 1348), interpreted as Lateglacial and possibly representing the Windermere interstadial (Allerød phase *c.* 11,000 BP), sealed by deposits of the ensuing Loch Lomond interstadial. Overlying the Lateglacial deposits were typical colluvial deposits (see Fig. 33, Section A – context 1345).

Both the lower and upper parts of the sequence were sampled with contiguous columns of samples (columns 10005 and 10021 respectively). An undisturbed soil sample was also taken from the Allerød phase buried soil and was sub-sampled for pollen (see Scaife below). A soil thin section slide was manufactured by the Department of Environmental Sciences, University of Stirling (after Murphy 1986) and the soil block is held in the project archive.

The samples

A total of 21 large samples (1500 g) was taken and processed for land snails. Magnetic susceptibility measurements were also taken on sub-samples of 10 g (air dried soil <2 mm) to create a magnetic susceptibility 'signature' for each sequence to augment interpretation (see Allen 1986; 1994, 57–61). The results obtained (see Tables 35, 36) are comparable to those from research conducted on similar colluvial deposits in southern England (e.g. Allen 1988; 1994). Magnetic susceptibility enhancement is commonly used to aid in the detection of buried soils and topsoil materials with sequences. In addition, the creation of magnetic susceptibility profiles from these sequences highlights zones of deposits with higher or lower readings which may provide information relating to the erosional regime and land use.

The Lateglacial sequence (Fig. 60, Table 35)

The Allerød phase buried soil contained within the Lateglacial chalk meltwater deposits is perhaps the first soil of this phase recorded from the mainland of southern central England (Hampshire, Wiltshire, Berkshire and Dorset). Outside Kent, where numerous soils of this period have been identified (see Preece 1994), Allerød phase soils are known from only a few specific locations at Pitstone/Marsworth, Buckinghamshire (Evans 1966; Evans and Valentine 1974), Westhampnett, West Sussex (Allen forthcoming) and Watcombe Bottom, Isle of Wight (Preece *et al.* 1995). Sampling and analysis of the deposit at Burleston Down was therefore undertaken in recognition of the potential importance of this data for wider archaeological and palaeo-geographical research.

The sequence at the sampling point may be summarised, from top to bottom as (see Fig. 33 – Section A, Column 10005):

0–0.35 m, context 1347. Pale brown massive chalk marl, common small chalk pieces, gradual wavy boundary. Samples 15–18;

0.35–0.43 m, context 1347. Transition and mixed truncation horizon; silty marl becoming less stony and darker with depth. Sample 14;

0.43–0.52 m context 1348. Brown silty clay with weak, poorly developed medium sub-angular structure, almost stonefree, but rare small and medium rounded chalk pieces, clear smooth boundary. – Allerød phase humic ranker bA. Samples 12, 13 and 19;

0.52–0.59 m, context 1349. Yellowish brown chalk marl, with common small and medium chalk pieces, very poorly developed weak sub-angular blocky structure, smooth clear boundary. – weathered periglacial meltwater A\C horizon – weathered periglacial Coombe deposits. Sample 11;

0.59–1.0 m +, context 1351. Pale brown calcareous silty clay with rare small and medium chalk pieces. – Coombe Deposits. Samples 6–10. Lies over weathered solid chalk.

Dr C. French (University of Cambridge) kindly provided a summary micromorphological description of the palaeosol, using the terminology of Bullock *et al.* (1985), as follows:

In thin section, the palaeosol was composed of a mixture of fine chalk rubble (c. 50–75%) and yellowish–brown, soil aggregates (c. 25–50%), with up to 30% void space comprised of fine channels to small, irregular vughs. The chalk rubble was sub-rounded, <5 mm in diameter and in all orientations. The soil aggregates were small, <4 mm and sub-rounded, containing about 20% very fine quartz and chalk fragments, 40% micritic calcium carbonate and 40% silt, with rare, very fine, included fragments of charcoal. The soil matrix also occurred in the form of dense to discontinuous infills between chalk fragments, and as coatings/partial infills of inter-aggregate channels. In addition, there were common, very fine 'filaments' of calcium carbonate within the void space.

Dr French therefore considers that the soil '... appears to be a thin (<100 mm), poorly developed, A horizon formed through the weathering of a standstill surface in the Coombe Deposits. In effect, the soil resembles a ranker to very immature, rendzina-like profile. The mixture of frequent, sub-rounded, fine chalk rubble with fine 'pellets' of calcitic silt soil fabric indicates the predominant effect cryoturbation has had on the soil structure through freeze–thaw events'.

Shell preservation was moderate to poor. Shell numbers were low but rose to acceptable levels (50–143 shells) in the buried soil. Although mollusc numbers were relatively low, especially since large samples (1500 g) were processed, this did not diminish the importance

Table 35: Burleston Down. Land snails from the Lateglacial meltwater deposits and Allerød phase soil

Phase	*Periglacial*						*Allerød*			*Periglacial meltwater deposits*				
Sample	*06*	*07*	*08*	*09*	*10*	*11*	*19*	*12*	*13*	*14*	*15*	*16*	*17*	*18*
Context		*1351*			*1349*			*1348*				*1347*		
Depth (m)	*0.90-1.00*	*0.80-0.90*	*0.72-0.80*	*0.65-0.72*	*0.59-0.65*	*0.52-0.59*	*spot*	*0.47-0.52*	*0.43-0.47*	*0.37-0.43*	*0.25-0.35*	*0.15-0.25*	*0.05-0.15*	*0.0-0.05*
Wt (g)	*1500*	*1500*	*1500*	*1500*	*1500*	*1500*	*1500*	*1500*	*1500*	*1500*	*1500*	*1500*	*1500*	*1500*
Cochlicopa lubrica (Müller)	–	–	–	–	–	–	–	1	1	–	–	–	–	–
Cochlicopa spp.	–	–	–	–	–	2	7	5	6	–	–	–	–	–
Vertigo pygmaea (Draparnaud)	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Vertigo spp.	–	–	–	–	–	+	–	–	–	–	–	–	–	–
Pupilla muscorum (Linnaeus)	–	–	–	–	1	–	42	17	38	54	28	9	2	1
Vallonia costata (Müller)	–	–	–	1	1	4	25	6	19	7	1	–	–	–
Vallonia pulchella (Müller)	–	–	–	–	1	4	16	4	9	2	–	–	–	–
Vallonia excentrica Sterki	–	–	–	–	–	–	–	–	–	–	–	–	1	–
Vallonia spp.	–	–	–	–	–	1	–	–	–	–	–	–	–	–
Punctum pygmaeum (Draparnaud)	–	–	–	–	–	–	3	–	1	–	–	–	–	–
Vitrina pellucida (Müller)	–	–	–	–	1	–	5	1	1	–	–	–	–	1
Aegopinella nitidula (Draparnaud)	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Limacidae	–	–	–	–	–	–	7	1	1	–	–	–	–	–
Cecilioides acicula (Müller)	–	–	–	–	–	–	–	–	1	–	1	–	–	2
Helicella itala (Linnaeus)	–	–	–	–	+	–	38	15	8	3	1	–	–	1
Trochoidea geyeri (Soós)	–	–	–	–	–	–	–	–	–	1	1	–	–	–
Trichia hispida (Linnaeus)	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Taxa	0	0	0	1	4	3	8	7	8	5	4	1	2	5
Shannon index				0	1.36	0.74	1.61	1.60	1.52	0.72	0.42	0	0.64	1.61
Brillouin Index				0	0.80	1.01	1.72	1.42	1.39	0.63	0.33	0	0.37	0.96
Shannon Index-Brillouin Index				0	0.59	-0.28	-0.11	0.18	0.13	0.08	0.09	0	0.27	0.65
Total	0	0	0	1	4	11	143	50	84	67	31	9	3	5
Magnetic susceptibility	11	11	11	10	10	17	20	24	23	9	3	1	1	1

Totals exclude *Cecilioides acicula*; + = presence

of the data from the buried soil because of the rarity of well-studied deposits of this period (fewer than five sequences have been well sampled and studied in the past 30 years). Although the Burleston sequence is not directly related to human activity (no charcoal, artefacts or any other evidence of human activity was recovered from the Allerød phase soil), it does provides information on the downland environment before its re-habitation in the Mesolithic period (*c.* 8500 BC).

The lower calcareous marl (1351) was devoid of shells; the first shells occurred in the weathered periglacial deposits – the B/C horizon of the lithomorphic ranker soil. Shell numbers were also very low here, and include species typical of Lateglacial deposits (*Pupilla muscorum, Vallonia costata, Vallonia excentrica* and *Vitrina pellucida*).

The buried soil produced a peak in shell numbers to 143 (with a corresponding minor but definite rise in magnetic susceptibility to 24 SI x10^{-8} SI/Kg) and was an organic horizon typical of interstadial episodes (e.g. Windermere Interstadial, Allerød phase = pollen zone II). The assemblages were impoverished and taxonomically-restricted, being dominated by *Pupilla muscorum* with *Helicella itala, Vallonia costata* and *Vallonia pulchella.* Other species include *Punctum pygmaeum, Cochlicopa* spp. and Limacidae. This is a typical, if impoverished, assemblage indicative of dry open harsh habitats. It compares well with assemblages from Watcombe Bottom, Ventnor, Isle of Wight (Preece *et al.* 1995). Assemblages from Dover Hill, Folkestone, Kent (Kerney 1963; Preece 1994), Upper Halling, Kent and Cow Gap, Sussex (Kerney 1963) have higher proportions of the more shade-loving species (*Punctum pygmaea*, *Euconulus fulvus* and *Nesovitrea hammonis*), perhaps indicating more xerophilic (open and very dry) habitats at Burleston Down than at many other

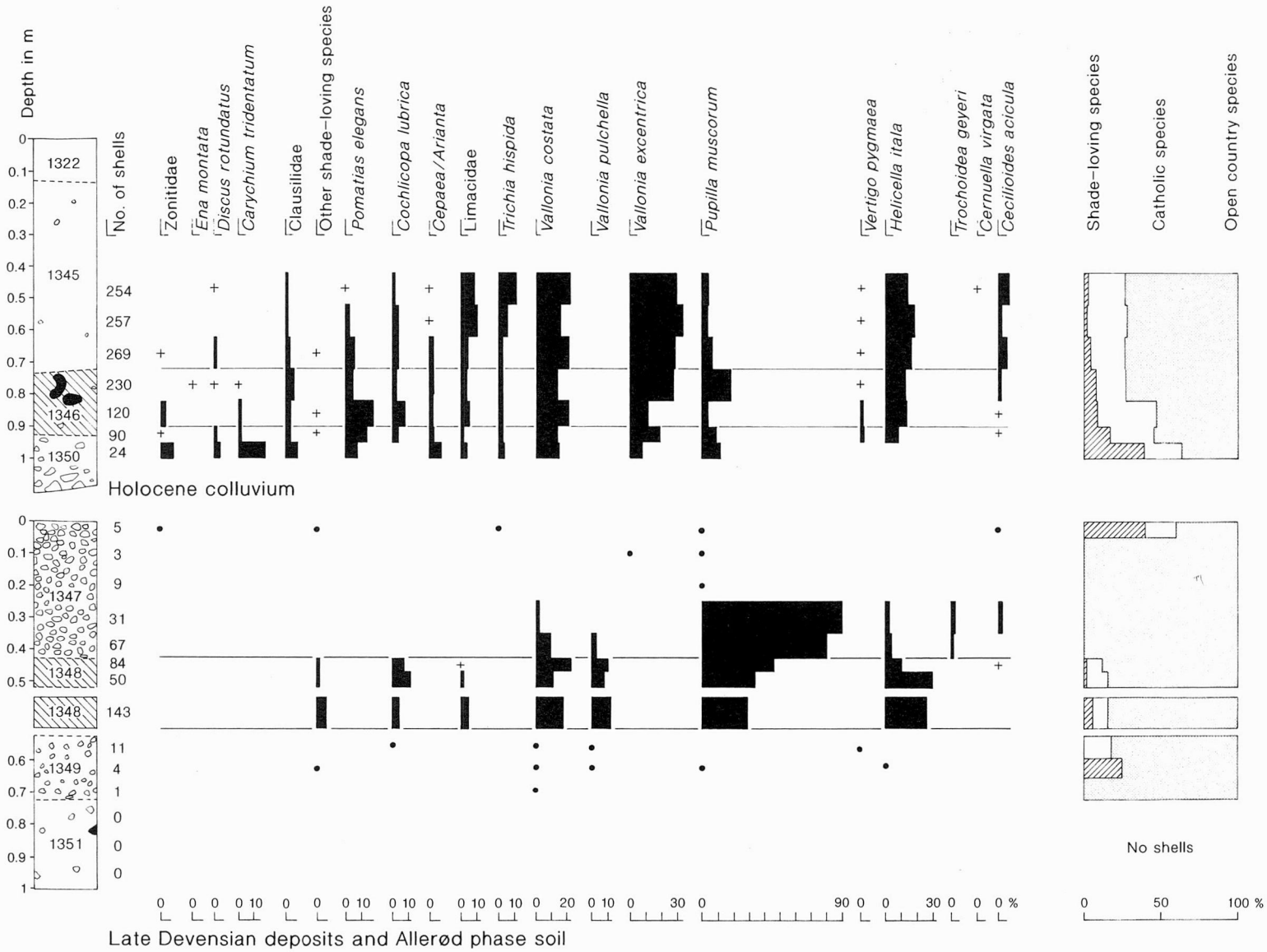


Figure 60 *Burleston Down: land snail histogram*

Windermere Interstadial soils. There is no evidence of the damper marshy habitats recorded in soils of this period at Holywell Coombe, Kent (Kerney *et al.* 1980) and Westhampnett, Sussex (Allen forthcoming). In view of the very dry tundra habitats at Burleston perhaps the most significant absence from the assemblage is *Abida secale* which is a common fossil of the period (Holyoak 1982). *Abida secale* has been recognised in many of the Kent sequences (Kerney 1963) and on the Isle of Wight and is often found in dry places on rocks and hillsides (Ellis 1969). It is, however, absent from the deeper, typical calcareous brown earth Allerød phase soil at Pitstone, Buckinghamshire (Evans 1966; Evans and Valentine 1974; Green *et al.* 1984). Perhaps the apparently harsher conditions represented by the snail assemblages at Burleston Down are also reflected by the presence of an immature rendzina soil rather than a developed calcareous brown earth such as that identified at Pitstone (Evans and Valentine 1974).

The overlying chalky meltwater deposits represent full glacial conditions with assemblages dominated by *Pupilla muscorum* and with one exception all other species decline in relative terms, or disappear. Too much should not be made of the absence of some of the intermediate species as this may be accounted for by declining shell numbers. The single, and notable, exception is the presence of the Lateglacial fossil *Trochoidea geyeri* which is extinct from Britain today. Its appearance in the Burleston Down sequence is also reflected in the strong relative decline in *Helicella itala*. *T. geyeri* has been extinct in England since the Post-glacial and occurs in a number of Lateglacial deposits and Pleistocene deposits (Sparks 1953), including many of the cold stage deposits already mentioned from Kent (Kerney 1963) and the Isle of Wight (Preece *et al.* 1995) as well as Coombe Bottom, Hambledon Hill, Dorset (Bell and Allen 1985). The assemblage relates well to the full glacial assemblages of Kerney's (1977) mollusc biozone z and probably equates to pollen zone III dated to about 8900–8000 BC.

Post-glacial sequences (Fig. 60, Table 36)

No associated artefactual material was recovered from the colluvial deposits and they are therefore strictly undated. However, the main colluvial episodes may be interpreted in the light of excavated evidence of Bronze Age and later activity to the east. The sequence at the sampling point may be summarised as follows, from top to bottom (Fig. 36 – Section A, Column 10021):

0–0.18 m, context 1322. Ploughsoil, greyish–brown silty clay loam with few stones, medium columnar structure, clear smooth boundary. Colluvial brown earth (not sampled);

0.18–0.72 m, context 1345. Colluvial deposit. Light yellowish–brown silty clay loam, common small and medium chalk pieces, weak sub-angular blocky structure, clear smooth to wavy boundary (samples 26, 27 and 28 from lower part of deposit);

0.72–0.90 m, context 1346. Possible buried soil (bB). Dark yellowish–brown silty loam with rare flint and few to common small and medium chalk pieces, well developed moderate medium sub-angular structure, clear wavy boundary. bB horizon, possibly transported rather than developed *in situ* (samples 24, 25);

0.90–1.09 m, context 1350. Weathered C horizon of buried soil (bB\C). Pale brown silty loam with common to abundant small and medium chalk pieces; weathered periglacial chalk meltwater deposits with soil inclusions (samples 22, 23).

The colluvium was in the form of unsorted hillwash with bands indicating either low-energy rilling events or major deposition events in the form of gravel fans (Allen 1991). The deposits were calcareous but due to the presence of Reading Beds and non-calcareous deposits on the eastern valley slopes (and therefore the possibility of lower shell numbers), large samples (1500 g) were processed throughout the sequence. Shell numbers were, in fact, relatively high in calcareous colluvial deposits (over 250 per sample) but the putative buried soil (context 1346) and weathered chalk meltwater deposit (context 1350) produced lower shell numbers.

Assemblages from the weathered Coombe Deposits contained a number of shade-loving species (*Discus rotundatus, Carychium tridentatum* and Clausiliidae) and *Pomatias elegans* which is not present in the British Isle before the late Boreal about 6500 BC (Kerney 1966). The assemblages clearly represent a fauna relating to Kerney's (1977) mollusc zone d, that is, Atlantic and Post-glacial. The assemblages are therefore derived from the truncated and mixed Post-glacial soil rather than the Lateglacial assemblages reported above.

The two assemblages from the weathered bB\C horizon were relatively low in shell numbers but indicate the presence of shadier, but generally open conditions. These assemblages are difficult to interpret because of the potential for mixing with the soil (cf. Carter 1990). However, they seem to indicate the relict assemblages of a former woodland or open woodland. Although shell numbers do not significantly increase through the putative buried soil (as one might expect), the assemblages show an significant dominance of open country species, in particular *Pupilla muscorum* and *Vallonia costata*. A decrease in *Pomatias elegans* and complementary relative increase in *P. muscorum* are interpreted as disturbed mixed ground becoming more stable grassland, albeit with bare patches. The magnetic susceptibility (see Table 36) shows a pronounced peak through this horizon. On balance the soil structure and moderate shell numbers suggest eroded former soil material rather than a former soil that had developed *in situ*. The presence of *in situ* buried soils under colluvium in Wessex is rare (Allen 1992): eroded, more humic soil forming the earlier sequences are more common. This concurs with the higher magnetic susceptibility readings obtained.

The overlying colluvium produced a typical hillwash assemblage dominated by open county species (over 70%) and the near disappearance of all shade-loving elements. The two most xerophile species (*Helicella itala* and *V. excentrica*) dominate the assemblage indicating very open dry downland, and the assemblage probably reflects both tillage and open short-grazed grassland. In the uppermost sample (0.42–0.52 m) two specimens of

Table 36: Burleston Down land snails from the Holocene colluvium

Phase	*Holocene colluvium*						
Sample	*22*	*23*	*24*	*25*	*26*	*27*	*28*
Context	*1350*		*1346*			*1345*	
Depth (m)	*0.95-1.00*	*0.90-0.95*	*0.82-0.90*	*0.72-0.82*	*0.62-0.72*	*0.52-0.62*	*0.42-0.52*
Wt (g)	*1500*	*1500*	*1500*	*1500*	*1500*	*1500*	*1500*
Pomatias elegans (Müller)	2	13	21	12	15	8	2
Carychium tridentatum (Risso)	2	–	2	–	–	–	–
Carychium spp.	2	2	1	1	–	–	–
Cochlicopa lubrica (Müller)	–	–	1	1	–	1	–
Cochlicopa spp.	–	4	8	5	11	10	4
Vertigo pygmaea (Draparnaud)	–	2	3	–	2	1	1
Vertigo cf *pygmaea* (Draparnaud)	–	–	–	1	–	–	–
Vertigo spp.	–	1	–	–	–	–	–
Pupilla muscorum (Linnaeus)	3	8	5	43	18	9	13
Vallonia costata (Müller)	4	14	25	31	52	39	54
Vallonia excentrica Sterki	2	17	15	63	73	83	72
Vallonia spp.	–	–	–	4	9	6	7
Ena montana (Draparnaud)	–	–	–	1	–	–	–
Punctum pygmaeum (Draparnaud)	–	1	1	–	1	–	–
Discus rotundatus (Müller)	1	8	–	2	4	–	1
Vitrea contracta (Westerlund)	–	1	–	–	–	–	–
Nesovitrea hammonis (Ström)	1	–	1	–	–	–	–
Aegopinella nitidula (Draparnaud)	–	–	1	–	–	–	–
Oxychilus cellarius (Müller)	1	–	2	–	1	–	–
Limacidae	1	2	7	9	14	29	23
Cecilioides acicula (Müller)	–	1	1	5	14	5	18
Cochlodina laminata (Montagu)	–	3	–	5	5	–	2
cf *Cochlodina laminata* (Montagu)	1	–	–	–	–	–	–
Clausilia bidentata (Ström)	1	–	3	9	3	4	4
Cernuella virgata (Da Costa)	–	–	–	–	–	–	2
Helicella itala (Linnaeus)	–	8	17	29	45	49	38
Trichia hispida (Linnaeus)	1	3	4+[1]	7	9	15	28
Helicigona lapicida (Linnaeus)	–	+	+	–	–	–	–
Cepaea/Arianta spp.	2	3	3	7	7	3	3
Taxa	13	15	16	15	15	11	14
Shannon index	2.20	2.05	2.24	1.99	1.86	1.83	1.82
Brillouin Index	1.89	2.21	2.15	2.05	2.08	1.81	1.86
Shannon Index-Brillouin Index	0.31	-0.16	0.09	-0.06	-0.22	0.02	-0.04
Total	24	90	120	230	269	257	254
Magnetic susceptibility	15	27	47	41	22	23	16

Totals exclude *Cecilioides acicula* ; + = presence; [ ] = numbers of modern (intrusive) shells with periostracum which have not been included in the analysis

the introduced Helicellid *Cernuella virgata* were present which is not found in England before the medieval period (Kerney 1966) and may therefore indicate medieval or later erosion. Magnetic susceptibility levels steadily decline from the eroded soil (context 1346) throughout the sampled colluvial sequence, to levels typical of chalkland hillwash deposits (cf. Allen 1988). The hillwash seems to represent gradual accumulation and, if any rills did occur, sediment accumulation was gradual and did not seal these lenses; rather it reworked them into the overall hillwash deposits by biotic (mixing by soil fauna – worms and insects etc.) activity.

On the whole, the assemblages are interpreted (tentatively) as indicating the clearance of a former woodland which existed in the post glacial and Neolithic

period. The period of clearance and onset of colluviation is difficult to establish but these episodes could be linked to the Late Neolithic/Early Bronze Age activity represented by the flint assemblage from the site and/or possibly to the Mid/Late Bronze Age activity recorded on the west-facing slope of valley side (trench 5). Colluviation appears to have continued well into the medieval and later periods.

Discussion

The molluscan sequences from Burleston Down provide an important contribution to the Late- and Post-glacial development of the downland vegetation and the human modification of that natural environment. Evidence for the presence of an ameliorating climate is provided by the formation of a thin lithomorphic humic ranker soil of the Allerød phase (Windermere interstadial). Harsher cold tundra conditions are indicated by the chalk meltwater deposits and the typical Lateglacial mollusc biozone z (pollen zone III).

The Post-glacial hillwash deposits provide tentative evidence for the former deciduous woodland which has been so elusive in the Dorchester area (Allen 1997b, 278–9). Although the Boreal woodland succession is not represented in the Burleston Down sequence, the limited evidence suggests a typical Atlantic deciduous woodland. However, most of the Post-glacial sequence relates to open country conditions which were undoubtedly created by human clearance and tillage. This increase of human impact on the landscape probably correlates with with artefactual evidence for Neolithic/Early Bronze Age activity (worked flint) and the excavated features on the adjacent slopes. Tillage and cultivation is also indicated by the presence of lynchets nearby, which themselves represent linear bands of accumulated hillwash. The molluscan sequence is largely undifferentiated but the deposits were more calcareous in the upper part of the sequence, indicating significant soil thinning which allowed fragmented bedrock chalk into the tilled and eroding soil profiles.

Tolpuddle Ball

A series of 33 samples was taken from a tree hollow and natural feature and through archaeological deposits of likely Neolithic to medieval date. The aims of the molluscan analysis may be summarised as:

i) Examine the potential for determining the nature of the ancient prehistoric woodland from the sequence in natural hollow 2315;
ii) define the presence and nature of the early prehistoric woodland (and associated clearance episodes) and the nature of the later Neolithic and earlier Bronze Age landscape (tree hollow 2393, and probable Neolithic quarry pit complex 2473);
iii) define the nature of the agricultural landscape and land use history relating to the late 2nd and 1st millennia BC occupation of the site from Early/Middle Bronze Age enclosure ditch 2360 and Iron Age ditch 2334 (i.e. assess the presence of trampled land, arable, grazed grassland or long grassland);
iv) examine the nature of the medieval and post-medieval land use and examine the use and disuse of the medieval hollow way (2448).

The post-excavation assessment (Wessex Archaeology 1997a) demonstrated that although the assemblages from the natural hollow 2315 and the medieval hollow way were large enough to undertake meaningful analysis (if fully extracted), the assessment itself resolved the aims posed of these sequences (i and iv, above). Detailed analysis was not therefore undertaken and the results are presented as assessment data. All other sequences (20 samples) were fully analysed.

Neolithic woodland and clearance (Fig. 61, Tables 37–8)

Because of its unusual fills (details in archive) it was considered that the undated natural hollow (2315) might provide evidence of an ancient landscape history similar to the small Mesolithic 'sinkhole' 2110 at Balksbury, Hampshire (Allen 1995, 93–5). A series of spot samples was taken through the fills of the feature. The assessment (Table 37) demonstrated that the assemblages contained a relatively diverse range of shade-loving species but that no rare species or type fossils were present. Furthermore these assemblages appeared to be very similar to those recorded from tree hollow 2393 (see below).

Tree hollow 2393

The size, shape and fills of this feature were typical of a tree hollow (Macphail 1987; Macphail and Goldberg 1990). The fills were therefore likely to have derived from the contemporaneous soil. Five spot samples were taken, both from the lower brown silty clay fill (context 2392) – which probably represents material derived from the former topsoil – and from the upper chalkier brownish silt (context 2391). The tree hollow is located on Fig. 10.

All five assemblages were broadly similar (Fig. 61, Table 38) and contained a strong shade-loving element (*Aegopinella nitidula, Discus rotundatus* and *Carychium tridentatum*), with a large proportion of rupestral species that live on and under tree trunks (*Clausilia bidentata, Cochlodina laminata* and *Acanthinula aculeata*). Furthermore, the lowest sample from the dark brown soil fill contains specimens of *Ena montana*, a species typical of old woodlands and which dislikes disturbance. *Ena montana* was not present as apical or non-apical fragments in any subsequent samples. The lower fill also contained the only specimens of *Acicula fusca;* another woodland species. This element of the assemblage may indicate relatively ancient deciduous woodland. However, in direct contrast, there was also a significant open country element (*Vallonia excentrica*), along with relatively high proportions of the obligatory xerophile *Helicella itala* which indicate some open country conditions. If the former ground surface represents an old (former) woodland, the presence of the open country species in the basal fills indicates that open country must have existed in the vicinity for these to arrive and colonise so

Table 37: Tolpuddle Ball land snail assessment from an undated hollow and the medieval hollow way

Sample (10,000 series)	*80*	*81*	*82*	*83*	*84*	*43*	*44*	*45*	*46*	*47*	*48*	*49*	*50*
Context	*2316*	*2318*	*2317*	*2316*	*2316*	*2701*	*2700*	*2694*	*2693*	*2692*	*2691*	*2690*	*2689*
Depth (m)	*spot*	*spot*	*spot*	*spot*	*spot*	*0.70-0.80*	*0.60-0.70*	*0.50-0.60*	*0.40-0.50*	*0.30-0.40*	*0.20-0.30*	*0.10-0.20*	*0.00-0.10*
(Column)/feature	*(10079) 2315*					*(10042) 2448*							
Phase group	*natural hollow (?Phase 1)*					*medieval hollow way (Phase 6)*							
Open country species													
Pupilla muscorum	–	B	C	B	C	A	A	A	A	A	A	A	A
Vertigo spp.	–	C	–	–	C	–	C	C	C	C	C	–	–
Helicella itala	–	C	C	B	C	B	A	A	A	A	A	A	A
Vallonia Spp.	–	A	B	A	A	A	A	A	A	A	A	A	A
Intro Helicellids	–	–	–	–	–	C	C	–	C	C	C	A	A
Catholic species													
Trichia hispida	–	C	–	C	C	B	A	A	A	A	A	B	B
Pomatias elegans	–	C	–	A	A	–	–	C	C	C	+	–	–
Cochlicopa spp.	C	C	–	–	C	C	C	C	C	C	–	C	C
Cepaea spp.	–	C	C	+	–	C	–	+	+	–	–	–	–
Shade-loving species													
Carychium	C	A	B	C	A	B	B	A	A	C	C	–	–
Discus rotundatus	–	B	C	A	A	–	C	A	B	C	–	C	–
Acanthinula	–	–	C	C	–	–	–	C	–	–	–	–	–
Punctum pygmaeum	–	–	–	–	–	C	C	–	–	C	–	–	–
Oxychilus	–	C	C	C	C	C	C	C	–	C	–	–	–
Aegopinella	–	C	–	C	C	C	C	A	B	C	–	–	–
Nesovitrea	–	–	–	C	–	–	–	C	–	–	–	–	–
Vitrea	C	–	–	C	C	C	C	–	–	–	–	–	–
Clausiliidae	–	C	–	C	C	–	C	C	C	C	–	–	–
Vitrina	–	C	–	–	–	–	–	–	–	–	–	–	–
Ena	–	–	–	C	–	–	–	–	–	–	–	–	–
Burrowing species													
Cecilioides acicula	A	A	A	A	A	C	C	C	B	A	A	A	A
Approx. totals	6	50	20	70	85	50	75	100	100	75	90	80	90

A = ≥10 items; B = 9–5 items; C = <5 items; + = present

quickly (cf. Thomas 1985). The tree hollow does not, therefore, represent the clearance of an ancient undisturbed woodland, but it could indicate expansion of woodland clearance (see below, quarry pits). The presence, however, of a single specimen of *Candidula gigaxii* does indicate the presence of more recent material as this species is a medieval introduction (Kerney 1966). Some caution therfore needs to be expressed about the assemblage although the high numbers of open country species (e.g. *Helicella itala* and *Vallonia excentrica*) indicate that the majority of them were not intrusive.

Quarry pits 2473 and 2897

The intercutting quarry pits (see Fig. 10 for location) largely contained a mass of chalky backfill Most of these fills comprised large and medium backfilled chalk which were unsuitable for mollusc analysis (as shell numbers would be expected to be low). Sampling concentrated on the finer soil deposits within the fills. A spot sample was taken from a thin 'trample' layer (context 2869) only *c.* 0.05 m thick at the base of one pit within 2473 and comprising a thin band of pale brown silty clay loam with few small chalk pieces. Two other spot samples were taken from the brown silty soil within the interleaved and 'folded' layers of chalk rubble (2870). A further two samples were taken from a 0.18 m thick layer of pale brown almost stone-free silty clay (2469) at the base of an adjacent pit, which underlay dumped backfilled chalk. Finally, two other samples were taken from the soil fill of a separate possible quarry pit (2897, fill 2777) which lay immediately to the north of 2473. The date and relationship of 2897 with the main quarry pit complex was uncertain but they were interpreted as

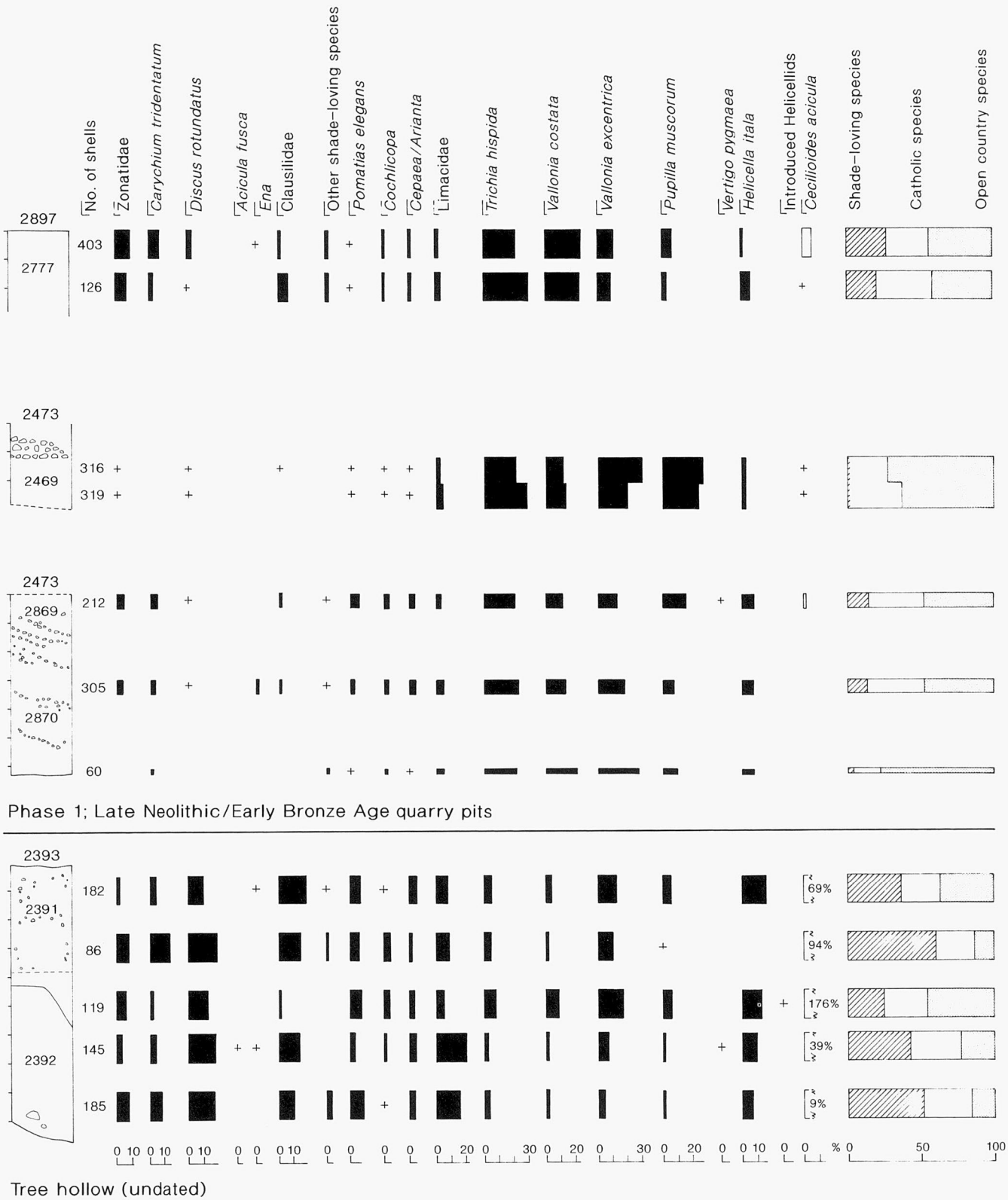


Figure 61 Tolpuddle Ball: land snail histogram

broadly contemporaneous by the excavators. The land snails within 2897 had the potential to confirm that the quarry pits were Neolithic rather than later prehistoric in origin and also to augment the limited suite of samples from Neolithic contexts.

In contrast to the tree hollow 2393, the assemblage from the lower 'trample' layer, although small (only 60 shells), produced an assemblage overwhelmingly dominated by open country species (68%). It is assumed that the assemblage derived from both the contemporaneous ground surface and from shells weathered from the soil through which the quarry pit was cut. *Pupilla muscorum* and the *Vallonia* species were the most important elements and even the obligatory

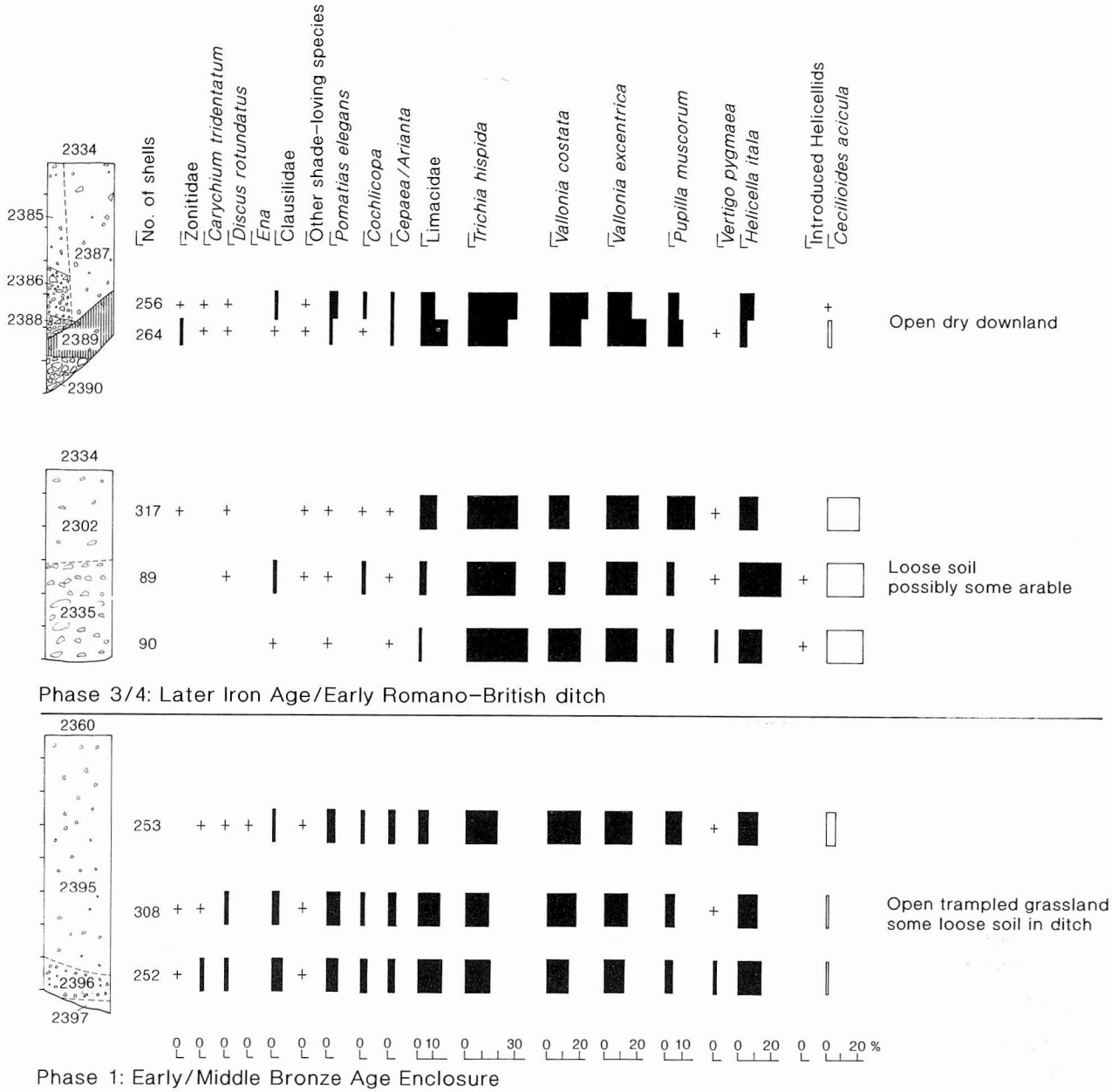


Figure 62 Tolpuddle Ball: land snail histogram

xerophile *Helicella itala* was significant. The shade-loving element was a very small percentage (3%) and infact was only represented by two species – *Carychium tridentatum* and *Punctum pygmaeum* – both of which are common in long grassland habitats (Cameron and Morgan-Huws 1975). This suggests an open probably grazed or trampled grassland habitat (Chappell *et al.* 1971). More significantly, however, the almost complete lack of shade-loving species and the dominance of open country species, probably indicates long-established open conditions.

Assemblages from the soil layers within the backfill deposits in the pit were likely to have derived from the soil through which the quarry was cut. They therefore represent the local environment *before* the quarry was excavated. These samples had high numbers of shells, and although still largely open country (48%) the presence of *Carychium tridentatum* and *Aegopinella nitidula* indicate the presence of shadier more mesic conditions locally. Unlike the 'trample' layer on the base of the quarry pit, the shade-loving elements include rupestral species (*Cochlodina laminata, Clausilia bidentata* and *Acanthinula aculeata*). It seems likely that this assemblage represents some woody elements, perhaps recently-cleared woodland or open woodland with drier short-turved niches to accommodate *V. excentrica* and *H. itala*. As this assemblage was largely, if not wholly, derived from the soil through which the quarry was cut it predates the trampled layer and so the stratigraphic sequence would be chronologically reversed. If this is the case, the assemblages from the soils show the presence of recently-cleared woodland and the onset of the establishment of open grazed or trampled grassland conditions. Such open conditions

Table 38: Tolpuddle Ball land snails from Neolithic/Early Bronze Age features

Phase / feature	*Phase 1: tree hollow*					*Phase 1: quarry pits*						
	2393					*2473*			*2473*		*2897*	
Sample	*10054*	*10055*	*10056*	*10057*	*10058*	*10072*	*10074*	*10076*	*10051*	*10052*	*10086*	*10085*
Context		*2392*		*2391*		*2869*	*2870*		*2469*		*2777*	
Depth (m)	*basal*	*mid*	*upper*	*lower*	*upper*	*spot*	*spot*	*spot*	*0.09-0.18*	*0.00-0.09*	*spot*	*spot*
Wt (g)	*1000*	*1000*	*1000*	*1000*	*1000*	*1000*	*1000*	*1000*	*1000*	*1000*	*1000*	*1000*
Pomatias elegans (Müller)	16	6	10	5	13	+	10	13	3	1	+	6
Acicula fusca (Montagu)	–	1	–	–	–	–	–	–	–	–	–	–
Carychium tridentatum (Risso)	6	4	3	9	3	1	8	10	–	–	2	27
Carychium spp.	10	3	1	4	4	–	2	1	–	–	2	5
Cochlicopa lubrica (Müller)	–	–	1	1	–	–	2	4	–	1	–	4
Cochlicopa lubricella (Porro)	–	–	–	–	–	–	1	1	1	–	–	–
Cochlicopa spp.	1	3	4	3	1	1	7	3	–	–	2	6+[12]
Vertigo pygmaea (Draparnaud)	–	1	–	–	–	–	–	3	–	–	–	–
Pupilla muscorum (Linnaeus)	4	3	7	1	9	6	23	29	81	86	4	30
Vallonia costata (Müller)	3	3	10	2	7	12	41	24	43	36	27	93
Vallonia excentrica Sterki	8	10	18	8	23	16	53	27	63	91	11	42
Vallonia spp.	2	1	3	1	2	2	7	2	6	8	1	7
Acanthinula aculeata (Müller)	6	–	–	2	–	–	1	1	–	–	1	1
Ena montana (Draparnaud)	2	–	–	–	–	–	–	–	–	–	–	–
Ena obscura (Müller)	2	1	–	–	1	–	5	–	–	–	–	4
Punctum pygmaeum (Draparnaud)	–	–	–	–	2	1	–	1	–	–	2	7
Discus rotundatus (Müller)	32	26	15	16	18	–	3	2	+	1	1	12
Vitrina pellucida (Müller)	–	–	1	–	–	–	–	–	–	–	–	2+[5]
Vitrea crystallina (Müller)	–	–	–	–	–	–	–	–	–	–	–	3
Vitrea contracta (Westerlund)	2	2	–	2	1	–	1	1	–	–	2	19
Nesovitrea hammonis (Ström)	–	–	–	–	–	–	3	–	–	–	–	–
Aegopinella pura (Alder)	–	–	3	–	–	–	1	–	–	–	1	1+[5]
Aegopinella nitidula (Draparnaud)	11	2	3	4	–	–	7	9	2	1	5+[6]	10+[21]
Oxychilus cellarius (Müller)	2	1	–	1	2	–	3	–	–	–	–	6+[14]
Limacidae	29	29	7	8	15	3	16	8	16	9	5	12
Cecilioides acicula (Müller)	16	57	210	81	126	–	–	4	1	1	1	24
Cochlodina laminata (Montagu)	9	6	1	3	6	–	1	2	–	1	1	1
Clausilia bidentata (Ström)	11	15	2	10	28	–	4	3	–	1	6	9
Candidula gigaxii (L. Pfeiffer)	–	–	1	–	–	–	–	–	–	–	–	–
Helicella itala (Linnaeus)	13	15	15	–	29	5	21	16	9	9	8	7
Trichia hispida (Linnaeus)	8	5	9	4	9	13	73	44	93	71	36	83
Helicigona lapicida (Linnaeus)	1	–	–	+	+	–	+	–	–	–	–	–
Cepaea / Arianta spp.	7	8	5	2	9	+	12	8	2	+	3	6
Taxa	20	19	17	16	17	9	21	19	10	12	17	22
Shannon Index	2.47	2.24	2.40	2.38	2.29	1.74	2.25	2.33	1.66	1.62	2.04	2.35
Brillouin Index	2.49	2.36	2.35	2.21	2.38	1.61	2.32	2.35	1.63	1.56	2.02	2.33
Shannon Index-Brillouin Index	-0.02	-0.12	0.05	0.17	-0.09	0.13	-0.07	-0.02	0.03	0.06	0.02	0.02
Total	185	145	119	86	182	60	305	212	319	316	120+[6]	403+[57]

Totals exclude *Cecilioides acicula*
[ ] = numbers of modern (intrusive) shells with periostracum which have not been included in the analysis

Table 39: Tolpuddle Ball land snails from Bronze Age and Iron Age features

Feature	*E/MBA ditch 2360*			*Iron Age ditch 2334*				
Phase	*Phase 1*			*Phase 3/4*				
Sample location	*Fig. 11, Section A*			*Fig. 21, Section D*			*Fig. 21, Section B*	
Sample	*10065*	*10066*	*10067*	*10061*	*10062*	*10063*	*10059*	*10060*
Context	*2396*	*2395*	*2395*	*2335*	*2335*	*2302*	*2389*	*2389*
	spot	*spot*	*spot*	*spot*	*spot*	*spot*	*spot*	*spot*
Wt (g)	*1000*	*1000*	*1000*	*1000*	*1000*	*1000*	*1000*	*1000*
Pomatias elegans (Müller)	18	26	14	+	+	1	5	13
Carychium tridentatum (Risso)	4	2	1	–	–	–	2	1
Carychium spp.	2	1	2	–	–	–	–	–
Cochlicopa lubrica (Müller)	–	–	–	–	2	1	1	–
Cochlicopa spp.	10	9	5	–	–	3	–	5
Vertigo pygmaea (Draparnaud)	3	1	1	2	1	3	1	–
Vertigo spp.	1	1	–	–	–	–	–	–
Pupilla muscorum (Linnaeus)	10	15	24	4	4	50	22	14
Vallonia costata (Müller)	31	48	44	16	8	35	44	52
Vallonia excentrica Sterki	29	41	38	16	16	58	57	35
Vallonia spp.	4	7	9	3	2	4	6	7
Acanthinula aculeata (Müller)	1	–	1	–	–	–	–	–
Ena obscura (Müller)	–	–	1	–	–	–	–	–
Punctum pygmaeum (Draparnaud)	–	1	1	–	–	1	–	–
Discus rotundatus (Müller)	4	6	1	–	+	+	+	+
Nesovitrea hammonis (Ström)	+	–	–	–	–	–	2	–
Aegopinella pura (Alder)	–	–	–	–	–	–	2	–
Aegopinella nitidula (Draparnaud)	1	2	–	–	–	1	1	2
Oxychilus cellarius (Müller)	2	–	–	–	–	–	–	–
Limacidae	35	40	16	2	4	33	42	20
Cecilioides acicula (Müller)	5	7	14	20	20	65	4	2
Cochlodina laminata (Montagu)	8	8	3	–	–	–	2	2
Clausilia bidentata (Ström)	7	5	3	1	2	–	1	4
Candidula spp.	–	–	–	–	1	–	–	–
Cernuella virgata (Da Costa)	–	–	–	1	–	–	–	–
Helicella itala (Linnaeus)	35	36	31	13	22	34	10	21
Trichia hispida (Linnaeus)	38	43	48	42	26	92	62	75
Helicigona lapicida (Linnaeus)	+	+	+	–	+	+	+	1
Cepaea hortensis (Müller)	1	–	–	–	–	–	–	–
Cepaea/Arianta spp.	8	16	10	+	1	1	4	4
Taxa	17	16	17	9	11	12	16	14
Shannon Index	2.31	2.09	2.01	1.70	1.80	1.85	1.92	1.87
Brillouin Index	2.37	2.39	2.19	1.52	1.68	1.80	1.90	1.95
Shannon Index-Brillouin Index	-0.06	-0.30	-0.18	0.18	0.12	0.05	0.02	-0.08
Total	252	308	253	90	89	317	264	256

Totals exclude *Cecilioides acicula*

are indicated by the presence of the *Vallonia* species and *H. itala* in these assemblages and which dominate the assemblage from the trample layer (2868). Two contiguous samples from the fine silty soil layer which accumulated at the base of quarry 2473 produced assemblages very similar to that present in the 'trample' layer. They therefore provide confirmation of an open, established dry trampled or grazed grassland when the quarry was open.

The assemblages from the upper soil fills of quarry pit displayed serious problems of contamination with modern intrusive shells (fresh glassy specimens retaining their periostracum represented up to 14%). These shells are identified in square parentheses in Table 38 and are excluded from the totals and the mollusc histogram (Fig. 61). In addition, very small sherds of Late Bronze Age/Early Iron Age pottery were also found in this layer. Interpretation is therefore cautious but nevertheless it is apparent that the assemblages from 2897 do not reflect the same environment as those from contexts contemporaneous with the open quarry features. They are similar, in general terms, to those assemblages thought to have derived from the soil through which the quarry was cut (context 3870) and may represent recently-cleared woodland. With such ambiguities, and the lack of any ancient woodland species, this could just indicate regeneration at a much later date after the infilling of most of this quarry. Unfortunately, therefore, the land snail data could not either resolve the chronology of this feature or confidently add to our knowledge of the Neolithic and later land use.

Bronze Age landscape and land use (Fig. 62, Table 39)

Three spot samples were taken from a ditch associated with Early/Middle Bronze Age settlement enclosure 2360 (see Fig. 10, Section A). The ditch (2394) was 0.90 m deep and, apart from a thin primary layer of chalk wash (2397, not sampled), contained a thin chalky lower fill comprised of small/medium chalk rubble (context 2396). Above this, the majority of the ditch was filled with a uniform deposit of brown (10YR 4\3) silty clay loam with occasional small chalk pieces. Two spot samples were taken from this main fill (context 2395).

All three samples contained relatively high numbers of shells (252–308) and the lower fill produced largely open country species (*Vallonia* species, *Helicella itala*) with *Trichia hispida* and Limacidae. *Vallonia costata* and *V. excentrica* occur in roughly equal proportions. Shade-loving elements were sparse and indicate that the enclosure ditch was constructed in a very open dry downland habitat. The lack of shade-loving elements and the composition of the catholic group does not suggest long ungrazed grassland. The xerophile *H. itala,* enjoys very open dry habitats and with *Pupilla muscorum, Vertigo pymaea* and the *Vallonia* species may suggest trampled or grazed grassland. However, the presence of *Pomatias elegans,* representing 7% of the assemblage, indicates a bare loose and broken soil surface; either that of an arable context, loose soil created by trampling or the loose soil of the ditch fill itself. The two samples from the upper ditch fill were both very similar, confirming the homogenous nature of the environment from and in which they derived. They were also similar to that already described from the lower fill.

Iron Age landscape and land use (Fig. 62, Table 39)

Unfortunately no suitable mollusc samples were taken during the 1993 excavation of the main Middle/Late Iron Age enclosure 2894. Sampling was therefore restricted to other less substantial Iron Age ditches excavated during the 1996/7 excavations. Iron Age enclosure ditch 2334 was sampled in two locations (Fig. 21, Sections B and D). Section B revealed a turf horizon (context 2389) overlying the primary fill (2390). The turf presumably derives from the old land surface through which the ditch was cut. Two samples were taken from the turf horizon and the assemblages within it are assumed to pre-date those in the primary fills. Three spot samples were taken from the primary (2335) and main (2302) fills in Section D.

Two contiguous samples were taken through the turf, carefully sampling the upper 0.05 m and the lower 0.07 m of this horizon. The sampled layer was an almost stonefree yellowish–brown clay loam with moderate medium granular peds giving way to a weaker coarser structure. Shell numbers are lower in this base element, but high in the upper portion confirming that this was a turf which slid into the ditch, akin to those reported from the Overton Down experimental earthwork (Bell *et al.* 1996). Not surprisingly the assemblages were dominated by open country and catholic species and in particular the *Vallonia* species with *Trichia hispida.* In the upper sample of the turf (10060), where shell numbers are appreciable, *V. costata* prevails over *V. excentrica.* The only main shade-loving elements within the samples from the turf are *Nesovitrea hammonis* and *Aegopinella pura* which are common in grassland (Cameron and Morgan-Huws 1975). Both the context, and the snail assemblages, indicate a well-established, short-grazed or trampled dry calcareous grassland which is not surprising in view of the evidence from the Early/Middle Bronze Age enclosure ditch (see above). The main contrasts were the higher relative abundance of *V. excentrica* over *V. costata* (a reverse of that seen in the upper part of the turf) a higher relative abundance of *P. muscorum* and a slight increase in *P. elegans.* Overall, therefore, this indicates grassland conditions, perhaps with more open dry broken ground in the vicinity. Samples from ditch section D were very similar, though the higher abundance of *V. excentrica* over *V. costata* and increased levels of *H. itala* may indicate the presence of more open broken possibly even arable ground in the vicinity.

The hollow way: medieval land management (see Table 37)

A column of eight contiguous samples was taken through the medieval hollow way (Fig. 28, Column 10042). Apart from examining the nature of the local medieval landscape, it was hoped to address two specific questions generated by the excavation of this feature. Firstly could the snail evidence confirm that this was a hollow way rather than a watercourse, secondly was there evidence of any abandonment phases and vegetation regeneration within the hollow way

sequence? The assessment showed that all the species were terrestrial and predominately open country. A larger number of shade-loving species occurred in the lower fills (where the hollow way was between 0.50 and 0.80 m deep). This may relate to the shady conditions in the hollow way itself caused by vegetation growing on the edges of the hollow way. In the upper fills, all assemblages are predominately open county and therefore indicate a very open tilled or short-grazed grassland. No evidence of a period of vegetation regeneration indicating a period of disuse of the hollow way was present in the assessed mollusc assemblages.

Discussion

The data provide firm evidence for the existence of an ancient deciduous Atlantic (later Mesolithic/Neolithic) woodland (tree hollow 2393). This is in contrast to concerted attempts to obtain such evidence from the intensive mollusc programme around Dorchester (Allen 1997b, 278–9). There is evidence for the clearance of woodland at Tolpuddle Ball associated with the excavation of the quarry pit complex (unsurprisingly). Mollusc assemblages indicate, however, that the establishment of an open country snail fauna had already occurred, that is, the quarries were excavated in an already-established small clearing in which grazed or trampled grassland existed. There are no sequences in which the Late Neolithic clearance event itself was depicted. It cannot therefore be determined how much earlier than the excavation of the quarry pits the woodland clearance occurred. Nevertheless, due to the time required for the establishment of the mollusc faunas depicted in the quarry pit fills, the woodland clearance does not appear to have been directly related to the excavation of the quarries/pits, but rather to some earlier (Neolithic) activity.

There may be a lacuna in the environmental data, but by the Early/Middle Bronze Age it is clear that a very open dry downland existed, comparable to contemporaneous environments around Dorchester (Allen 1997b). Although open grassland existed in the Early/Middle Bronze Age, the Tolpuddle Ball evidence indicates, like Dorchester, intensive activity in the form of either heavily grazed or trampled grassland. By the Iron Age, the mollusc evidence confirms a grassland pasture and it can be suggested that the evidence indicates the possibility of some tillage in the immediate locality. Unfortunately the potentially longer ditch sequences from the main Middle/Late Iron Age enclosure 2894 (TP93) were not sampled. It is not possible, therefore, to compare (reliably) the development of land use at Tolpuddle Ball with the model postulated for Dorchester. Nevertheless, from the limited sequences available, the general impression is of a lower intensity of arable and pastoral pressure on the land than recorded in the Dorchester environs and is indicative of a small, self-contained farmstead at Tolpuddle Ball.

A Note on Pollen and Microscopic Plant Debris, Robert G. Scaife

Sub-samples were taken from monolith tins of undisturbed deposits for pollen assessment from a Lateglacial soil (Allerød phase) at Burleston Down and a medieval (13th century) soil accumulation at West Mead. It was anticipated that if pollen was present at all, it would be poorly preserved. Large samples were therefore processed and standard pollen concentration techniques were used for micro-fossil extraction (Moore *et al.* 1991).

Burleston Down: Lateglacial Buried Soil

Palaeosols of late Devensian Age are few in southern England and this, therefore, offered potential for elucidating the character of the late Devensian, Windermere Interstadial (Allerød) vegetation in this southerly region of the country. Three samples (each 15 ml) from an undisturbed sample through the soil were examined for assessment purposes (see Fig. 33, Section A – monolith 10020). Unfortunately pollen was not present apart from three very badly degraded and 'puffy' grains, displaying a swollen amorphous appearance typical of preservation in chalk soils. The grains were *Betula* (birch), *Quercus* (oak), and *Alnus* (alder). No conclusions can be made from these finds although the presence of oak and alder is not commensurate with a late Devensian age. The general absence of pollen is attributed not especially to the alkalinity of the soil, but to its free-draining character, which would allow the through-flow of oxygenated and calcareous waters which would rapidly degrade any pollen. It is possible that pollen of Holocene age (early Post-glacial) may have moved downwards through the chalk rubble overburden with oxygenated calcareous water; hence the presence of intrusive oak and alder grains.

West Mead: Medieval Deposits

Five large samples (6–7 ml) were taken from context 3004, spanning the depth of the midden deposit (Fig. 38: Monolith 10100) at depths of between 0.18 m and 0.62 m in the monolith. Pollen was largely absent in all of the samples analysed, except for a few grains of the dandelion group Lactucoideae (Asteraceae). These are typical of poor, biased preservation (because they are very tough and resistant to decay) and commonly represents the last vestiges of pollen surviving in soils/sediments. No interpretation of the vegetation can be made from the pollen. The residue from pollen analysis did, however, contain microscopic plant debris. During pollen preparation this appeared to be particulate carbon but microscopic examination indicated that this material was highly humified, very dark brown organic residue (almost lignified). It is likely that this residue represents the final remains of plant material, which has rotted and oxidised in a sub-aerial environment. This environment is undoubtedly responsible for the destruction and absence of pollen and spores and supports the suggestion that the deposits represent a rural midden or compost heap.

Animal Bones, Sheila Hamilton-Dyer

Animal bone was recovered from four sites (six separate excavations) and from the watching brief, as summarised in Table 40. The few fragments from the Roman Road and Burleston Down do not warrant further comment beyond the fact that the size and general appearance of the sheep/goat radius from the latter site is comparable with pre- and proto-historic material rather than a recent bone. The assemblages from Tolpuddle Ball (including the horse skeleton discovered during the watching brief) and West Mead were sufficient to warrant detailed analysis.

Table 40: summary of animal bone quantities (all sites)

Site (west to east)	*Quantity (frags)*
Burleston Down	1 (sheep/goat radius)
Roman Road	4 = single bone (?sheep/goat scapula)
Tolpuddle Ball Cemetery (1998)	107
Tolpuddle Ball (TP93)	7655
Tolpuddle Ball (1996/7)	306
West Mead, nr Bere Regis	267
Watching brief (nr Tolpuddle Ball)	1 articulated horse skeleton
	8340 + horse skeleton

Methods

The methods used for identification and recording were based on the Faunal Remains Unit, Southampton method 86 system, with some modifications. All fragments were identified to species (as listed below) and element with the following exceptions: ribs and vertebrae other than axis, atlas, and sacrum were identified only to the level of cattle/horse-sized and sheep/pig-sized. This restriction does not apply to burials and other associated bones where ribs and vertebrae were assigned to species. Unidentified shaft and other fragments were similarly divided. Any fragments which could not be assigned even to this level were recorded as mammalian only. Species identifications were made using the modern comparative collections of the author. Where possible sheep/goat distinctions were made using Boessneck (1969) and Payne (1985). Very few goat remains were positively identified and, excepting these few, the material is referred to as sheep throughout. Measurements follow Driesch (1976) and are in millimetres unless otherwise stated. Withers height estimations of the domestic ungulates are based on factors recommended by Driesch and Boessneck (1974). Withers heights of dogs are calculated using the factors of Harcourt (1974).

The two main components from Tolpuddle Ball (i.e. 1993 and 1996/7 assemblages) have been analysed separately. This is due to limitations in the Liverpool archive and differences in excavation and recording techniques (which could have presented difficulties if the assemblage was analysed together). The small group of material from the Tolpuddle Ball cemetery site is also noted here separately since it was analysed after the other material. The total assemblage from the site is, however, considered together in the discussion.

Animal species list
domestic horse
domestic cattle
sheep and/or goat
domestic sheep
domestic goat
domestic pig
red deer, *Cervus elaphus*
large ungulate (probably mostly cattle but may also include horse and red deer)
small artiodactyl (probably mostly sheep and/or goat but may also include some pig)
domestic dog
domestic cat
hare, cf. brown, *Lepus europaeus*
fox, *Vulpes vulpes*
unidentified bone, probably mostly small artiodactyl or large ungulate
small mammals not further identified
field vole, *Microtus agrestis*
water vole, *Arvicola terrestris*
mice including wood mouse, *Apodemus sp.*
domestic fowl
domestic goose or greylag, *Anser anser*
domestic duck or mallard, *Anas platyrhynchos*
eagle *cf.* white-tailed, *Haliaeetus albicilla*
gull, *cf.* herring, *Larus argentatus*
corvid, *cf.* crow, *Corvus corone*
unidentified bird fragments
amphibian including common toad, *Bufo bufo*; and common frog, *Rana temporaria*
shark, perhaps blue, *Prionace glauca*

Tolpuddle Ball (W2402.13)

All of the remains from this small assemblage of 306 individual bones are slightly or moderately eroded and have a chalky appearance where fractured. Most of the bones are between 50 mm and 100 mm in greatest dimension and about a third exhibit recent breakage. While taphonomic loss is bound to have occurred, the proportion of the resistant loose teeth is low and some very small bones such as sheep carpals are present. Overall the bones are mainly of cattle with sheep also frequent. Other taxa include horse, red deer, pig, dog, bird and amphibian. Table 41 summarises the species representation by phase.

Phase 1 and 2. Neolithic and Early/Middle Bronze Age

Contexts dated to Phase 1 and 2 make up approximately half of the total assemblage from the excavation (52%). Bones identified to species mainly comprise horse, cattle, sheep and pig. Cattle bones are the most frequent, followed by sheep with horse and pig being comparatively rare. The cattle bones include an unusually complete femur which gives an estimated withers height of 1.05 m This is very small and slender in comparison with modern animals but is entirely consistent with material from the Middle to Late Bronze

Table 41: Tolpuddle Ball (W2402.13) animal bone. Species distribution

	Phase 1		*Phase 2*	*Phase 3/4*		*Phase 6*	*Undated*	*Total*
	pits	*ditches*	*pits*	*ditches*	*other*	*other*	*other*	
Horse	6	–	–	9	2	–	–	17
Cattle	39	2	–	4	6	3	12	66
Sheep/goat	27	–	–	2	4	1	7	41
Pig	1	–	1	–	1	–	1	4
Red deer	–	–	–	4	–	–	6	10
Cattle-size	33	–	–	3	8	2	22	68
Sheep-size	17	–	–	1	2	2	3	25
Mammal	5	–	–	1	34	2	3	45
Dog	–	–	–	–	–	1	–	1
Bird	1	–	–	–	–	–	–	1
Amphibian	27	–	–	–	–	–	–	27
Small mammal	–	–	–	–	1	–	–	1
Total	156	2	1	24	58	11	54	306

Age and the Iron Age (Grigson 1985; Jewell 1962) and is probably of a female. The sheep bones include a complete metatarsus, giving an estimated withers height of 0.59 m, and a neonatal radius. The single bird bone (pit 2660, part of pit group 2897) matches blackbird and the amphibian bones, from the same context, are of two toads. It is likely that these are incidental remains indicating the general environment. No dog bones were found but several of the bones exhibited canid gnawing.

Phase 3/4. Iron Age/Early Romano-British
Bones from Phase 3/4 contexts comprise 27% of the assemblage. The species list is very similar to that of the Phase 1 and 2 contexts with the addition of red deer and small mammal. The latter is the jaw of a field vole from grave 2670 (burial 2672) and is likely to be incidental. The four deer remains are antler fragments from ditch 2334.

The amount of horse is a little higher than that from Phase 1 and 2, all but two of these were also from ditch 2334. They include a maxilla with extremely worn teeth indicating an animal which probably died when very aged. Grave 2670, besides the vole jaw, contained many other animal bones, 57 fragments in total. These were a mixture, mainly of cattle teeth and cattle-sized limb shaft fragments but there were also horse teeth, sheep leg and foot bones and a pig radial fragment. One bone was canid gnawed. The collection does not give the appearance of being associated with the interment itself and is more likely to be associated with the infill.

Phase 6. Medieval and undated
Medieval contexts comprised only 4%; just 11 bones, of cattle, sheep and dog (five not identified to species). A complete cattle metatarsus gives an estimated withers height of 1.21 m and is quite large for this period, though not exceptional. The species represented in the undated contexts are generally those represented in the phased material. Six of the ten red deer bones from the site were undated.

Tolpuddle Ball (TP93)

Nearly 24% (1824 fragments) of the bones from this large assemblage derived from unstratified contexts or those which could not be securely placed in the stratigraphic sequence or were otherwise considered unsuitable for detailed analysis. These bones were scanned to provide species totals for each context. A summary of the material by species is given in Table 42, full details in held in the archive. The bulk of the remaining 5,831 bones were almost equally divided into Iron Age (Phases 3, 4 and 3/4) and Romano-British (Phase 5) material, together with a very small quantity of Neolithic/Early Bronze Age material (Phase 1). These bones were fully recorded and analysed in detail and are summarised by phase and feature type on Table 43.

Phase 1. Bronze Age
Just 12 bones were recovered from contexts assigned to this period. They are poorly preserved cattle- or sheep-sized fragments which could not be further distinguished.

Phases 3, 4 and 3/4. Iron Age
The 2941 bones are from a large number of individual deposits and features (full details in archive). This report compares the bone assemblage in the three phase groups, and by feature type. Certain notable individual features, mostly pit contents, are also examined in detail (see Table 44). Overall the taxa identified are mainly of the domestic ungulates, sheep, cattle, horse and pig with sheep dominant. Other species include goat, dog, hare, red deer, fowl, duck, gull, crow, voles, shark and amphibians.

Enclosure ditch 2894 (Phase 3)
This feature produced a mixture of 275 bones from the various excavated slots (*c.* 17% of the ditch circuit). Taxa identified are cattle, horse, sheep, pig and dog. The bones of cattle are a little more frequent than sheep, which are in turn a little more

Table 42: Tolpuddle Ball (TP93) animal bone. Species distribution of scanned contexts

Phase	*4*	*3/4*	*5*	*6*	*7*	*Un-dated*	*Total*
Horse	–	1	8	21	3	27	60
Cattle	1	12	55	95	8	154	325
Sheep/goat	5	26	113	47	4	266	461
Pig	1	1	8	1	–	22	33
Red deer	–	–	4	–	–	5	9
Cattle-size	1	9	103	132	7	222	474
Sheep-size	2	17	175	32	7	150	383
Mammal	–	–	28	12	–	22	62
Dog	–	–	1	4	–	7	12
Hare/rab.	–	–	–	–	–	3	3
Fowl	–	–	–	–	–	1	1
Amphibian	–	–	–	–	–	1	1
Total	10	66	495	344	29	880	1824

frequent than those of horse. Pig and dog are represented by a few bones only. Several bones were measurable and some withers heights could be estimated. In context 789 The jaw of a male horse was found which matches one in 827 and is undoubtedly from the same animal. This jaw is of additional interest as there is considerable uneven wear on the second premolars (the first tooth behind the incisors and diastema). which are overworn towards the anterior. This characteristic is thought to indicate bit-wear and, therefore, indictive of a riding animal. This was not an old animal, from the crown heights perhaps about six years (Levine 1982). There is some periodontal disease along the gum line but no evidence of cause of death.

Phase 3 Pits

Three pits (19, 116 and 1264) produced significant bone assemblages (see Table 44). A partial dog skeleton was discovered at the base of Pit 19 (SF 158). A sketch shows the skull, jaws, neck and several of the thoracic bones in articulation with the head near the pit section. This group numbered 20 bones. A further 26 bones were assigned to fill (18). These were thoracic and lumbar vertebrae, ribs, sacrum and both sides of the pelvis. These appear to be from the same animal but fill (18) is recorded as being much higher up the pit. It is not certain that both groups are from the same animal but it seems likely. Other bones from the pit include cattle, sheep, pig, amphibian, duck cf. mallard, and corvid cf. crow (one bone each of these last three). All of the bones are well preserved, two have an ivoried appearance, one is charred and four of the sheep bones had been gnawed. Sheep bones are the most frequent and include a mixture of head, foot and limb bones. Two sheep bones are of a neonate: one of the jaws has an unerupted second molar equivalent to about a year old; the another has all teeth erupted and worn and was probably over four years at death.

Pit 116 contained a very high proportion of sheep. The basal fill contained 23 sheep bones and 12 sheep-sized ribs. These represent at least two lambs which, estimated from the teeth and epiphyses, were about six months old. Most areas of the body are represented but the skulls, scapulae and many of the smallest bones are missing. These are not complete skeletons but may well have been associated bones since it is not clear whether the pit was fully excavated. One of the jaws had knife cuts on the outer side, probably from releasing the skin. A layer above the basal fill contained several lamb bones of the same age which may be from the same animals; it included a pair of scapulae and a skull which had been axially divided. This layer also contained a few fragments of horse, cattle, pig, amphibians and a small mammal. Dog is evidenced by gnawing on some of the fragments. These bones included a horse skull and pair of jaws (SF 230) from an animal of about 12 years (Levine 1982). Of considerable interest is the wear on the lower second premolars which is very similar to that on the pair in the

Table 43: Tolpuddle Ball (TP93) animal bone. Species distribution

	Phase 1			*Phase 3*			*Phase 4*			*Phase 3/4*		*Phase 5*			*Total*
	pit	*ditch*	*oth.*	*pit*	*ditch*	*oth.*	*pit*	*ditch*	*oth.*	*pit*	*oth.*	*pit*	*ditch*	*oth.*	
Horse	–	–	–	12	39	–	18	2	4	43	7	–	1	29	155
Cattle	–	–	–	44	66	–	36	4	10	111	19	11	9	321	631
Sheep/goat	–	–	–	133	57	1	200	7	12	200	80	499	10	506	1705
Pig	–	–	–	12	8	–	15	–	–	31	7	3	–	40	116
Red deer	–	–	–	–	–	–	–	–	–	2	–	–	–	10	12
Cattle-size	4	3	2	59	107	–	88	7	11	144	37	18	13	579	1072
Sheep-Size	2	1	–	153	27	–	209	10	25	212	67	19	21	537	1283
Mammal	–	–	–	13	14	1	17	–	–	44	19	101	4	119	332
Dog	–	–	–	84	4	–	11	–	1	234	5	–	–	8	347
Bird	–	–	–	4	–	–	3	–	–	–	2	–	1	3	13
Amphibian	–	–	–	37	–	–	30	–	–	35	–	–	–	8	110
Small mam.	–	–	–	27	–	–	3	–	–	12	–	–	–	2	44
Cat	–	–	–	–	–	–	–	–	–	–	–	–	–	2	2
Hare	–	–	–	1	–	–	–	–	–	6	–	–	–	1	8
Shark	–	–	–	–	–	–	–	–	–	1	–	–	–	–	1
Total	6	4	2	579	322	2	630	30	63	1075	243	651	59	2165	5831
Phase total	12 (<1%)			903 (15%)			723 (12%)			1318 (23%)		2875 (49%)			
Period total	Iron Age 2944 (50%)														

Table 44: Tolpuddle Ball animal bone: Species distribution in large Iron Age pits

Pit	*Horse*	*Cattle*	*Sheep/ goat*	*Pig*	*Red deer*	*Cattle-size*	*Sheep-size*	*Mammal*	*Dog*	*Hare*	*Shark*	*Bird*	*Amphibian*	*Small mammal*	*Total*
Phase 3															
19	–	2	18	2	–	3	21	–	46	–	–	2	1	–	95
116	6	9	57	4	–	5	68	2	–	–	–	–	35	1	187
1264	–	6	1	1	–	4	2	–	37	–	–	–	–	–	51
Phase 4															
9	1	5	28	2	–	14	40	5	–	–	–	–	–	–	95
108	8	1	26	2	–	3	14	–	–	–	–	1	29	–	84
120	1	9	61	2	–	22	34	10	–	–	–	–	–	–	139
122	1	9	22	–	–	4	13	–	–	–	–	1	1	–	51
223	1	4	26	4	–	16	55	–	1	–	–	–	–	–	107
1093	1	1	2	–	–	3	12	–	8	–	–	–	–	–	27
1172	–	–	3	–	–	1	1	–	2	–	–	–	–	–	7
Phase 3/4															
66	8	21	17	1	1	14	9	1	1	–	–	–	–	–	73
233	2	2	18	–	–	3	10	1	–	–	–	–	–	–	36
353	–	1	1	–	–	8	5	–	18	–	–	–	–	–	33
403	11	11	16	2	–	3	5	10	214	–	–	–	34	8	314
777	5	2	–	1	–	1	4	–	–	–	–	–	–	4	17
799	3	6	9	–	–	5	3	–	5	–	–	–	–	–	31
815/836	3	12	18	4	–	9	3	–	–	3	1	–	1	–	54
1067	1	1	34	7	1	13	40	9	–	–	–	–	–	–	106
1019	–	1	19	2	–	4	38	4	1	–	–	–	–	–	69
1302	–	1	–	–	–	1	2	–	–	–	–	–	–	–	4
Total	52	104	376	34	2	136	379	42	333	3	1	4	101	13	1580

enclosure ditch (see above) and is highly likely to be from bit-wear. The other fills of the pit contain a variety of bones of the main domestic mammals. A partial horse jaw with very worn teeth indicates an animal at least 20 years old at death.

The small assemblage from Pit 1264 within the enclosure included 37 dog bones from the basal layer and a pair of cattle jaws (SF 171) in the adjacent fill. The cattle jaws contained all the permanent teeth which were much worn. The dog bones in Pit 1264 almost certainly represent the remains of a single adult animal but are far from complete. Only the skull (SF 172), jaws and foot bones are present. Both forefeet are represented with all but the smallest bones present. Although the skull is fragmented some measurements were taken (in archive). The animal was of 'average' size and build, not unlike modern Labrador and Retriever types. Measurements taken of the metapodia and calcaneum matched comparative material of about 0.48 m at the shoulders. Assuming that the majority of the extant bones were recovered it is clear that the main part of the skeleton is missing. It is possible that the remains represent the head and feet within a skin, a suggestion reinforced by the presence of fine knife cuts on the proximal lateral shaft of the right fifth metacarpus.

Phase 4 Pits

Seven pits ascribed to Phase 4 produced a total assemblage of 510 bones. Details of the material from each pit are given in the archive report. Many pits contained typical elements of Iron Age deposits and included the main domesticates, however, in some cases special elements were placed in the pit. The domestic and other assemblages were largely represented by sheep, followed by cattle, but the pits contained a relatively high proportion of dogs and some specific horse elements. The majority of the bones from the large complex Pit 9, for instance, were sheep or sheep-sized (68 of the 98 bones) and a mixture of anatomic elements. The remaining assemblage was unsurprising (cattle, horse and pig), despite the presence of two human neonate burials in this pit (1280A/B). More significant and unusual in Iron Age deposits is the presence of some unusual butchery on the sheep remains. These included a metacarpus pierced from the rear and a lumbar vertebra with a clean axial chop. Young sheep were common and Pit 120 produced bones from four individuals ranging from six months to over three years. Few butchery marks were noted except cuts across an atlas and occipital indicating the removal of head. Similarly, within Pit 223, the sheep or sheep-sized bones represented at least one adult and two lambs (not neonates). Unless this feature was only partly excavated, the remains do not represent complete animals, nor do they comprise just the head and feet as several limb bones and ribs are present. Few goats were noted, but one goat-kid jaw was recorded in Pit 122.

A dog head (skull, jaw and neck vertebrae) was placed in Pit 1093. A skull and right jaw of an old, but 'average' build dog were also recovered from Pit 1172. Some general horse fragments were recovered including a metatarsus in Pit 1093 giving an estimated withers height of 1.247 m. The maxilla of a horse over 20 years old was recovered from Pit 108. Fragments of cattle bone were present in low numbers in most of the Phase 4 pits, with pig and horse in similar low numbers. Gull (cf. herring) was recorded in Pit 122, fowl and amphibians in Pit 108. Gull and fowl are unusual species in Iron Age deposits.

Phase 3/4 Pits

The most common bones were those of cattle, sheep and dog; several of the dogs were recovered as whole or partial skeletons. In general bones were well preserved but in some instances bones were ivoried, charred and gnawed. Sheep bones tended to be the most frequent (see Table 44) and included a wide range of ages and preservation and generally a mixture of head, foot and limb bones, with some neonates and lambs present (Pit 66). Two sheep skulls from Pit 66 had been axially divided, both would have been horned. Some pits contained sheep carcases or partial carcases. Pit 1019 contained sheep bones of mixed ages and anatomy but included a high number of immature bones, probably from a single animal of about six months old. It is probable that these bones represent a complete or partial carcase. Estimated withers height for sheep, based on the metacarpus and metatarsus from Pit 403 are 0.585 m and 0.590 m.

Cattle are generally less well represented. Pit 799 produced a right and left cattle tibia and a horse right tibia which give an almost identical withers height estimate (1.308 m) as a right radius from the fill (1.302 m). The right cattle tibia gave an estimated withers height of 1.19 m, small but not unusual for the period. A partial humerus was, however, exceptionally small and is presumed to be from a different animal. Some of these bones had been butchered and some gnawed. In Pit 1302 a cattle skull (SF 175) appears to have been deliberately placed. No plans or photographs exist but the context sheet describes a horse (*sic*) skull placed against the eastern wall associated with flint pebbles and pieces of shale. The skull is not complete but has very small horn core bases and is probably female. The maxillary teeth are all in wear. A complete cattle metatarsus from Pit 66 gives an estimated withers height of 1.003 m. Several of the cattle bones from this pit were of at least two calves under seven months old, but of particular note was a probable cattle rib with evidence of osteomyelitis.

Deer were relatively rare but part of a large antler (SF 142) was recovered from pit 66. It had a three point crown with one point sawn off, as was the trez and the beam. There were also chop marks on the extant portion of the beam. Horses were present in a number of pits (see Table 44) but were represented by relatively few bones (28). Pit 403 contained a horse calcaneum which had been cut, probably while skinning and/or removing the foot.

Dog bones were present in higher numbers than recorded in Phase 3 and Phase 4 features and also included partial or complete carcases. The bulk of the bone from Pit 403 was from a single context and mostly represented a dog skeleton (probably originally complete). This was revealed by the collapse of the pit section and subsequently recovered (SF 123). It is not clear whether the whole of the remaining fill was excavated. The body is recorded as lying on its left side facing south-west on or covered with a bed of flint pebbles. A total of 213 dog bones were recovered and examination revealed that 60 of the smallest bones were of a neonatal pup but their position in relation to the adult is unknown. An additional humerus from another neonate was also present. The adult skeleton is almost entirely complete. The absence of an os penis may suggest a female but is by no means conclusive. There was evidence of several fractures including the right tibia and the tail vertebrae (both fully healed) as well as an unhealed fracture of the left ulna. The average estimated withers height is 0.599 m, a good size for the period. Pit 799 also included five dog bones including jaws, skull, atlas and axis, the teeth suggest an old animal but not large animal. It is not clear from the records whether the feature was fully excavated, and as the skull and atlas are visible near the section in the photograph of one excavated half it may not have been. This presents a problem: how much of the dog skeleton was originally present and how does this relate to other bones (some of which appear to have been associated)?

Other animals represented within the assemblages from the Phase 3/4 pits included pig, hare and amphibians. Evidence of a rat was found in Pit 777, but this had probably burrowed into the fills from the post medieval track above. More unusual was the recovery of a shark tooth from pit 815/836, the only evidence of fish from the site. This tooth is not quite complete but is serrated and is a good match for blue shark. This species is often found in the Channel in the summer, usually immature

females. It should perhaps be noted that the Dorset beaches are a good source of recent and fossil sharks' teeth and the presence of a tooth does not necessarily imply shark fishing.

Romano-British (Phase 5)

Phase 5 features produced almost half of the assemblage. Five features produced over 200 bones each and comprise 77% of the total bone from Phase 5. Overall sheep dominate the assemblage (56%) followed by cattle(33%). Bones of other taxa were infrequent and included horse, goat, pig, red deer, dog, cat, hare, birds (fowl, goose, eagle), amphibians and small mammals (see Table 43). The main groups of interest are summarised below, full details of all features are held in the archive.

Structure 702 and associated deposits

Four layers in this structure produced 420 animal bones, mainly from the upper fill of the terrace cut. The bones are slightly or moderately eroded. The basal fills provided 80 bones. Sheep is well represented with cattle about half as frequent. There is a single bone of pig and the sawn tip of a red deer antler. One of the 'sheep' bones is actually a goat horncore, one of only six bones positively identified as goat from the entire site. Of the 32 other sheep bones eight are loose teeth and another eight are metapodia. From the upper fill over 100 bones are of sheep with a similar quantity of sheep-sized fragments. Other taxa identified are cattle, horse, pig, red deer, dog, hare, amphibian and a small mammal, all in far smaller numbers. The three dog bones may be from the same small individual. Loose teeth form a large proportion of the sheep remains (almost 50%). The 18 cattle bones are mixed and include fragments of skull, jaws, limb bones and five loose teeth. It is clear that there is considerable taphonomic bias in favour of the most resistant anatomical elements in the assemblage. The high proportion of sheep remains appears genuine, however, as they would be expected to be destroyed preferentially in comparison with the larger cattle/cattle-sized remains which are in fact poorly represented. It is possible that Structure 702 was used as a convenient place for slaughter or for dumping of slaughter waste.

Features and deposits associated with Structure 702 can be viewed in two main groups. A small collection (70 bones) was recovered from layers sealed by the main context 64. Cattle and cattle-sized bones accounted for most of this group. Other taxa included sheep, a partial dog skull, and a fragment of red deer antler. This composition is clearly different from the sheep-dominated contexts of the terrace cut. By comparison layer 64 produced a massive 851 bones. These were almost equally divided between sheep and cattle. Other taxa included horse, pig, red deer, dog, birds and a small mammal bone. Dog gnawing was observed on some of the bones (mainly cattle). Two of the three bird bones were identifiable: one is of domestic fowl; the other a white-tailed eagle (both probably female). Although now absent from England this eagle was probably once relatively abundant. The eagle held a special position in Roman society but this species is a scavenger and might well be encountered near middens and would also be interested in dead lambs and afterbirth. The red deer remains are of chopped antler, radius, femur, metatarsus and a phalanx. Most skeletal elements are represented in the cattle bones. Butchery marks could be discerned on only a few cattle bones, all major meat bearing limb bones, five of these were of chopping with a heavy cleaver or axe. Several bones were measurable and metapodial withers height estimates range from 1.072 m to 1.207 m. The 'sheep' bones included a radius which could be positively identified as goat. Unlike the cattle remains the sheep include a high proportion of loose teeth and the resistant tibia is also frequent. Other elements are much less frequent and many of the bones are moderately eroded. It is almost certain that the amount of sheep in the layer was originally higher than cattle but the assemblage is not dissimilar in appearance to that of (40) and the greater number of cattle bones is likely to reflect an original difference in deposition. Tentatively, if these two deposits are contemporaneous, the larger cattle waste was deliberately disposed of outside the structure (or its ruin) while the sheep remains were more evenly spread.

Pit 5

This small pit lay close to tank 357 (which contained almost no bone) and produced over 40% (450 fragments) of the sheep bones from the Romano-British assemblage. The group is almost entirely composed of sheep feet (see Plate 14). Also present were two fragments of cattle-sized limb shaft, and 100 unidentified mammalian fragments, almost certainly broken from the sheep bones. Many of the small carpals and phalanges were recovered during manual excavation of the feature; they were augmented by retrieval from soil samples. Most of the bones have fused epiphyses but some were not fused, representing at least two animals under two years old but probably near full size. Taking into account the state of fusion and handedness the minimum number of animals represented is 11. This figure is derived from both the phalanges and metatarsi. The metacarpi and cuboids offer the next highest estimate of nine individuals. The elements at the top of the feet, the astragalus, calcaneum and carpals, are under-represented. The total numbers of each element represented are listed below, along with their expected frequency.

Anatomical distribution of sheep bones in pit 5
(O/E = number of recovered elements)

	Recovered	*O/E*
calcaneum	1	0.5
astragalus	2	1.0
cuboid	15	7.5
other tarsals	15	3.8
carpals	28	2.3
metacarpus	16	8.0
metatarsus	22	11.0
sesamoids	149	6.2
phalanx 1	77	9.6
phalanx 2	57	7.1
phalanx 3	53	6.6

It is interesting to note that the frequency of the phalanges decreases with the size of the bone. This could, in part, explain the under-representation of the carpals and small tarsals but it cannot explain the very low numbers of calcaneum and astragalus which are comparatively large. Just one bone in the assemblage had been cut, this was a cuboid. The knife marks are consistent with removal of the foot from the rest of the leg, cutting between the cuboid and astragalus. It can be seen that, while cuboids are quite well represented, astragalus number only two and there is a single calcaneum. This is also consistent with the removal of the foot at the ankle, the astragalus and calcaneum being removed with the leg, the cuboid remaining with the rest of the foot. As no heads are present it is assumed that the remains do not represent primary slaughter waste. The most likely interpretation is that this pit contains waste from processing sheepskins for leather, the feet having been left in the skins as handles for part of the process and subsequently discarded. The feet may also have contributed neatsfoot oil for treatment of the skins (Serjeantson 1989). It

is uncommon to find such a distinct deposit. Similar deposits but of post-medieval date have been recorded in York (O'Connor 1984). A high proportion of metapodia was also found in a well at Rudston Villa (see Serjeantson 1989). Although a number of the metapodia in the Tolpuddle Ball sample were badly fragmented, many were complete or could be rejoined for measurements. The withers height estimates range from 0.508 m to 0.567 m

Features 1013 and 871
These two features are of note in that both contained similar elements to those in Pit 5. Rectangular feature 1013 included 33 sheep foot bones. The bones are mainly of the metapodia and include both fused and unfused distal epiphyses (i.e. under and over two/three years). The comparative lack of the small bones such as phalanges may be due to excavation bias. At least six animals are represented. Withers heights calculated from one metatarsus and four metacarpi range from 0.542 m to 0.586 m It seems likely that this deposit represents the same activity as that for Pit 5. The bones from small pit 871 which lies close to Pit 5 comprise ten sheep foot bones and include a complete metacarpus of estimated withers height 0.57 m.

Hollow 178
This feature produced 310 bones. Cattle, sheep, horse, pig and dog are present, the assemblage dominated by sheep (80 fragments) and sheep-sized (98) bones. Several bones are gnawed and four charred. Most bones were slightly eroded and most had suffered recent breakage. The sheep bones include a hornless skull, the only such from the site, even skulls from young animals having horn buds.

Although hornless skulls are sometimes associated with larger animals (see below) none of the bones in this group were larger than from other features and hornless sheep occur occasionally in most populations. Unusually for the site the assemblage also contained jaws with teeth rather than fragments and loose teeth, implying that the bones had been deposited soon after use rather than being exposed and trampled.

The teeth indicated that these animals would all have been at least two years old and one over four, probably barren ewes and other culls rather than animals killed at prime meat age. There is also a part-worked metatarsus. This has 'burin' grooves along its length, a technique used for axially splitting the bone. One of the few pig bones is an axially divided skull. This is typical of most periods, the pig's head being more useful than the heads of other animals.

Grain drier 1100
The grain drier and its associated contexts only produced 84 bones. Many of these were identified as sheep with some cattle, pig and horse. Much of the material is eroded, chalky and recently broken. Just four fragments were burnt, and were perhaps contemporary with the use of the structure. Other fragments are likely to have been incidental components of the infill. In spite of the fragmentary nature of the collection there are three sheep jaws with teeth, all with the permanent teeth erupted and in wear.

Other Romano-British features
The 293 bones from layer 1060, representing possible occupation debris, included cat and dog bones, both represented by loose teeth. Scoop 140 contained 45 sheep bones and no other remains. These bones suggest the burial of a complete, adult, sheep. Romano-British layer 248, a possible occupation deposit, contained fragments of sawn antler.

Tolpuddle Ball Discussion

The separate analysis and description of the two parts of the Tolpuddle Ball assemblage (TP93 and W2402.13) is considered unlikely to affect the overall results, given the very small assemblage of pre Iron Age material and the small total number of bones from the 1996/7 excavations. Understanding the effects of taphonomic bias on the bones at this site is crucial in the interpretation of the assemblages and is considered throughout this discussion (further details in archive).

Phases 1 and 2. Neolithic–Early/Middle Bronze Age

The small size of the animal bone assemblage (171 fragments) unfortunately renders detailed discussion inappropriate, however, there are several general observations that can be made. Horse, cattle, sheep and pig were positively identified, with cattle the dominant taxa by far. Sheep comrpise roughly half the cattle total and horse and pig account for a few bones only. The bones are of small animals and include a sheep of 0.59 m estimated withers height and a probable cow of 1.05 m Although bones of dog were not found several of the fragments exhibited canid gnawing, indicating that dogs were present at the settlement.

The accumulation of data from small rural assemblages such as Tolpuddle Ball is of value in composing an overall view of animal exploitation in the region. The picture which has emerged is that in comparison with the Neolithic period, Bronze Age assemblages contain only small amounts of pig and show an increase in sheep, foreshadowing the importance of sheep in the Iron Age. Cattle are generally smaller in the Bronze Age than in the Neolithic and horse is introduced. The emphasis is on domestic husbandry rather than hunting. The small assemblage from Tolpuddle Ball appears consistent with this general pattern.

Phases 3–5. Iron Age and Romano-British

Comparative faunal assemblages
There are some large Iron Age assemblages in southern England to compare with Tolpuddle Ball. Danebury, Hampshire (Grant 1984a; Grant 1984b), Maiden Castle, Dorset (Armour-Chelu 1991), and Cadbury, (Hamilton-Dyer & Maltby n.d.) are hill forts; Winnall Down/Easton Lane, Hampshire (Maltby 1985a, 1988b), Gussage All Saints, Dorset (Harcourt 1979) and Owslebury near Winchester (Maltby 1987) offer large assemblages from other settlement types. Smaller contemporary sites nearer Tolpuddle Ball include Alington Avenue, Dorchester (Maltby 1988a), and the sites along the Dorchester By-pass (Bullock & Allen 1997), including the Western Link (Reilly 1997). There are also some small assemblages from the Purbeck area, Dorset (Coy 1987a, b; Hamilton-Dyer 1991). Excavations at Greyhound Yard (Maltby 1993) and County Hall, Dorchester (Hamilton-Dyer 1993) have produced good-sized Roman urban assemblages but similarly-dated groups from rural settlements in the area are few and often small. The Tolpuddle Ball assemblage therefore

represents a useful and important assemblage from the Dorchester hinterland. It is comparable with the very large sample from Owslebury which also spans the Iron Age and Romano-British periods (Maltby 1987). Publication references to these comparative faunal assemblages are not repeated below.

Comparison of feature types
Almost 50% of the total assemblage was recovered from pits of Iron Age and Romano-British date (see Tables 43 and 44). Romano-British layer 64 and Structure 702 also produced large groups of material (921 and 420 fragments respectively). Material from ditches is much less common, making up only 7% of the total assemblage. Preservation and fragmentation of material differs between these groups (details in archive). Erosion of bones was also highly variable and this is discussed at length in the archive report. In general much of the Romano-British assemblage is poorly preserved.

'Special' deposits
Most of the bone is from mixed domestic and slaughter waste but there are a number of deposits which do not fit this general pattern. The deposit of sheep feet from the Romano-British Pit 5 (and perhaps also 1013 and 871) are clearly from specialised processing. They probably represent waste from sheepskin processing and may be associated with Tank 357.

Groups of associated dog bones are less easy to interpret. The most simple explanation is that they are merely disposal of a carcase in a convenient pit. While this may be true in some cases others are likely to be deliberate burial or placement of part or complete bodies. It is notable that almost all of the dog bones (339 bones, 98%) are from Iron Age contexts (Phases 3, 4 or 3/4), Romano-British contexts producing just eight bones. Most of the Iron Age dog bones are from seven pits which contained complete or partial skeletons. A complete dog, apparently laid on a bed of flint and pebbles, was found in the very large pit 403. The remains of two neonatal pups were also present in this pit but unfortunately exactly how they were associated with the adult dog cannot be determined.

Pit 19 contained the axial parts of a dog, including the pelvis and skull, but no limb bones. At least part of this was at the base of the pit. Pit 353 contained the skull, jaws, atlas and axis of a dog together with part of the right lower forelimb, probably from the same animal. The axis had been cut at the rear, presumably to remove the head from the rest of the body. Pit 1093 contained the skull, jaws and neck vertebra together with a number of artefacts (quern, pot and a brooch). Another head and neck was found in Pit 799; this was of an old dog. The skull and jaw of an old dog was also found in Pit 1172 with very little other bone. Finally there were 37 associated dog bones from Pit 1264. This appeared to be the remains of just the head and feet. Cut marks were observed on a metacarpus and the remains could be from a dog skin.

The pit also contained a pair of isolated cattle jaws. Dog skulls and skeletons are often found in Iron Age pits, many appearing to have been deliberately placed and sometimes associated with other animal remains for example, at Danebury and Winnal Down/Easton Lane. Several examples were found at Danebury, often with horse (see Grant 1984b). The dog is likely to have held a special position in Celtic society (Green 1992) and some or all of the remains recorded at Tolpuddle Ball are probably ritual in origin. The apparent evidence for dog skins at Tolpuddle Ball is of interest. A similar instance was recorded from a Late Roman grave at Asthall, Oxfordshire where a dog skin with feet attached appeared to be wrapped around a juvenile burial (Booth *et al.* 1996, 382–7).

Ritual placement may explain the presence of the horse skull and jaws in Pit 116 which may have been a riding animal. The cattle skull in 1302 also appears to have been deliberately positioned. Finds of cattle and horse skulls have been recorded at Cadbury and Danebury (Hamilton-Dyer and Maltby n.d.; Grant 1984a, b). The high level of horse (and other large bones) in the Phase 3 enclosure ditch is typical. Ditches are more likely to have been used for the convenient disposal of large material, especially of carcases, away from dwellings whereas pits close to buildings are likely to contain more domestic waste.

Species representation
Species diversity is low throughout. Most of the identified bones are of the main and minor domestic mammals; horse, cattle, sheep, goat, pig and dog. Other taxa are very rare, often just a few fragments from the whole site. Red deer bones are the most common of the larger animals at 12 fragments. Amphibians were encountered in the lower fills of several pits. Other taxa are cat, hare, domestic fowl, goose, duck, white-tailed eagle, crow, blackbird, herring gull, watervole, field vole, and shark. Bones of small taxa are often retrieved only from sieved samples and are also likely to suffer preferential destruction but a low variety of species is a common feature of rural Iron Age and Romano-British sites.

Close to 6000 bones were recorded in detail, virtually all (99%) derived from the 1993 excavations (see Tables 41 and 43). Almost half (46%) could not be positively identified to species. This is partly due to fragmentation and in part due to the state of preservation, which itself affects fragmentation. Sheep and cattle comprise 29% and 11% of the assemblage respectively, leaving only 14% for all other taxa. As discussed above, dog is significantly more frequent from Iron Age features, mainly from associated bones.

Horse is also more frequent from Iron Age contexts, in this case mainly due to the higher percentage in the Phase 3 enclosure ditch. Horse is often better represented in ditches and very few Romano-British ditches were present. The relative proportions of the main domestic meat animals cattle, sheep and pig are slightly, but not greatly, different between the Iron Age and Romano-British deposits. In both cases sheep dominates at over 60% of the cattle/sheep/pig total with cattle second and pig very subordinate. Excluding the contents of Pit 5, sheep forms 60% of the Romano-British total (73% when included).

For the Iron Age total, sheep forms 65%. Sheep here refers to both sheep and goat; only six bones were positively identified as goat whereas there were 112 identified as sheep from the Iron Age and 276 from Roman contexts.

Goat, while still at a relatively low level, was more frequent in the later Roman deposits at Dorchester in comparison with earlier material. Goats can be used for meat, skins, horns and milk and the presence of young animals may indicate an increased interest in milk. Of the six goat bones at Tolpuddle Ball one was of a kid, from Iron Age pit 122 from the same context as the gull bone. Sheep is present in high numbers at most Iron Age sites and at Tolpuddle Ball it is present in equally high numbers in the Romano-British period. The rural landscape of the Dorset Downs is ideal sheep country and it is not therefore surprising that sheep are common in both the Iron Age and Roman settlements at Tolpuddle Ball.

The amount of pig is extremely low, only 4% of the identified bone in both period groups (excluding Pit 5). A low value for pig is often the case for Iron Age sites whereas in the Romano-British period the amounts appear to be largely dependent on settlement type, with higher percentages in the most urban and Romanised settlements (King 1984; Maltby 1994). In the Tolpuddle Ball sample differential recovery rates and poor preservation conditions may adversely affect the survival of pig bone more than usual. Comparison of the similarly sized sheep bones with those of pig gives variable results and many samples are too small for analysis, but the overall value for the Iron Age assemblage is 10% while the Romano-British assemblage gives a consistently lower value with a mean of 6% overall (Pit 5 excluded).

The poor level of preservation in much of the Romano-British assemblage has been noted but it may also be noted that the assemblages on the Ower Peninsula (Purbeck) produced high levels of pig (19%) in acidic soil conditions. At Alington Avenue pig occurred at about 6% of the identified bone from the Romano-British phases and pig amounted to around 9% at Maiden Castle. Pigs are raised almost entirely for meat alone, are quick to breed, and are not herding herbivores. They therefore require different husbandry to cattle and sheep but can respond very quickly to changes in demand. Although they prefer woodland they can utilise other habitats and can be used as scavengers and kept in confined areas. This may be the reason for the variation in the amount of pig, over and above considerations of taphonomy. The low amount at Tolpuddle Ball once again contrasts with the high level (over 20%) from urban Dorchester where it is thought that the pigs were raised in the town for local consumption (Maltby 1993; 1994). This urban concentration was evidently quite localised: the amount of pig was lower in the suburbs, for example as recorded at County Hall, Dorchester and at Alington Avenue, just outside the city walls.

The amount of horse in the Iron Age assemblage amounts to 8% of the identified bone and horse is more frequent than pig. This is similar to Winnall Down and Gussage All Saints. Comparing the similarly-sized cattle bones with horse the proportion of horse in the horse/cattle total is 30% The proportion is slightly higher in the ditches than in the pits, as is commonly the case. The Romano-British contexts contain very little horse, only 2% of the identified bone. While this is similar to the results from Greyhound Yard, Dorchester it is unusual for a rural site where the proportion of horse in the horse/cattle total can be a lot higher, for example 18% at Alington Avenue and 18%, at Owslebury. At Tolpuddle Ball it is only 8%. This is in stark contrast with the Iron Age proportion of 30%. The results are biased by the lack of ditch material, where horse is often more common, but the level is still rather low.

There was little evidence of reliance on wild resources from Iron Age or Romano-British contexts. Even taking problems of recovery and preservation into account the number of bones from wild animals is very low. The 12 remains of red deer include limb bones, implying hunting while the antlers may have been collected or were from hunted animals. Hare is the only other wild mammal represented and indicates open land rather than the woodland preferred by deer.

There are few bird bones, domestic fowl occurs in five contexts (Late Iron Age and Romano-British). That in Grave 49 (burial 458) could be a deliberate inclusion but is more likely to be from the backfill. Fowl bones are uncommon at Iron Age sites in southern England and are usually found only in the latest phases, for example at Danebury and Winnall Down. More are encountered in Roman material, especially from urban sites such as Greyhound Yard, Dorchester. At rural, non-villa, sites they are much less common (see Maltby 1997) as is the case at Tolpuddle Ball.

There are two bones each of goose and duck which could be either wild or domestic, or at least tamed. The single bones of eagle, crow, blackbird and gull were probably not from food, although the several remains of kittiwake at Gussage All Saints and Danebury may indicate that the gull might have been. The eagle is comparable with white-tailed and is probably female on size. The eagle and crow are scavengers and no doubt plenty of suitable material would have been present, particularly at lambing time. The gull may seem odd at an inland site but they are frequently seen following the plough or taking shelter from bad weather and the south Dorset coast and Poole Harbour are both only about 15 km from Tolpuddle Ball.

The lack of fish (bar one shark's tooth) is unsurprising as fish are rarely reported from Iron Age sites in southern England (even where extensively sieved) and usually come only from urban and coastal Romano-British sites. The voles are environmental indicators of rough pasture and grassed river banks. The amphibian bones are frog and toad and are commonly found in the base of pits.

Anatomy

For the major species all body areas and most anatomical elements are represented in the overall assemblage. Some elements are very poorly represented, other than in certain special deposits. These are especially the fragile elements such as the maxilla and the minor elements such as the smallest bones of the wrist, ankle and foot. There are three probable reasons for the low quantity of these last; they

are sufficiently small to have been missed in hand excavation, small bones might be expected to have been preferentially destroyed in aggressive soil conditions, and some may not have survived to be deposited, having been consumed by dogs. Gnawing, in conjunction with epiphysial fusion, may greatly affect the survivability of some bones, and their identifiability. Those most affected are the later fusing limb bones especially the femur. This bone is particularly hard to assign to anatomy and species when fragmented. Even counting fragments rather than whole bone equivalents femur is poorly represented in the assemblage.

The amount of loose teeth in an assemblage indicates the state of preservation and the likelihood of differential representation. At Tolpuddle Ball the amount of loose teeth of sheep (the most common species) is very high. Jaws are frequent but loose teeth form a huge 20% of the entire assemblage. Loose teeth are also high (17%) in the cattle assemblage (details in archive).

Of the limb bones the tibia, especially the robust early fusing distal end, is usually well represented in assemblages (see Maltby 1985b). This element is quite well represented at Tolpuddle Ball, about the same amount as jaws, but it is very noticeable that almost of the fragments are of shafts and are without even the distal end. This predominance of shafts has been reported before and the amount varies with preservation (Maltby 1985b; Hamilton-Dyer and Maltby n.d.). Usually the number of sheep phalanges, carpals and tarsals is low, and much lower than those of cattle, even though the number of these bones in the skeleton is higher than the limb bones. This lack is almost entirely due to the biasing affect of size on survivability and recovery. At Tolpuddle Ball, however, the number of these bones of sheep is high, over 20% of the total. This can be explained by the unusual group of sheep feet in Pit 5, these elements form nearly 40% of the Romano-British group and are almost absent from the rest of the assemblage, as expected.

There are other differences in anatomical representation between the main phase groups. There are fewer jaws in comparison with teeth in the Romano-British for both cattle and sheep, probably a reflection of the high fragmentation in Layer 64. The increase in cattle skull fragments in Phase 3 is probably due to feature type as most of the bone comes from ditch contexts. The Romano-British sheep sample is composed almost entirely of loose teeth, carpals, tarsals and phalanges. This is due in part to the dump of feet in Pit 5 but this does not explain the lack of jaws and limb bones. Maltby (1985b) has discussed the effect of taphonomy on variability of samples, and it is noticeable that the more susceptible elements are at very low levels in the Romano-British samples.

It is thus difficult to interpret the assemblages as much of the Romano-British material may not have been preserved. Overall, making allowances for differential preservation, the Iron Age and Romano-British assemblages do not appear to be substantially different.

Ageing

Full details on ageing data, analytical methods applied and the detailed results are held in the archive report. Epiphysial fusion data is of limited value in assemblages with large amounts of gnawing and other taphonomic bias (as here) and very little unfused material was recovered from the Romano-British assemblage. However, there do appear to be significant differences in the surviving data between the Iron Age and Roman periods. Over 70% of the Romano-British group survived beyond the age of 18–28 months whereas over 65% of the Iron Age animals had already died by this age and there are also bones from animals under 10 months. Several lambs were recovered from the Iron Age assemblage, including neonates.

Detailed analysis of teeth was undertaken, their resistant nature help jaws to survive and therefore usually offer less biased data, but there is still likely to be a bias against the jaws of very young animals. There are 46 jaws with teeth from the Iron Age deposits and 28 from the Romano-British. Tooth wear patterns were recorded using the method devised by Grant (1982) and grouped into stages. The results are given in Fig. 63. For the Romano-British group there are no jaws in the very young classes. There is a distinct peak around Stage 5 and several at Stage 6 with just a few older or younger. The jaws are in the main from adults of about 3 years old, just a little over the prime meat age. The Iron Age pattern is quite different with a noticeable double curve; the main peak is more diffuse and shifted towards younger animals of Stages 2 to 5 and there is a secondary peak of very old animals. There are no jaws of very young or neonatal lambs from either group. However, it is likely that this reflects preservation since there are a few neonatal lamb bones from both Iron Age and Romano-British contexts. Several bones from the Iron Age group are of older lambs about 6 months old. Although taphonomic processes may therefore have affected the youngest jaws there is still a difference in the mortality profiles of the two period groups.

If representative the differences observed from the teeth analysis suggest a different exploitation pattern. In the Iron Age sample many of the sheep died or were being killed as lambs and just before or close to the prime age for meat, with a further group being utilised at the end of their lives. The flock is probably multipurpose with some interest in by-products such as milk and wool as well as meat. Sites of Early and Middle Iron Age in Wessex consistently produce samples with high numbers of animals which died in the first year (Maltby 1981) while some Late Iron Age sites such as Owslebury and Gussage All Saints produced samples with more from the prime meat age.

The broad spread present at Tolpuddle Ball may reflect a change from the early to the later pattern which cannot be separated as many features could only be dated to the Middle/Late Iron Age (Phase 3/4). Alternatively the taphonomic bias against lambs may weight the results in favour of the later pattern. The true picture may well lie in a combination of these explanations.

The Romano-British pattern at Tolpuddle Ball is more concentrated on adult, but not aged, animals with a distinct peak of animals culled in their third year. These jaws probably represent animals culled primarily for meat but which have already given several cuts of wool, probably culls of barren ewes and other surplus

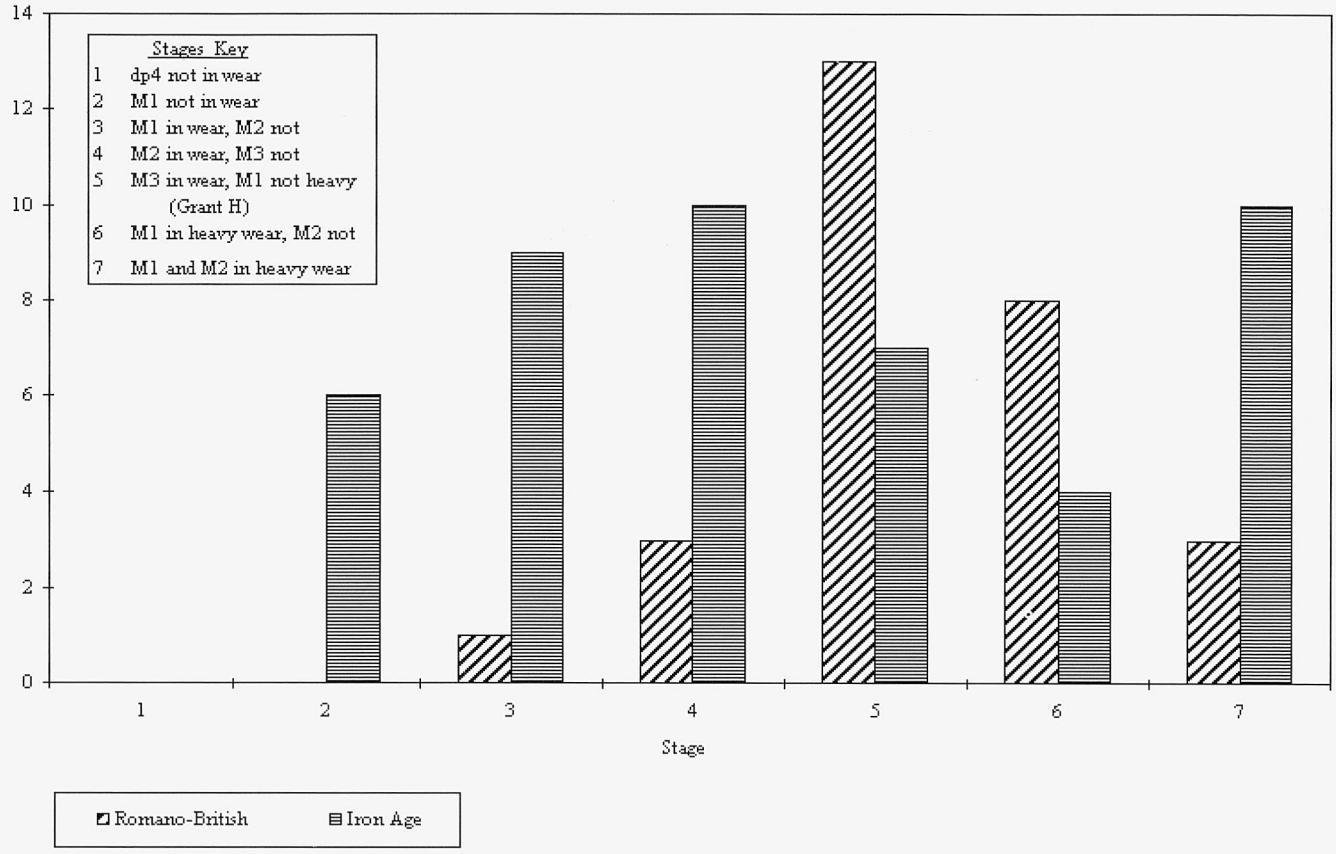


Figure 63 Tolpuddle Ball animal bone: sheep tooth wear and eruption stages (Y axis = no. of jaws)

animals. Interpretation must be cautious, however, as any animals which were sent to Dorchester or elsewhere will not of course be represented in the faunal remains at Tolpuddle Ball.

Unlike the Early Roman contexts at Dorchester there are no lambs (Stages 1–2) represented by the jaws and only a few represented in the bones. Although taphonomic loss is an important factor here it is possible that the data represents a different usage. Maltby suggests that lambs represented in Dorchester assemblages could represent milk production, which may not have been so important at a rural settlement such as Tolpuddle Ball.

The dataset for cattle is smaller than for sheep. There are differences between the two period groups with a greater emphasis on fused material from the Romano-British group. It is probable, however, that this reflects taphonomy more than a difference in culling practice. Overall, although rather small, the sample implies the culling of both calves and of old animals well past the prime meat age. The samples imply the presence of breeding stock rather than the remains of prime beef. At Greyhound Yard the remains showed an increase over time of adult, but not aged, cattle together with some veal calves implying some degree of selection in the beef supply.

Ageing information for pig is sparse, with a total of only 117 bones many of which were incomplete, it can merely be stated that both adult and young pigs are represented.

Metrical data

Sheep bones offer the largest metrical group but the amount of fragmentation of recent and ancient origin restricts the information available (details in archive). All of the sheep limb bones sufficiently complete for withers height estimates are metapodia. There is very little difference between values for the Iron Age and Roman periods. The range is 0.508 m to 0.608 m with a mean of 0.557 m (Table 45). The sheep measurements are all of small, slim, animals very similar to material from Gussage All Saints, Cadbury and Romano-British Dorchester. There is some evidence that larger animals are associated with hornless skulls from the Romano-British period, especially in the south-east (O'Connor 1982; Maltby 1987; 1993). Armitage (1983) suggests imports of large polled sheep during the Roman period. The single hornless skull at Tolpuddle Ball is not associated with larger bones, but it is interesting to note that of the few distal tibia measurements one is, at 28.2 mm, as large as any from later Roman deposits at Winchester Northern Suburbs and larger than any at Owslebury. An increase in size was reported from later Roman Dorchester and this measurement suggests that these larger animals were present at Tolpuddle Ball along with small ones.

Cattle bones available for withers height measurements are comparatively rare. The range is 1.003 m to 1.207 m with a mean of 1.100 m (details in archive). The data suggests slightly smaller individuals in the Iron Age deposits. The sample is far too small for this to be

Table 45: Tolpuddle Ball animal bone. Sheep withers height estimates

Feature	*Anatomy*	*Measurements Gl (mm)*	*Withers height (m)*
Phase 4			
223	metacarpus	114.6	0.560
223	metacarpus	118.4	0.579
Phase 3/4			
403	metacarpus	119.7	0.585
403	metatarsus	130.1	0.591
35	metacarpus	114.3	0.559
Phase 5			
983	metatarsus	131.8	0.598
1013	metatarsus	128.6	0.584
1013	metacarpus	119.8	0.586
1013	metacarpus	110.8	0.542
1013	metacarpus	116.8	0.571
1013	metacarpus	115.0	0.562
5	metacarpus	109.7	0.536
5	metacarpus	108.9	0.533
5	metacarpus	114.3	0.559
5	metacarpus	115.8	0.566
5	metacarpus	112.9	0.548
5	metacarpus	107.9	0.528
5	metacarpus	113.9	0.557
5	metacarpus	109.4	0.535
5	metatarsus	119.9	0.544
5	metatarsus	120.1	0.545
5	metatarsus	125.5	0.569
5	metatarsus	121.6	0.552
5	metatarsus	112.5	0.511
5	metatarsus	112.3	0.510
5	metatarsus	122.3	0.555
5	metatarsus	125.0	0.568
5	metatarsus	112.0	0.508
Undated			
179	metacarpus	124.3	0.608
Total = 29	min wht = 0.508 max wht = 0.608	mean = 0.577	sd = 0.025; cv = 4.5

Gl = greatest length; sd = standard deviation cv = coefficient of variance; wht = withers height

interpreted as certain evidence for an increase in height in the Roman period but this has been recorded elsewhere (Maltby 1981). All of the measurements are of small cattle in comparison with recent material and are comparable with material from Winnall Down, Owslebury and Greyhound Yard, Dorchester.

Withers height measurements for horse range from 1.154 m to 1.354 m with a mean of 1.274 m (details in archive). Horses are pony-size, typical of prehistoric and early historic material. Most of the few pig bones were of young animals and therefore not measured, fragmentation and erosion prevented measurement in all but one of the remainder.

Butchery / processing

With the considerable amount of fragmentation and erosion butchery marks were not often clearly visible. Surviving marks are mainly from knives with a lesser number from heavy bladed implements. Knife marks associated with skinning were found on several foot bones of horse, cattle, sheep and dog. Heavy cuts across the back of the skull or on neck vertebrae are evidence for the removal of the head. Marks of this type were found on horse, sheep and dog. Both skinning marks and decapitation do not necessarily indicate consumption of meat; while cattle, sheep and pig bones had marks on other elements consistent with jointing and removal of meat there were none on horse and dog bones. Other sites show evidence of occasional use of horse and dog for meat but they are also often found unbutchered or, as at Tolpuddle Ball, just skinned. Some of the sheep skulls had been axially split for access to the brain and the few pig jaws had also been split. Several of the sheep horncores and skulls had chop or knife marks at the base of the horncore for removal of the horn for working. Some sheep limb bones had also been used for working as had some of the red deer antler. Several of the knife marks on limb bones were related to disarticulation of joints and a few were probably made when removing meat. Very few marks were found on the Romano-British material and none were of the distinctive chopping and filleting types often found at urban and military sites including Greyhound Yard and County Hall, Dorchester. Overall, the few marks on bones in the Tolpuddle Ball assemblage are typical of those found on Iron Age and rural Roman sites throughout southern England.

Pathology / abnormalities

Pathological bones were uncommon although some data is likely to have been destroyed as the bones are mainly eroded. Age related changes are the most frequent; oral pathology was recorded in horse, sheep and dog and extra bone growth on foot bones was recorded for horse, cattle and sheep. Traumatic injury was recorded for some of the dog bones and, for sheep, possible damage resulting from dis-budding. A cattle rib with a prominent sinus is probable evidence of osteomyelitis. Oral pathology in sheep was the most common condition. Sheep are often culled when they become broken-mouthed before they become natural mortalities and this was no doubt a common practice in the past. Many diseases do not leave evidence on the bone and of those that do the eroded and fragmentary nature of the assemblage masks all but the most gross evidence. Data from other sites suggests that these few examples are typical and that the animal population was generally healthy.

Tolpuddle Ball – conclusions

Overall, the Tolpuddle Ball assemblage provides an important group of data from a rural site which covers the pre-Roman to Roman transition. The samples can be usefully compared with other rural assemblages and those from urban Dorchester and make a valuable

contribution to the wider study of animal exploitation at a regional level. Further aspects of the faunal evidence and its contribution to a discussion of the agricultural economy and trading networks are presented below in the overall discussion (Section 5).

Iron Age Horse Skeleton (Watching Brief near Tolpuddle Ball)

The large sub-rectangular pit 5039 contained the entire, articulated, skeleton of a horse (see Fig. 22). Apart from two navicular sesamoids, two carpals and a tarsal, all bones and teeth are present. The animal had been placed in the pit on its left side. The forelimbs are slightly flexed against the side of the pit. There is no evidence of dismembering of the carcase by displacement of bones, and no evidence from cut marks of any gutting or skinning of the animal. All of the bones, other than the vertebrae and pelvic symphysis, are fused and all of the permanent teeth are erupted and in wear. The wear on the incisors and the crown heights of the cheek teeth indicate an animal of only 5–8 years at death, probably near7 years (Levine 1982). No pathology is visible on the bones and the skeleton gives every impression of an animal in its prime. The presence of canine teeth in both upper and lower jaws indicates a male.

Measurements were taken of the major limb bones (details in archive). Estimates of withers heights can be calculated from these values and range from 1.204 m to 1.374 m with a mean of 1.283 m. The metapodia (cannon bones) give notably taller estimates than those calculated from the other bones. The factors used for the withers heights estimations were devised by Kiesewalter in 1888 using mounted museum specimens (Driesch and Boessneck 1974). It is possible that the collections contained few of the smaller, 'unimproved' types of horse. It would be interesting to know whether Exmoor ponies and those of similar 'unimproved' type also have proportionally long feet. Taking the measurements on an individual basis they represent the small, pony-sized, horse typical of prehistoric material all over southern England. Harcourt (1979) suggests that horses in the Iron Age were not bred but captured when adult from feral herds, resulting in the bias towards adult males so often found in Iron Age material.

The horse figures regularly in Celtic art and is thought to have had a significant position in Celtic mythology (Green 1992). Special deposits involving the burial of part or complete horses, sometimes in association with other remains is often suggested as indicating ritual use (*ibid.*; Grant 1984). In this particular case, however, there are no other associated bones and only two small fragments of pottery in the feature and the burial may be of a natural mortality.

Tolpuddle Ball Cemetery (W2405.17)

A total of 107 fragments was recovered from nine features including graves (five contexts, 35 fragments) and from various other ditches and pits (four features, 72 fragments). On the whole the material was in fairly poor condition. Features pre-dating the cemetery which produced animal bone were Middle Bronze Age ditch 5302 and Middle/Late Iron Age Pit 5282. The former produced 37 horse, cattle, sheep/goat and pig bones; the latter cattle and sheep-sized bones. One fragment of pig jaw was recovered from grave 5160 from the burial context itself (5162). It is possible that this represents a deliberate deposit given the general rarity of pig on the site as a whole (see above), but this seems somewhat unlikely. The 34 fragments from the fills of four other graves (5087, 5090, 5092 and 5134) include cattle, sheep/goat, fox and rabbit and unidentified mammal. These all very likely represent incidental fragments incorporated into the grave fills. The ten fox bones were all recovered from grave 5090 which lies on the southern edge of the cemetery and which was very poorly preserved. These bones are quite well preserved and represent part of one immature animal. Six well-preserved bones from grave 5087 are somewhat unusual and possibly represent pathological sheep tail bones.

West Mead, Bere Regis

The colluvium, medieval ditches and the midden deposit produced 571 fragments. After joining fresh breaks this amounted to 267 separate bones. Apart from modern breakages the condition of the bones was good, often excellent. Horse, cattle, sheep, goat, pig, red deer, cat and domestic fowl were identified in the bone collection and dog was indirectly identified by gnawed bones. Identifiability was high and less than 30% of the bone could not be identified to species. Much of the unidentified material is likely to be of cattle and sheep in proportion with the identified bone. The species represented are summarised in Table 46.

The proportion of horse is very high (74 bones, 27.6% overall) but this is due to the presence of a collection of 61 bones in ditch 3016. This almost certainly represents the deposition of an entire carcase. If this group is excluded then cattle is the most frequent species at 58 bones (28% of all bone and 45% of the identified bone). Sheep/goat is the second most frequent at 36 fragments, three of which could be positively identified as goat. Pig lies in third place with 16 fragments and horse, excluding the associated bones in ditch 3016, amounts to 13 fragments. The two bones of red deer are from ditch 3016 and from within the midden (context 3131). There were just two fragments of fowl, both from the midden deposits. The single cat bone is from ditch 3016.

Colluvium

The samples produced bones of cattle, sheep and pig as well as some fragments which could not be identified to species.

Ditches

As indicated above, ditch 3016 contained a large number of horse bones, probably all from one animal. Ageing information indicates that this was a fully mature animal, though not particularly aged. All of the bone epiphyses are fused. There is slight exostosis round the dorsal joints of two of the thoracic vertebrae and the cuboid and cuneiform tarsals are fused together. In the jaws the incisors no longer have an infundibulum and crown heights give an estimated age of over 14 years

Table 46: West Mead animal bone. Species distribution

	Midden deposits	*Ditch 3041*	*Ditch 3016*	*Ditch 3029*	*Ditch 3009*	*Colluvium*	*Topsoil / unstrat.*	*Total*
Horse	10	–	60	–	–	–	3	73
Cattle	33	–	7	4	–	4	10	58
Sheep/goat	20	1	1	2	–	9	3	36
Pig	11	–	–	–	–	4	1	16
Red deer	1	–	1	–	–	–	–	2
Cattle-size	26	–	10	1	–	4	3	44
Sheep-size	29	–	–	1	1	2	–	33
Mammal	2	–	–	–	–	–	–	2
Cat	–	–	1	–	–	–	–	1
Fowl	2	–	–	–	–	–	–	2
Total	134	1	80	8	1	23	20	267

(Levine 1982). The presence of canines indicates that this was a male. No butchery was observed on the bones but there is some dog gnawing. The position of the marks suggests that the bones of the feet were still articulated when gnawed. The damage is slight and the otherwise good condition of the bones suggests that the carcase was not left exposed for long before final placement and covering in the ditch. Measurements of these and other bones are discussed below but the animal would have been of large pony size.

In addition to the above bones there was another horse jaw in the unstratified material. Cattle bones numbered ten including two pairs of cattle mandibles. Both of these are mature with all teeth in wear and approaching what could be termed aged. Just five bones of sheep were recovered from the ditches and, although pig bones were found in the colluvium and in the midden, there were none from the ditches. A red deer scapula (3052) is one of only two bones of wild animals from the site and a cat humerus represents the only other species recovered from the ditches. There is considerable indirect evidence of dog; although no bones were recovered one of the cattle and several of the horse bones were gnawed.

Midden deposits

Bones from the midden are mainly of cattle and cattle-sized fragments (33 and 26 fragments). Sheep/goat bones are also well represented at 20 bones and include two fragments of horncores and a radius positively identified as goat. The eleven pig bones include three associated bones of a forelimb, and an atlas and axis also found together. The epiphysial fusion data indicates animals of between 1 and 3 years old.

The ten horse bones are from at least two individuals, not dissimilar in size to each other and to the animal in the ditch. Wild animals are again represented by a red deer scapula. This is large and probably from a male. A humerus and an ulna of domestic fowl are the only bird bones from the site. At a rural location it might, perhaps, be expected to find more, from both domestic and wild birds, but this is a small sample. As from the ditches, there are no dog bones but, there is plenty of indirect evidence for dog in the form of 17 gnawed bones.

Measurements

Horse, with the large number of complete bones, offered the largest amount of metrical data. From the bones in ditch context (3018) a metatarsus gives an estimated withers height of 1.332 m and a tibia gives a similar height of 1.308 m. A complete metacarpus in (3052) is a little larger at 1.449 m but is probably still from the same animal. Another pair of metatarsi from the southern baulk of the midden gave estimates of 1.311 m and 1.332 m, while a humerus from the north side gives an estimate of 1.266 m. A radius, split between contexts (3143) and (3144) gives an height of 1.39 m. These are all very similar – large sturdy ponies suitable for pack or riding.

Two cattle bones allow withers height estimates (both are metacarpi): one gives a height of 1.072 m, the other 1.029 m. These are typical of the small size of medieval material. A sheep metacarpus is estimated as 0.56 m at the shoulder. This is within the range reported for southern England from Iron Age through to the later medieval period and is entirely consistent with a high medieval date. Other measurements not detailed here are recorded in archive.

Other observations

Butchery marks are uncommon but include a cattle maxilla with knife marks typical of skinning, split and chopped metapodia, a chopped humerus and pelvis, and knife cuts on radius. For pig there is a jaw with knife cuts on cheek side. The large red deer scapula from the midden had been stripped of meat using a heavy bladed cleaver rather than knife, removing a piece of the spine in the process. No marks were found on the horse and it may have been buried without skinning.

Ageing data is sparse but indicates that the horses, cattle and sheep were mostly fully mature and the pigs mainly young animals. This pattern is often seen in larger collections. Pigs have little use other than for meat and tend to be killed at prime, horses may be occasionally used for meat but are generally used until death or no longer fit for work and then disposed of. Unlike pigs, cattle and sheep have considerable use beyond the meat supply. Cattle were used for milk and traction and sheep mainly for wool at this period and,

as a result, the remains are often of old animals with few killed at the prime meat age.

Only two bird bones were recovered and no hare, rabbit or fish bones were found. The absence of small species may not necessarily reflect lack of exploitation. Such species may not have arrived at this deposit, having been dumped closer to the point of usage or destroyed by scavengers.

The ditch appears to have been used mainly for dumping large waste, as expected, but the midden deposits are more mixed. Some of the material appears to have been derived from slaughter waste but there is also some butchery and kitchen waste too. Dog gnawing is frequent throughout, even including some on the horse in the ditch. The condition of the bones varies, suggesting that some bones were rapidly covered while others were left exposed to dogs and trampling before final disposal on the midden.

Discussion

This is a small but interesting collection especially since deliberate medieval midden deposits are rare in rural areas. Kitchen waste may be placed in pits near the occupation while large carcases are usually disposed of in more distant pits and ditches. Often bone has been generally spread with other material on the surrounding fields as part of the manuring process. It is possible that this midden was a convenient place to store this material, or was itself an end disposal point.

In comparison with urban medieval deposits there is more of the large waste of horse and cattle and virtually none of the birds, fish and bones of other small species which can be very prominent in urban assemblages, especially cess pits. Few rural assemblages of any size have been published apart from Faccombe Netherton (Sadler 1990). The large collection from this site included many bones of wild and domestic birds and several of wild mammals (even though no sieving was undertaken). The bones of smaller species were particularly common in the pits and internal occupation layers, but even the ditches contained bones of several species. Faccombe is known to have been an affluent manorial settlement, and the part excavated was that nearest the main buildings, which may explain the high levels of the small species.

The chapel at Sutton Poyntz, Weymouth (Hamilton-Dyer in prep.) had notably high levels of pig and birds in the medieval assemblage. Although high levels of pig, birds and wild animals may indicate high status, the low levels at West Mead may be a reflection of deposit type and distance from kitchens as much as the possible status of those who created the waste deposit.

Oyster Shell, Jessica Winder

The 1993 excavations at Tolpuddle Ball (TP93) produced a minimum number of twenty oyster shells (*Ostrea edulis* L.), with 20 left valves of which seven were too badly damaged to measure and 14 right valves of which four were not measurable. The shells were derived from a total of 16 contexts and therefore amount to little more than an overall scatter on the site. There is no evidence that this marine mollusc played a significant role in the diet. The small number of shells prevents meaningful comparison with other sites, determination of the source of the shells and the mode of their exploitation. However, the mean left valve maximum diameter was 90.83 mm which is large. Also, burrows of the marine polycaste worm *Polydora cilata* were present in all of the shells, those of *Polydora hoplura* in 5% of the shells, and borings of the sponge *Cliona celata* in 20%.

The nearest known likely source for the oysters would be Poole Harbour, Dorset, which lies some 15 km away. Non-parametric Mann-Whitney tests to compare the size of Tolpuddle shells with those from nearby sites, show that there is no significant difference between the Tolpuddle oysters and those from Alington Avenue phase 40 (Dorchester, Romano-British), Corfe Castle group 4 (Isle of Purbeck, 17th century), *Shipwrights Arms* (Poole waterfront, early medieval), Thames Street (Poole waterfront, medieval), and modern oysters from the South Deep in Poole Harbour.

The interest in the samples lies in the fact that, in addition to general signs of wear and flakiness probably attributable to weathering and disposal treatment, there are definite signs of deliberate wear and usage in four of the right valves and one of the left valves. This consists of either one or two smooth and straightened edges to the shell on the margins opposite the umbonal (ligament) end of the shell. Where two edges have been smoothed on the same shell this has resulted in a shell which is sub-rectangular or diamond shaped. The wear is consistent with the shell having been used as a scraper, perhaps of skins, in which case the alteration to shell shape has been accidental.

There is also the possibility that the wear may have been deliberate in a process that was transforming the shell for some other purpose. The only parallel to this type of wear in oyster shells has been recorded from excavations at Alington Avenue, Dorchester where seven smooth-edged right valves of oyster were recorded.

At Tolpuddle Ball there were also nine shells (4 left valve and 5 right valve) with a large central perforation. This type of perforation has previously been considered a result of the tine of a garden fork breaking the shell either at the time of original burial or during excavation. Another suggestion is that large oyster shells were perforated for use as temporary roof tiles to stop leaks. There is, however, no evidence to substantiate the latter theory, for example in the form of any *in situ* method of attachment, and it would seem more likely that these perforations were caused by accidental damage at or soon after their deposition. Similar perforated shells have been noted, for example, in medieval contexts at Carisbrooke Castle (Wyles and Winder forthcoming). The only other site at which oyster shells were excavated was West Mead which produced a mere 15 fragments.

Charred Plant Remains, Pat Hinton

A total of 24 samples from five excavations was selected for analysis after the assessment phase. The samples were as summarised below.

Site	*No. samples*	*Date(s) of samples*
N. of Tolpuddle Ball	2	LBA/EIA
Tolpuddle Ball (1996/7)	1	E/MBA
Tolpuddle Ball Cemetery (1998)	1	MBA
Tolpuddle Ball (1993)	17	Neo/EBA–R-B
West Mead	3	Med

The unsorted flots and charred items extracted from the residues were examined from all samples selected for full analysis with a stereo microscope at x7 to x40 magnification. Nomenclature of wild plants accords with Stace (1991). The word 'seeds' is used to include fruits, caryopses, achenes etc. All taxa are represented by seeds unless otherwise noted. The results are presented in Tables 47 and 48.

North of Tolpuddle Ball (Table 48)

The two samples from the Late Bronze Age/Early Iron Age (Phase 2) pits 2006 and 2011 contained very small amounts of very degraded cereals and chaff and, in one, a few seeds of disturbed ground. They also contained some evidence of the glume wheats *Triticum dicoccum* and *Tritcum spelta* (emmer and spelt) and of *Hordeum vulgare* (hulled barley). One sample also included a few seeds of probable weeds. Both samples included a small number of recent uncharred seeds and fungal sclerotia. The cereals are poorly preserved but wheat may have been the more important species. Only three grains were very loosely identifiable as wheat. There was slightly more evidence from chaff which indicates the glume wheat *Triticum spelta* (spelt) and possibly *T. dicoccum* (emmer), both typical wheats of the Late Bronze and Early Iron Ages. Only one grain was identified as *Hordeum vulgare* (barley). The very few weed seeds (present in only one sample) may have originated with the cereals or from any other open disturbed ground. At such low density these remains may represent little more than chance inclusion from the usual background of charred material.

Tolpuddle Ball (Table 47)

All the samples contained small amounts of highly-degraded charred fragments, some of which were parts of cereals, but in no case are they likely to represent the remains of more than a very few grains. For consistency these were quantified by volume and the greater numbers of *Corylus avellana* (hazel) nut shell fragments in features 184 and 841 are similarly quantified.

Phase 1. Neolithic–Early/Middle Bronze Age
The four samples examined from this period included only very sparse traces of cereals, but in two of the pits (184 and 841) there were a large number of hazel nut shell fragments. Those in pit 184 weigh 12.65 g (25 ml volume). The fragments are mostly very small, only two approaching half a complete shell. These provided length measurements, from centre of hilum to base, of 12.00 mm and 12.60 mm. With so little evidence of their size an estimated number of 50–60 nuts can only be speculative. Pit 841 contained only a trace of cereals but 73 fragments of hazel nut shells, (1.5 ml) equivalent perhaps to four or five nuts. There is no evidence of how the nuts were opened due to the very small size of the fragments which probably resulted from a combination of burning along with their later burial and mixing in the soil. The occurrence of hazel nuts is not a surprising find for this period when cereal cultivation was still limited and wild plant foods remained an important part of the diet. The nuts also illustrate the availability of hazel as a source of wood for fuel or other purposes.

The sample from Middle Bronze Age ditch 5302 on the cemetery site produced very little charred material (not included on Table 47). The identifiable fragments comprised one wheat grain (*Triticum* sp.), five small cereal fragments and one smooth tare (*Vicia* cf *tetrasperma*). The wheat grain cannot be identified specifically but spelt or bread wheat seems more likely than emmer. Smooth tare is a common weed. It is not represented among the other Phase 1 samples but is present in Iron Age samples from Tolpuddle Ball (Phases 3/4 and 4).

Phases 3–5. Iron Age and Romano-British
All Iron Age samples (Phases 3 and 4) were selected for analysis on the basis of the potential value of the estimated content of charred cereals, chaff and weed seeds. Samples from other sites produced little or no charred material for this period. All phases of the Iron Age are represented in the enclosure samples and all include cereals, thus allowing a general view of agricultural economy. Hulled barley occurs throughout but there is some variation in the wheats. The glume wheats, either emmer or spelt, occur rarely in some samples but become more obvious (probably mainly spelt) in the Late Iron Age. *Triticum* cf *aestivum* s.l. (free-threshing bread wheat) was found only in three samples. These few grains are rather shorter than the glume wheats, with more rounded sides and steeper angles at the radicle end, similar to the compact form known as club wheat. Oats, present only as a trace in the Bronze Age, appear in slightly larger numbers in the Late Iron Age. It is not possible to say whether these represent wild oats or, possibly in the greater presence in the later samples, cultivated species. Seven of the 13 analysed Iron Age samples have more particular interest and are discussed below.

Samples from pit 9 (Phase 4) produced a few cereals but more notably wild plant seeds, indicative of the exploitation of heathland. While some of the wild plant seeds could be field weed seeds (*Cerastium, Trifolium, Plantago, Odontites* and *Galium aparine*), others are

Table 47: Tolpuddle Ball (W2402.13 and TP93) charred plant remains

		Phase 1. Neo-E/MBA			*Phase 3. M/LIA*			*Phase 4. Late Iron Age*					*Phase 3/4. Iron Age*					*Phase 5. R-B*	
Feature		*184*	*841*	*2394*	*258*	*1264*			*9*	*108*	120-122	*231*	*19*	*68*	*1019*		*1288*	*5*	*1100*
Context		*960*	*848*	*2395*	*894*	*1334*	*1343*	*1350*	*1307*	*780*	*1245*	*1370*	*1173*	*473*	*1400*	*1399*	*1330*	*4*	*1526*
Sample		*59*	*33*	*10068*	*50*	*79*	*85*	*92*	*96*	*25*	*71*	*119*	*108*	*36*	*130*	*131*	*105*	*5*	*158*
Sample vol.		*10*	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*0.35*	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*3*	*3*
Cultivated plants																			
Triticum cf. *dicoccum* - grains	emmer	1(1)	–	–	–	–	–	–	–	–	–	–	1	–	–	1(1)	–	–	1
- glume bases		–	–	–	–	–	–	–	–	–	2	2	3	–	3	3	–	–	5
Triticum cf *spelta* - grains	spelt	–	–	–	–	–	–	2	–	–	–	2(2)	–	–	17	5(1)	–	–	6
- glume bases		–	–	–	–	–	–	–	3	–	–	4	1	–	35	11	–	–	17
Triticum dicoccum/spelta -grains	emmer/spelt	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–
- glume bases		–	–	–	–	1	–	2	–	–	4	2	5	–	20	32	–	–	26
Triticum cf *aestivum* s.l. - grains	bread wheat	–	–	–	–	1(1)	–	–	–	–	–	–	–	3	–	2	–	–	–
Triticum sp. - grains	unspec. wheat	–	–	–	1	–	–	–	–	–	13	–	1	6	8	8	–	1	4
- rachis fragments		–	–	–	–	4	1	1	1	–	6	–	–	1	28	28	–	–	17
Hordeum vulgare L. - grains	hulled barley	1	3	1	2	–	(3)	3	2(1)	(2)	16	3	1	*c*450	19	7	3	2	7
- rachis internodes		–	–	–	–	–	–	–	–	–	2	–	–	–	2	–	–	–	6
Avena sp. - grains	oats	1(1)	–	(1)	–	–	–	1	2	–	4	3	3(1)	–	5	2(1)	–	–	1
- awn fragments		–	–	–	–	–	–	–	1	–	19	–	–	–	1	–	–	–	4
Cerealia indet. - grains & frags	indet. cereals (vol: ml)	0.25	0.25	<0.25	0.25	0.5	0.25	0.5	0.25	–	1.0	1.5	0.5	1.75	0.75	0.5	<0.5	0.5	0.5
Arable & grassland																			
Ranunculus acris/repens/bulbosus	buttercup	–	–	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	1
Papaver somniferum L.	opium poppy	–	–	–	–	–	–	–	1	–	1	–	–	–	–	–	–	–	–
Papaver rhoeas/dubium	field poppy	–	–	–	–	–	–	–	–	–	1	–	–	1	1	–	–	–	–
Chenopodium album L.	fat hen	–	–	–	–	–	–	–	–	–	1	–	1	–	3	1	–	–	–
Chenopodium cf. *polyspermum*	many-seeded goosefoot	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1	–	–	–
Atriplex prostata/patula	spear-leaved/ common orache	–	–	–	–	–	–	–	–	–	–	–	1	1	1	–	–	–	–
Stellaria media/neglecta	chickweed	–	–	–	–	–	–	–	–	*c* 70	1	–	–	3	1	–	–	–	–
Stellaria cf graminea	grass chickweed	–	–	–	–	–	–	–	–	*c*400	–	–	–	–	1	–	–	–	–

Table 47 (continued)

	Feature	184	841	2394	258	1264		9		108	120-122	231	19	68	1019		1288	5	1100
	Context	960	848	2395	894	1334	1343	1350	1307	780	1245	1370	1173	473	1400	1399	1330	4	1526
	Sample	59	33	10068	50	79	85	92	96	25	71	119	108	36	130	131	105	5	158
Cerastium cf *fontanum*	common mouse-ear	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–
Lychnis flos-cuculi L.	ragged robin	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–
Caryophyllaceae indet.	indet. pink family	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–
Polygonum avicule sl.	knot-grass	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Fallopia convolvulus (L.) Á. Löve	black bindweed	–	–	–	1	–	–	–	–	–	2	1	–	–	2	1	–	–	–
Rumex acetosella L.	sheep's sorrel	–	–	–	–	–	–	2	–	–	4	–	3	–	3	–	–	–	–
Rumex cf *crispus*	curled dock	–	–	–	1	1	–	–	–	–	–	–	–	–	3	1	–	–	6
Rumex crispus / obtusifolius	curled/broad-leaved dock	–	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–
Brassica sp.	dock	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Vicia tetrasperma (L.) Schreber	smooth tare	–	–	–	–	–	–	–	–	–	1	–	1	–	1	–	–	–	–
Vicia hirsuta / tetrasperma	hairy/smooth tare	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2
Vicia cf *sativa*	common vetch	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	–	–	–
Vicia / Lathyrus sp.	vetch/vetchling	–	–	–	–	–	1	–	–	–	1	–	–	2	–	–	–	–	–
Medicago lupulina L.	black medick	–	–	–	–	–	–	–	–	–	–	–	–	3	–	–	–	–	–
Trifolium cf *pratense*	red clover	–	–	–	–	–	–	–	–	–	7	1	–	2	2	1	–	–	–
Trifolium sp.	clover	–	–	–	1	–	–	1	–	–	1	1	–	1	–	1	2	–	2
Polygala sp.	milkwort	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–
Lithospermum arvense L.	field gromwell	–	–	–	–	–	–	–	–	–	7	4	–	1	8	5	–	–	–
Thymus sp.	thyme	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–
Plantago lanceolata L.	ribwort plantain	–	–	–	–	–	–	1	–	–	–	–	–	–	1	–	–	–	–
Veronica cf. *chamaedrys*	germander speedwell	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–
Euphrasia / Odontites	eyebright/red bartsia	–	–	–	1	–	–	–	–	–	–	1	1	5	1	–	–	–	–
Sherardia arvensis L.	field madder	–	–	–	–	–	–	–	–	–	1	1	–	3(1)	–	–	–	–	–
Galium aparine L.	cleavers	–	–	–	1	–	–	–	–	–	4	3	2	1	–	–	–	1	4
Valerianella dentata (L.) Pollich	narrow-fruited cornsalad	–	–	–	–	–	–	–	–	–	–	–	–	3	–	–	–	–	–
Cirsium sp.	thistle	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2
Tripleurospermum inodorum (L.) Schulz-Bip	scentless mayweed	–	–	–	–	–	–	–	–	–	2	1	–	–	2	–	–	–	1

Table 47 (continued)

	Feature	184	841	2394	258	1264		9		108	120-122	231	19	68	1019		1288	5	1100
	Context	960	848	2395	894	1334	1343	1350	1307	780	1245	1370	1173	473	1400	1399	1330	4	1526
	Sample	59	33	10068	50	79	85	92	96	25	71	119	108	36	130	131	105	5	158
Asteraceae indet.	indet. daisy family	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–
Luzula sp.	wood-rush	–	–	–	–	–	–	–	–	–	1	–	–	–	–	2	–	–	–
Carex ovalis / nigra	oval/common sedge	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–
Carex cf *flacca*	glaucous sedge	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	–	–
Carex sp.	sedge	–	–	–	1	–	–	–	–	–	–	1	–	–	–	–	–	–	–
cf *Lolium perenne / Festuca* sp.	rye-grass/fescue	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	4
Poa annua L.	annual meadow grass	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–
Arrhenatherum elatius Beav. var. *bulbosum*	onion couch - tubers	–	–	–	–	–	–	–	–	–	–	1	–	2	–	–	–	–	1(2)
cf *Agrostis* sp.	bent-grass	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	2
Alopecurus / Phleum sp.	foxtail/cat's tail	–	–	–	1	–	–	–	–	1	–	–	–	–	1	–	–	–	–
Bromus cf *secalinus*	rye brome	–	–	–	–	2	–	–	–	–	5	4	–	–	22	13	1	–	2
Anisantha sterilis (L.) Nevski	sterile brome	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–
Danthonia decumbens (L.) DC	heath grass	–	–	–	–	–	–	1(1)	–	–	–	–	–	–	–	–	–	–	–
Molina caerulea (L.) Moench	purple moor grass	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–
Poaceae indet.	grass (small)	–	–	–	–	1	–	3	1	–	–	–	3	14	4	5	2	–	4
Heathland																			
Pteridium aquilinum (L.) Kuhn - pinnule	braken	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–
Calluna vulgaris (L.) Hull - flower	heather/ling	–	–	–	–	–	–	4	5	2	43	–	–	–	6	8	1	–	1
- seed		–	–	–	–	–	–	1	–	–	1	–	–	–	–	–	–	–	–
- shoot		–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–
Erica sp. - flower	bell heather	–	–	–	–	–	–	1	–	1	14	–	–	–	–	2	–	–	–
Calluna / Erica sp. - flower	ling/bell heather	–	–	–	–	–	–	1	–	1	4	–	–	–	–	–	–	–	1
Wood margins																			
Corylus avellana L. - nutshell frags	hazel	25ml	1.5ml	–	–	–	3	2	–	–	–	6	2	–	–	–	–	–	–

( ) = identification uncertain

typical of acid conditions (*Thymus* sp. and sheep's sorrel) and occur in this sample with true heathland plants, that is, heathers (*Calluna* and *Erica* spp). *Danthonia decumbens* (heath grass) also suggests a similar provenance but this grass is not restricted to such soils.

Phase 4 intercutting pits 120/122 includes some cereals and a range of wild plant seeds, including arable, grassland and heathland plants. There is one leaf fragment of *Pteridium aquilinum* (bracken) and more heather flowers. Although the latter are recorded as flowers the petals, not surprisingly, are lost and only the seed capsules survive, often only the bases but sometimes retaining the base of the style. It is surprising that these parts of the heather plants have survived, with only one shoot tip. Two Phase 4 samples (from pits 120/122 and pit 9) produced *Papaver somniferum* (opium poppy) seeds have been distinguished from field poppies by the larger reticulation of the testa surfaces. This poppy has long been cultivated in continental Europe presumably because of the oil-rich seeds, and has been recorded on other British Iron Age sites. These seeds are long-lived in the soil and germinate prolifically when the soil is disturbed and aerated.

The sample from Phase 4 pit 108 is notable because the seeds are almost entirely achenes of *Rumex* species (docks). However, many are damaged and in the absence of perianth parts many seeds are not specifically distinguishable, particularly between *Rumex crispus* (curled dock) and *R. obtusifolius* (broad-leaved dock). Of the better-preserved seeds curled dock seems to be the most likely identification. As a single plant may produce thousands of seeds this may perhaps represent only the disposal of a single or very few plants.

The Phase 3/4 pit 19 included a moderate number of cereal remains, including grains and glume bases of emmer and/or spelt. The few wild plant seeds may be those of field weeds or other open areas. *Rumex acetosella* (sheep's sorrel) suggests light sandy, slightly acid soil and *Carex ovalis* or *Carex nigra* (oval or common sedge) damp, possibly mildly acid, grassland. These few seeds and chaff fragments are likely to be derived from discarded waste.

The Phase 3/4 pit 68 is characterised by the large content of barley, with only a trace of wheat. About 300 more-or-less whole grains were counted but the total was estimated from sub-samples of the many fragments. Among the better-preserved grains are some which show the slightly twisted form of six-row barley. This deposit presumably represents the disposal of grains accidentally burnt, perhaps during preparation or because they were unsatisfactory for some reason. No evidence of germination could be seen on any of the complete grains. The wild plant seeds include arable weeds such as *Lithospermum arvense* (field gromwell) and *Valerianella dentata* (narrow-fruited cornsalad), both typical of calcareous fields, but plants such as *Trifolium* spp. (clovers), *Medicago lupulina* (black medick) and *Arrhenatherum elatius* (onion couch) are common in grassy or rough places. The remains from Pit 1019 (Phase 3/4) also include a range of cereals, characteristic seeds of arable or grassland conditions and further indications of contact with and usage of heathland plants.

There was a limited amount of material available from Romano-British features. Samples from pit 5 and grain drier 1100 were analysed. Very few remains were present in the pit (see Table 47). The grain drier contained wheat, barley, oats and weed seeds; these may have derived from the main function of the drier. However, the presence of 'tubers' (basal stem internodes) of onion couch, which although a possible crop contaminant is frequently found in contexts which suggest the use of up-rooted grasses, may mean the charred fragments from the drier represent fuel or tinder.

West Mead, near Bere Regis (Table 48)

The samples from the 13th century deposits and features (Phase 6) produced a valuable series of plant remains. Three samples from two contexts, (colluvial build-up and ditch 3053) were selected for analysis and included cereals and field weeds. Two samples (contexts 3005 and 3006) from a column of samples taken through the midden included a wide range of cereals and crop weeds, together with evidence of contact with heath and woodland or scrub, suggesting an accumulation of material from several original sources. The sample from ditch 3053 contained fewer seeds but was of similar composition. A few items were unidentified. The most important of these were 10 fragments which bear some resemblance to root or bud scales, or possibly detached thorns (not *Rosa* spp.) or other leaf 'emergences'. They are roughly triangular in shape, measure *c.* 1.80 mm across the base, *c.* 2.00 mm from base to apex and are *c.* 0.10 mm thick.

The majority of the plant remains from West Mead were cereals, with preservation varying from almost whole to small fragments. *Triticum* (wheat) species were the major constituent and most of the better-preserved grains (*c.* 4–5 mm in length) have the almost-square outlines of a compact form of free-threshing wheat. The considerable overlap in morphology of wheat species makes identification uncertain, even in well preserved grains; all were therefore recorded as *Triticum aestivum* s.l. A few with a relatively longer form and higher ridged back were suggestive of *Triticum dicoccum* (emmer) or *spelta* (spelt) but there were no chaff remains to support this, and these cereals would generally be unlikely in this period. Other grains indicate *Secale cereale* (rye), but with poorly-preserved grains it is not always possible to separate wheat and rye.

Grains of *Hordeum vulgare* (hulled barley) and *Avena* sp. (oats) occur in lesser numbers. There were none of the fragile parts of the oats which are necessary to determine whether they are *A. sativa* (cultivated oats) or *A. fatua*, (wild oats). An added problem is that poor preservation means that it is not always possible to distinguish oats from *Bromus* sp. (brome grass), both of which occur frequently as constituents of crop assemblages. In this case both are likely to have been weeds of the cereal crops.

Other cultivated plants are poorly represented. *Pisum sativum* (pea) and *Vicia faba* (field or broad bean)

Table 48: North of Tolpuddle Ball (W2402.13) and West Mead (W2402.16) plant remains

		N. of Tolpuddle Ball		*West Mead*		
		Phase 2. LBA/EIA		*Phase 6. Medieval*		
	Feature	*Pit 2006*	*Pit 2011*	*Midden 3100*		*Ditch 3053*
	Context	*2007*	*2012*	*3005*	*3006*	*3052*
	Sample	*10032*	*10033*	*10090*	*10093*	*10101*
	Vol. (litres)	*10*	*10*	*10*	*10*	*10*
Cultivated						
Triticum spelta L. - glume bases	spelt	3	2	–	–	–
Triticum dicoccum/spelta L. - glume bases	emmer/spelt	3	3	–	–	–
Triticum cf *aestivum* s.l. - grains & frag	wheat	–	–	*c* 150	*c* 320	36(9)
- rachis frags		–	–	–	2(1)	–
Triticum spelta L. - glume bases	spelt	3	2	–	–	–
Triticum sp. - grains	unspec. wheat	1	2	–	–	–
- rachis frags		3	–	–	–	–
Secale cereale - grains	rye	–	–	3	4(2)	–
- rachis frags		–	–	–	3	–
Hordeum vulgare L. - grains	hulled barley	1	–	10(2)	22	11(4)
- rachis frags		–	–	3	1(2)	3
Avena sp. - grains	oats	–	–	6(3)	34(20)	11(4)
- awn frags		–	–	2	1	1
Cerealia indet. - grains & frags	indet. cereals	–	–	4ml	10ml	1.5ml
Pisum sativum L.	pea	–	–	–	–	1
Vicia faba	field/broad bean	–	–	–	1	–
Arable/waste/grassland						
Chenopodium album L.	fat-hen	–	–	1(1)	–	–
Chenopodium cf *rubrum/polyspermum*	red/many seeded goosefoot	–	1	–	–	–
Stellaria media/neglecta	common/greater chickweed	–	–	–	3	–
Agrostemma githago L.	corn cockle	–	–	1	1	–
Fallopia convolvulus (L.) Á. Löve	black bindweed	–	–	1	–	–
cf Polygonaceae indet.	?knotgrass	–	–	5	–	–
Rumex cf *crispus*	curled dock	–	–	–	1	–
Rumex sp.	dock	–	–	1	6(1)	–
cf *Malva* sp.	mallow	–	–	–	1	–
Raphanus raphanistrum - fruit segments	wild radish	–	–	1	4	2
Vicia cf *sativa*	common vetch	–	–	>3	*c* 42	*c*7
V. cf *hirsuta*	hairy tare	–	–	–	3	–
V. tetrasperma (L.) Schreber	smooth tare	–	–	–	1	–
V. hirsuta/tetrasperma	smooth/hairy tare	–	–	3	2	2
Vicia/Lathyrus sp. - seeds & frags	vetch/vetchlings	–	–	>4	>12	2
Trifolium dubium/campestre	lesser/hop trefoil	–	1	–	1	–
Trifolium cf *pratense*	red clover	–	1	–	–	–
Galium cf *aparine*	cleavers	–	1	1	2	–
cf *Cirsium* sp.	thistle	–	–	–	1	–
Anthemis cotula L.	stinking mayweed	–	–	6	16	1
Chrysanthemum segetum L.	corn marigold	–	–	1	1	–
Bromus hordaceous/secalinus	soft/rye brome	–	–	3	>10	2(1)
Poaceae indet.	indet. grass	–	1(1)	1	3	1

Table 48 (continued)

		N. of Tolpuddle Ball Phase 2. LBA/EIA		West Mead Phase 6. Medieval		
Feature		*Pit 2006*	*Pit 2011*	*Midden 3100*		*Ditch 3053*
Context		*2007*	*2012*	*3005*	*3006*	*3052*
Sample		*10032*	*10033*	*10090*	*10093*	*10101*
Vol. (litres)		*10*	*10*	*10*	*10*	*10*
Heathland						
Calluna vulgaris - flower	heather	–	–	5(1)	10	1
- capsule		–	–	2	3	–
- leaf		–	–	3	3	–
Erica cf *tetralix* - leaf	cross-leaved heath	–	–	1	2	–
cf *Erica* sp. - flower	heather	–	–	–	–	–
Hedgerow/scrub						
cf *Alnus glutinosa* - cone stem frag.	alder	–	–	–	1	–
- seed		–	–	–	(1)	–
Corylus avellana L. - nut shell frag.	hazel	–	–	1	6	2
Cornus sanguinea L.	dogwood	–	–	–	1	–
Bud		–	–	1	–	–
Unclassified						
Carex sp.	sedge	–	–	(2)	1	–
Poaceae indet.	small grass (c 1 mm)	–	–	1	3	1
Musci indet. - stem frags	moss	–	–	–	2	–
?root/leaf scales/stem emergences		–	–	–	10	–

( ) = identification uncertain

occur only once (the latter only as one cotyledon) but there are relatively larger numbers of seeds of other pulses (Fabaceae). The identification of these seeds, unless in very good condition and retaining the diagnostic hilum, is difficult and there is a continuous range of sizes. Very small seeds (*c.* 2 mm.) can be identified as *Vicia hirsuta* or *V. tetrasperma* (small tares), but other larger seeds of *c.* 4 mm or more, might well represent a larger species of *V. sativa* (common vetch) known to be cultivated for fodder. There were approximately 16 seeds of *c.* 4 mm diameter among the vetches in context 3006 and two detached hila identifiable as from common vetch.

The wild plant seeds are mostly those of weeds of fairly acid sandy soils or loams and *Raphanus raphanistrum* (wild radish) is an indicator species of acid soils. *Anthemis cotula* (stinking chamomile) was once a common weed on wet loams and clay soils with *Chrysanthemem segetum* (corn marigold) indicative of occasionally wet conditions. The latter plant has fruits of two different forms and one sample contained a seed from a ray floret and another a seed from a disc floret. These plants are more typical of crop fields but some, for example, *Trifolium dubium/campestre* (lesser or hop trefoil) are grassland plants.

In addition to these seeds a few fragments of heathers (mainly flowers from which the petals are lost but unripe seed capsules retained) and a few leaves indicate acid conditions. *Calluna vulgaris* (heather) is the common plant of both dry and damp heathland but *E. tetralix* (cross-leaved heath) indicates wetter patches. Unfortunately the two *Carex* (sedge) seeds are not specifically identified but although some species might occur in or close to a damp field an origin in heathland is quite likely. This also applies to the two very small (<2 mm) lengths of (leafless) moss stems. Heathland is illustrated by heather flowers and scrub, hedge or woodland borders by *Cornus sanguinea* (dogwood) fruit and a few hazel nut shell fragments. The fragments of *Alnus glutinosa* (alder), which prefers damp places in woods or besides rivers, may be another indication of damp conditions.

The cereals, pulses and weed seeds presumably originated in crop processing or domestic refuse and were deposited on the midden. The few heathland remains may indicate the gathering of heather for domestic use as bedding, flooring or as fuel and may have reached the midden among hearth sweepings.

Discussion

For the Bronze Age, the small amounts of charred remains from Tolpuddle Ball and North of Tolpuddle Ball provide little more than background evidence for some cereal cultivation and the use of available wild

plants. In the Iron Age there is evidence for considerable activity within the main enclosure at Tolpuddle Ball, with most samples presumably derived from the disposal of crop processing waste. In all periods the interpretation of the wild plant seeds is made difficult by attempting to distinguish arable weeds, that is, between plants growing and liable to be gathered with cultivated crops, and plants of grassland or other open areas, perhaps encroaching on fields. Distinguishing these two groups is particularly difficult when seeds cannot be firmly identified to specific level. Furthermore, many plants may be common to both habitats. The use of better-drained calcareous soils for the cultivation of crops in the Iron Age is indicated by typical chalky cornfield weeds as *Lithospermum arvense* (corn gromwell) and *Valerianella dentata* (narrow-fruited cornsalad). No seeds from the Iron Age samples specifically denote cultivation of acid soils. Heathers, bracken and sheep's sorrel indicate acid soils but are more likely to have originated in material brought in for other purposes such as fuel or refuse. The plant remains from the medieval site at West Mead provide evidence for the cultivation of cereals and pulses on heavy and occasionally wet soils.

Charcoal, Rowena Gale

Charcoal from six excavations was identified for environmental and dating purposes as summarised below.

Site	*No. samples*	*Date(s) of samples*
Lower Eweleaze	1	LBA
N. of Tolpuddle Ball	2	LBA
Tolpuddle Ball Cemetery	1	Neo
Tolpuddle Ball (1996/7)	1	E/MBA
Tolpuddle Ball (1993)	8	EBA–R-B
West Mead	2	Med

Methods

The charcoal from the residues of the processed bulk samples was extracted under x10 magnification and combined with charcoal from the flots which had been separated from the seed and plant macrofossils at low-magnification. One sample from TP93 (context 960, fill of Phase 1 Pit 184) had large quantities of charcoal and was sub-sampled by the author and 50% examined. Another sample from the same site (fill of Phase 5 pit 108) included insufficient charcoal for identification.

Charcoal fragments measuring >2 mm in radial cross-section were prepared for examination using standard methods. The fragments from each sample were fractured to expose fresh transverse surfaces and sorted into groups based on the anatomical features observed using a x20 hand lens. Representative fragments from each group were selected for further examination using high magnification. Freshly fractured surfaces were prepared in the transverse, tangential and radial planes. The fragments were examined using an incident-light microscope at magnifications of up to x400. The anatomical structure was matched to reference material. Where appropriate the maturity of the wood was assessed (i.e. sapwood/heartwood) and the number of growth rings recorded. It should be noted that the measurements of stem diameters are from charred material; when living, these stems may have been up to 40% wider.

Results

The results are summarised on Table 49. The anatomical structure of the charcoal was consistent with the taxa (or groups of taxa) given below. It is not usually possible to identify to species level. The anatomical similarity of some related species and/or genera made it difficult to distinguish between them with any certainty, for example between members of the Pomoideae and Leguminosae. Classification is according to Tutin, Heywood *et al.* (1964–80). The species list for the project is as follows:

Araliaceae, *Hedera* sp., ivy
Betulaceae, ?*Alnus* sp., alder
Caprifoliaceae, *Sambucus* sp., elder
Cornaceae, *Cornus* sp., dogwood
Corylaceae, *Corylus* sp., hazel
Ericaceae, *Calluna* sp., ling; *Erica* sp., heather (anatomically similar)
Fagaceae, *Quercus* sp., oak
Leguminosae, *Ulex* sp., gorse and/or *Cytisus* sp., broom (anatomically similar)
Oleaceae, *Fraxinus sp.*, ash
Rhamnaceae, ?*Frangula alnus*, alder buckthorn
Rosaceae: Pomoideae: *Crataegus* sp., hawthorn; *Malus* sp., apple; *Pyrus* sp., pear; *Sorbus* spp., rowan, service tree and whitebeam (these are anatomically similar). Prunoideae: *Prunus* spp., which includes *P.avium*, wild cherry; *P. padus*, bird cherry; *P. spinosa*, blackthorn (these are anatomically very similar)

Lower Eweleaze

Late Bronze Age posthole 1105, included many large fragments of charred oak (Quercus) sapwood and heartwood. Some heartwood was relatively slow-grown (e.g. 17 growth rings in 15 mm). Allowing for likely sapwood growth, the pole/trunk from which this material originated was probably at least 30 years old and may have been considerably more.

The origin of the relatively mature oak timber present in this feature could have been the charred remains of the post. Its age, although estimated, suggested that the timber was cut from a relatively substantial pole/ trunk. The absence of other woody taxa in this relatively large charcoal sample would support the suggestion that the oak timber was structural in origin.

North of Tolpuddle Ball

The charcoal from two adjacent Late Bronze Age pits (2006 and 2011) contained a similar range of taxa – hazel (*Corylus*), ash (*Fraxinus*), hawthorn type (Pomoideae), blackthorn/cherry (*Prunus*), and oak (*Quercus*). A poorly-preserved piece of roundwood (diameter 4 mm) was probably hazel but alder (*Alnus*) could not be ruled out. Much of the oak was narrow roundwood, some measured as little as 4 mm in diameter.

Table 49: Charcoal. Summary of all sites

Phase	*Feature*	*Context*	*Sample*	*Alnus*	*Cornus*	*Corylus*	Ericaceae	*Frangula*	*Fraxinus*	*Hedera*	Pomoideae	*Prunus*	*Quercus*	*Sambucus*	*Ulex/Cytisus*
Lower Eweleaze															
2	Posthole 1105	1104	1001	–	–	–	–	–	–	–	–	–	67sh	–	–
N. of Tolpuddle Ball															
2	Pit 2006	2007	10032	–	–	2	–	–	2	–	2	3	12rs	–	–
2	Pit 2011	2012	10033	?1	–	?1	–	–	–	–	1	1	6rs	–	–
Tolpuddle Ball Cemetery (W2405.17)															
1	Posthole 5146	5147	10705	–	–	–	–	–	1	–	2r	–	1r	–	–
Tolpuddle Ball (W2402.13)															
1	Ditch 2394	2395	10068	–	–	–	–	–	–	–	2	–	1	–	–
Tolpuddle Ball (TP93)															
1	Pit 184	960	59	–	1	7	–	?1	–	1	38	12	51sh	–	–
1	Pit 841	848	33	–	–	3	–	–	1	–	–	2	63	–	–
3	Posthole 258	894	50	–	–	2	–	–	–	–	–	–	56sh	–	–
4	Pit 9	1350	92	–	–	1	–	–	1	–	?1	?1	7s	–	1
4	Pits 120/122	1245	71	–	–	3	5	–	–	–	–	–	6rh	–	21r
4	Pit 231	1370	119	–	–	2	–	–	6	–	3	–	4	2	–
3/4	Pit 1019	1399	131	–	–	1	2	–	–	–	1	1	9rh	–	3r
5	Grain drier 1100	1526	158	–	–	–	?1r	–	–	–	6r	–	–	–	–
West Mead															
6	Midden 3100	3005	10090	–	–	2	–	–	–	–	–	?1	8r	–	–
6	Midden 3100	3006	10093	–	1	6r	–	–	–	–	1	3	15rs	2r	6r

r = roundwood (diam. <20 mm); s = sapwood; h = heartwood

Tolpuddle Ball

The post-excavation assessment demonstrated that few features in the area around the Early/Middle Bronze Age enclosure 2360 (W2402.13) contained charred plant material and when present samples were small (Wessex Archaeology 1997a). A single sample from the enclosure ditch was therefore examined. By contrast, features associated with the main Middle/Late Iron Age enclosure (TP93), frequently included charcoal, suggesting that most activities involving the use of fire (including the disposal of fuel debris) were carried out within the confines of the enclosure boundary.

Environmental samples containing charcoal, seeds and/or cereal were selected from nine features representing periods from the Early Bronze Age to the Roman period. A further sample was examined from Neolithic posthole 5146 which was uncovered during the excavation of the Tolpuddle Ball cemetery site.

Phase1. Neolithic–Early / Middle Bronze Age

The darkened soil in Neolithic pit 841 may have been caused by burning although the evidence was inconclusive. Pieces of bone, pottery, grain and charcoal were present (context 848). The charcoal was rather fragmented but included oak (*Quercus*) sapwood, hazel (*Corylus*), *Prunus*, ash (*Fraxinus*), and hawthorn type (Pomoideae).

The charcoal from posthole 5146 included two roundwood sections of the hawthorn group (Pomoideae) and one from oak (*Quercus*). The diameters of the hawthorn measured 15 mm and 25 mm with three and six growth rings respectively, that of the oak measured 15 mm with nine growth rings. A single fragment of ash (*Fraxinus*) was also present. None of the charcoal from the posthole appeared to be heartwood. No charred seeds were present in the sample.

Oak (*Quercus*) and hawthorn type (Pomoideae) charcoal were identified from a fill of the Early/Middle Bronze Age enclosure ditch (context 2395). Most material in this sample was, however, too fragmented for identification. Pit 184 contained a large volume of charcoal in its base (context 960). Some fragments measured up to 10 mm in radial cross-section. A 50% sub-sample of the charcoal was examined and identified as mainly oak (*Quercus,* sapwood and heartwood) and hawthorn type (Pomoideae). Small amounts of *Prunus*, hazel (*Corylus*), dogwood (*Cornus*), ivy (*Hedera*), and possibly alder buckthorn (*Frangula alnus*) were also identified. It seems unlikely, in view of the number of woody taxa and cereal grains present, that the charcoal originated from the remains of a post.

Phases 3–5. Middle / Late Iron Age–Romano-British

The fill of Phase 3 posthole 258 contained a charcoal lens (context 894) indicative of the remains of a fire. The charcoal was abundant with pieces measuring up to 10 mm in radial cross-section, and was identified as predominantly oak (*Quercus*) sapwood and heartwood, with some hazel (*Corylus*).

Charcoal from four Phase 4 pits was examined. Pit 9 (context 1350) included oak (*Quercus*) sapwood, hazel (*Corylus*), ash (*Fraxinus*), gorse/ broom (*Ulex / Cytisus*), and some rather twiggy pieces of oak and Pomoideae or Prunus. Pit 231 contained large quantities of household debris, charcoal and grain. A charcoal-rich layer (1370) occurred in the lower half of the pit and included oak (*Quercus*), ash (*Fraxinus*), hazel (*Corylus*), *Prunus*, and elder (*Sambucus*).

The fills of two intercutting pits 120/122 included burnt material. The charcoal was very friable and often too degraded to identify. Much of it consisted of narrow roundwood (diameter up to 8 mm) from oak (*Quercus*), gorse/broom (*Ulex / Cytisus*), hazel (*Corylus*), and heather (Ericaceae). Oak heartwood was also recorded. Similarities were noted between this sample and the material from pit 1019, particularly the high proportion of juvenile wood, the species identified, and the poor condition of the material.

Charcoal from the base of Pit 1019 (Phase 3/4, context 1399) was poorly preserved and mainly composed of narrow roundwood (up to 10 mm in diameter). It included oak (*Quercus,* also heartwood), gorse/broom (*Ulex / Cytisus*), hazel (*Corylus*), hawthorn type (Pomoideae), *Prunus*, and heather (Ericaceae). Charcoal associated with Phase 5 grain drier 1100 was sparse and consisted of narrow roundwood (diameter up to 5 mm) from member/s of the Pomoideae and possibly heather (Ericaceae).

West Mead, near Bere Regis

Two samples from the medieval colluvial build-up were analysed. Charcoal was abundant in the basal layer (3006) but much sparser in the overlying levels (layer 3005). Most of the charcoal appeared to be from fairly narrow roundwood or twiggy material, particularly that from the lower deposit which included dogwood (*Cornus*), hazel (*Corylus*), hawthorn type (Pomoideae), blackthorn/cherry (*Prunus*), oak (*Quercus*), elder (*Sambucus*), and gorse and/ or broom (*Ulex / Cytisus*). Oak, hazel, gorse/ broom, and possibly Pomoideae were identified from the upper layer.

Discussion

Charcoal was identified from samples ranging in date from the Neolithic to medieval periods. Although some sites only provided one or two samples the combined data provide an overview. Most of the features from which charcoal was identified included household refuse and fuel debris and in most instances the rubbish had probably been dumped or had gradually accumulated in hollows or ditches.

The charcoal from a Neolithic posthole on the Tolpuddle Ball Cemetery site indicates the use of narrow roundwood from juvenile oak and probably either hawthorn (*Crataegus*) or a species of *Sorbus* (service tree, whitebeam or rowan). Ash is also represented in the posthole. The fuel used in Neolithic pit feature 841 at Tolpuddle Ball included oak, ash, hazel and *Prunus*. The fuel used in the Late Bronze Age ?fire-pits at North of Tolpuddle Ball appears to have consisted mostly of roundwood from various taxa including hazel (*Corylus*), ash (*Fraxinus*), member(s) of the Pomoideae (e.g. hawthorn/ whitebeam), blackthorn/ cherry (*Prunus*), and oak (*Quercus*). Two Late Iron Age features from Tolpuddle Ball site (pits 120/122) and the Romano-British grain drier (1100) produced interesting

species. The site lies at the juxtaposition between chalkland and sandy heathland. The combination of heathland species in the pits – heather (Ericaceae), gorse/broom (*Ulex/Cytisus*), hazel (*Corylus*) and oak (*Quercus*) – reflects the use of fuel from local sources. Charcoal from the grain drier was sparse but included heather and stems or narrow branches from hawthorn or related genera. Charcoal from samples associated with the 13th-century midden at West Mead was mainly composed of narrow stems and twiggy material from oak (*Quercus*), hazel (*Corylus*), gorse/broom (*Ulex/Cytisus*), hawthorn etc. (Pomoideae), elder (*Sambucus*), dogwood (*Cornus*), and blackthorn/cherry (*Prunus*). The charcoal was associated with other burnt refuse (flints and pot sherds) and therefore seems likely to have been fuel debris.

Local resources and their utilisation

Most of the taxa identified, including oak (*Quercus*), hazel (*Corylus*), blackthorn/cherry (*Prunus*), hawthorn/whitebeam (Pomoideae), ash (*Fraxinus*) and elder (*Sambucus*) tolerate both alkaline and acid soils and, indeed, were identified from sites in both the western chalkland zone (Lower Eweleaze and those near Tolpuddle Ball) and at West Mead which is characterised by argillic brown earth soils and is closer to the heathland zone. Some taxa have specific soil preferences, for example, dogwood (*Cornus*) is more frequent on chalk, whereas gorse (*Ulex*) and broom (*Cytisus*) tend towards poor, acidic soils. All, however, can survive fairly successfully where soil pH levels are not too far from neutral; unlike most heathers (Ericaceae) which are specific to acid soils (Clapham *et al.* 1989).

Despite the general proximity of the River Piddle and in particular the closeness of the West Mead site to Milborne Water, there was only slight evidence from the fuel debris for the use of wetland species, in the form of alder buckthorn (*Frangula alnus*) at Tolpuddle Ball. Willow (*Salix*) and alder (*Alnus*), both of which would almost certainly have been growing fairly locally during the occupation of the sites, does not appear to have been utilised.

Although a high proportion of the fuel debris was stem material there was no evidence to suggest that it derived from coppiced wood. Comparison of the woodland taxa identified from the prehistoric and medieval periods suggested that oak and hazel woodlands remained dominant locally, although the distribution of other species probably varied according to soil type.

In conclusion, the analysis of charcoal deposits mainly from fuel debris identified the use of a range of trees and shrubs which, in almost every instance, included oak (*Quercus*). Some local differences, for example the presence of heather (Ericaceae) and gorse/broom (*Ulex/Cytisus*) at Tolpuddle Ball and West Mead, testify to the use of locally gathered fuel from the heathland, whereas further west on the chalkland sites such species were absent. Oak frequently included sap- and heartwood, and sometimes roundwood. For other taxa narrow diameter stem and twiggy material was common but there was no evidence of coppiced stems. The woodland element was probably dominated by oak and hazel (*Corylus*) and appears to have remained fairly constant from the Bronze Age to the Romano-British period. Evidence from the medieval period suggested a similar landscape.

Section 5. Discussion

Carrie M. Hearne with contributions from Lorraine Mepham, Vaughan Birbeck, Michael J. Allen, Sheila Hamilton-Dyer and Jacqueline I. McKinley

The Neolithic and Bronze Age Landscape

Setting the Scene: the Development of the Post-glacial Landscape

A very significant but fortuitous discovery on the project was a rare Lateglacial buried soil sandwiched between Lateglacial cold stage chalk meltwater deposits. Molluscan analysis has demonstrated a typical Allerød phase sequence (*c.* 11,000 BC). The significance of this deposit derives from its rarity on the chalklands; very few are known in southern England and those recorded are largely restricted to Kent, with single occurrences recorded in Buckinghamshire, West Sussex and the Isle of Wight (Allen, Section 4). The sequence at Burleston Down therefore represents the first soil of this phase to be recorded and analysed from the mainland of south-western England. The data from the sequence confirm a warmer phase at the end of the Lateglacial with a typical cold stage molluscan fauna and conditions which allowed the establishment of woodland.

This warmer episode enabled the formation of a deep humic soil, itself indicative of stabilisation and vegetation regeneration, which was sealed by deposits formed during the recurrence of cold permafrost conditions. The evidence therefore indicates the presence of both fauna (snails), and more importantly, flora in the area which were able to colonise the Cretaceous Chalk landscape given suitable climatic conditions. These conditions provided the basis for the environment which became established in the immediate early Post-glacial period in which Mesolithic communities may have lived. Analysis of pollen in peat deposits at Rimsmoor, which lies 4 km south-west of Bere Regis on the edge of the zone of Tertiary sands and gravels, indicates the presence of closed oak, elm and lime forest prior to the Neolithic (Waton and Barber 1987). Within the Tolpuddle/Puddletown landscape the project has provided no hint of evidence for possible Mesolithic vegetation clearance such as that tentatively suggested in the Dorchester environs (Allen 1997b, 278). Among an assemblage of over 6000 worked pieces of flint from the A35 project, only one piece is of Mesolithic character: a blade segment of a bifacial axe recovered from Lower Eweleaze. It can reasonably be assumed, therefore, that Mesolithic activity was focused in the main river valleys of the Piddle and Frome. Local evidence for such activity is provided, for example, by an Early Mesolithic flint assemblage from Briantspuddle (Gardiner 1988, 1095, site D259). The proto-woodland vegetation which developed into a full mixed oak deciduous woodland covered much of the landscape in southern England and was progressively cleared, initially in localised patches, from the Early Neolithic onwards (*c.* 4000 BC). Locally this sequence is illustrated at Rimsmoor where there is evidence for a sharp decline in woodland, particularly elm and lime, and a corresponding increase in grass and herbs associated also with the presence of cereals. The mollusc assemblages from the project indicate that open countryside and grasslands were prevalent in the area by at least the Bronze Age, and probably earlier.

The Neolithic and Early / Middle Bronze Age (c. 3000–1000 BC)

The evidence for Neolithic and Bronze Age activity from the project is disparate, but together provides important new information for this part of Dorset. Until now the local archaeological evidence for these periods has largely consisted of the numerous barrows on high ground to the north and south, overlooking the Piddle Valley (see Fig. 2). The project has demonstrated that the Tolpuddle and Puddletown landscape was occupied to an increasing extent from the later Neolithic period and throughout the Bronze Age, between about 3000 and 1000 BC.

With one notable exception – an Early/Middle Bronze Age settlement enclosure at Tolpuddle Ball, described below – features of Neolithic and Bronze Age date were small in number and often poorly preserved. It could be suggested that the evidence indicates localised and infrequent activity during these periods. If, however, the evidence of excavated features is considered in conjunction with that of the worked flint assemblage, the overall impression is of wider activity, even if it often cannot be differentiated into specific periods within the Neolithic and Bronze Age. The total amount of worked flint recovered (over 6000 pieces) is not insignificant, particularly considering that it does not include groups from fieldwalking. The largest collections from the two main pre-Iron Age sites at Tolpuddle Ball and Burleston Down account for 52% and 21% of the total assemblage respectively. The remaining 27% comprises groups of varying size (12–300 pieces) from all other sites (see Table 25); that is, every excavation produced prehistoric worked flint. This would appear to support the evidence from other areas in the region that fairly large-scale woodland clearance of the chalklands occurred in the later Neolithic and that by the earlier Bronze Age open downland conditions existed, as persist today (see Plate 1).

The Neolithic period is represented by a small number of features at Tolpuddle Ball and by coherent groups of worked flint at Home Farm, Burleston Down



Plate 55 Tolpuddle Ball: view of the 1996/7 excavations looking west to the Ball and Tolpuddle Common (BBTA January 1997)

and Lower Eweleaze. Early/Middle Bronze Age evidence is more substantive, comprising settlement remains at Tolpuddle Ball and features and/or artefacts at Burleston Down and South of Tolpuddle Ball. There is evidence for Late Bronze Age activity at six different sites: Tolpuddle Ball, North of Tolpuddle Ball, South of Tolpuddle Ball, Burleston Down, Home Farm and Lower Eweleaze.

Features dated to the Neolithic are confined to Tolpuddle Ball and consist of a pit uncovered in the 1993 excavation, a quarry pit complex recorded in 1996/7, and a posthole recorded in 1998 within the area of the cemetery site. The pit (841), although small in size, produced over 300 pieces of worked flint in mint condition including chips from knapping and an unfinished bifacial knife. The technology of the material indicates a Late Neolithic date. A similar quantity of diagnostically Neolithic flintwork was associated with the quarry pit complex 2473 which lies some 30 m north-west of pit 841 (see Fig. 9). The group from 2473 was more varied in condition than that from pit 841 and included a transverse arrowhead, a piercer, four scrapers and a core reused as a hammerstone. It also included knapping waste. The quarry pit was evidently backfilled rapidly and no finds were recovered from the primary or lower chalk rubble fills. Most of the flint assemblage was recovered from upper fills in deposits overlying the quarry which presumably collected as the chalk rubble subsided.

Overall, the date of quarry pit group 2473 is open to interpretation. The mollusc evidence indicates that the quarry pit was excavated in an environment whose character (including recently-cleared woodland) is more indicative of the earlier prehistoric period (i.e. Later Neolithic or Early Bronze Age) than the Iron Age or later. A similar finds assemblage was found overlying a group of small pits immediately to the north of the quarry pit complex (2897). Posthole 5146 (within the Late Roman/post-Roman cemetery) is dated by a Neolithic flint axe roughout placed in the base of the feature (Fig. 55). The axe appears to have been broken at the time of its manufacture and may have been a post-pad or a deliberate deposit prior to setting the timber.

An enigmatic group of Neolithic flint was recovered from a pit (1207) at Home Farm, Puddletown. This small collection of unpatinated flints (40 pieces) included small fragile pieces with fresh edges, blades, a scraper, cores and two axe resharpening flakes. The worked flint was

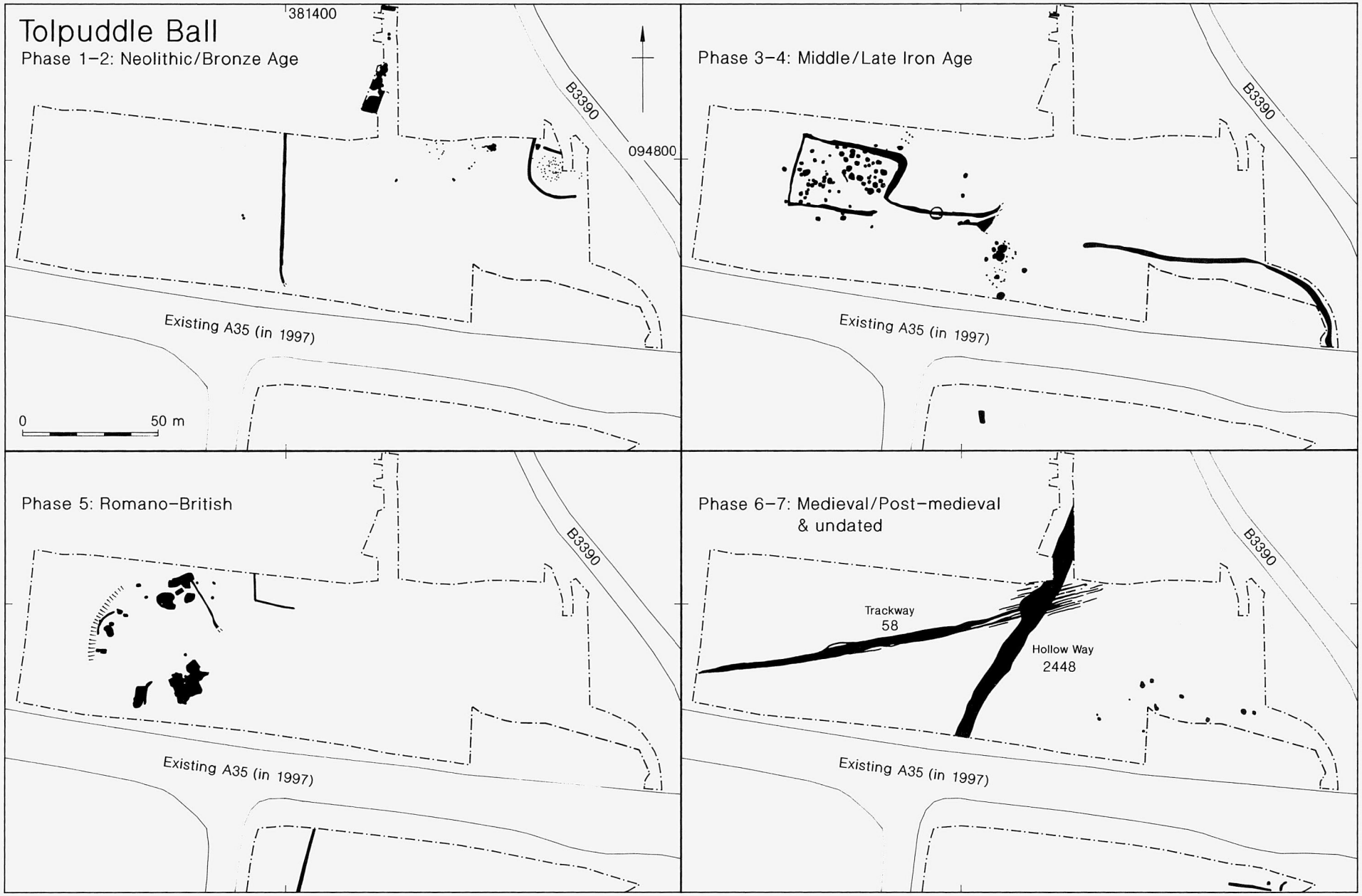


Figure 64 Tolpuddle Ball: summary phase plans

associated with pottery of recognisably Late Bronze Age form, comprising base and body sherds (47 sherds), probably from a single vessel. Worked flint of a Late Neolithic character was also found at Lower Eweleaze and among the large collection from Burleston Down; both these groups are likely to be residual.

The only sherds of Early Bronze Age Beaker from the project were recovered from two adjacent pits at Tolpuddle Ball (184 and 945). A large number of hazelnut fragments was recovered from soil samples taken from one of these pits (see below). More substantive was the evidence for an Early/Middle Bronze Age settlement enclosure (2360, Phase 1 – see Fig. 10) approximately 100 m east of the pits (Fig. 64). The enclosure is the earliest certain evidence for structural remains from the project and appears to represent a small settlement.

There was evidence for at least two buildings inside the enclosure and although the lack of stratigraphy and diagnostic finds means they cannot be closely dated, they do at least indicate that the enclosure was maintained and the building replaced at least once (and probably more than this). The enclosure appeared to be divided by an internal ditch which may have separated the main building from a paddock.

Artefactual evidence directly associated with this settlement was extremely sparse and consisted only of a small assemblage of pottery and animal bone. No other domestic artefacts were recovered although a socketed spear fragment (Fig. 42, 1), recovered from the site during metal-detecting in 1993, also dates to the Middle Bronze Age.

The enclosure and roundhouses at Tolpuddle Ball have various contemporaneous parallels in the region. At Down Farm (Cranborne Chase) roundhouses of similar size and construction were recorded. There the enclosure also had a short ditch or channel within it, although it did not appear to divide the enclosure as recorded at Tolpuddle Ball (Barrett *et al.* 1991, 184–98). Other local parallels include the Middle Bronze Age roundhouse at Rowden on the South Dorset Ridgeway (Woodward 1991, Site A), the Early/Middle Bronze Age settlement at Poundbury, Dorchester (Green 1987, Phase 1B–D), and the Middle Bronze Age enclosure at Middle Farm on the Dorchester by-pass (Smith *et al.* 1997, 73–84).

Two linear features at Tolpuddle Ball (TP93: 192 and W2402.13: 2480) were contemporaneous with the enclosure, lying about 100 m west and north-west of it respectively. These appear to be field ditches associated with the settlement and may even have been part of a single larger enclosure around the main domestic area. Two Middle Bronze Age ditches about 200 m west of the settlement enclosure, discovered within the area of the Late Roman/post-Roman cemetery (W2405.17, 5302 and 5303) point to fairly extensive activity during this period.

The ceramic evidence for Early and Middle Bronze age activity at Tolpuddle Ball is not large but it may be noted that the pottery types recovered (Early Bronze Age Beakers and Middle Bronze Age urns) are commonly associated elsewhere with funerary contexts. The range of evidence within the excavated area, however, supports a purely domestic interpretation for the settlement during this period. The site lies only 600 m east of the barrows on the Ball itself (Plate 55) and it is possible that these burial and settlement elements are directly linked and represent the remains of the same Bronze Age landscape.

Elsewhere on the bypass Early/Middle Bronze Age settlement activity is distinctly lacking. A pit (4002) approximately 400 m south-west of the Tolpuddle Ball settlement (see Fig. 7) is unlikely to be an isolated feature and may indicate another area of settlement on the lower slopes of the Piddle valley. This feature lay within a landscaping area for the bypass and further subsoil features, if they exist, remain preserved *in situ*. Elsewhere only Burleston Down produced convincing evidence for earlier Bronze Age activity in the form of a large flint assemblage. In all probability, however, settlement at Burleston was focused beyond the bypass corridor, on the plateau to the north-east overlooking the dry valley. The flint assemblage included both chalk and bullhead flint, the latter obtainable from the flint gravels associated with the local river valleys, as well as occasional pieces of non-local chert from Portland or from the Upper Greensand deposits.

Late Bronze Age Activity (c. 1100–700 BC)

There is an interesting contrast between the archaeological evidence for the Early/Middle and the Late Bronze Age from the project. The latter is of a far more ephemeral nature but at the same time it is more frequently represented. This may indicate more dispersed activity across the chalk downlands around Tolpuddle and Puddletown in the Late Bronze Age than in the Early/Middle Bronze Age. Six sites produced Late Bronze Age remains (see Table 3, Phase 2). Although this list of sites included Tolpuddle Ball the evidence there was not markedly different to other sites indicating that the established Early/Middle Bronze Age settlement was abandoned or relocated slightly, possibly outside the area affected by the construction of the bypass.

Late Bronze Age features largely took the form of small groups of shallow pits at Tolpuddle Ball, North of Tolpuddle Ball and Home Farm. Pits associated with ditches (all poorly-preserved) were recorded at Burleston Down and Lower Eweleaze. Shallow ditches, probably field boundaries, were recorded in the watching brief South of Tolpuddle Ball. The only site with a suggestion of actual structures was Lower Eweleaze: a posthole contained unmixed charcoal deriving from a mature oak pole or trunk and groups of postholes, some with angled posts, may represent small temporary structures such as tents. Elsewhere domestic activity is indicated by the ceramic evidence and associated environmental assemblages, but no actual evidence for structures exists, no doubt largely reflecting a general lack of preservation.

The North of Tolpuddle Ball site produced the largest collection of Late Bronze Age pottery (141 sherds, being one third of the total assemblage of this period). Soil samples from the two pits at this site produced a mixed charcoal assemblage. Most were from roundwood which is unlikely to have been structural and no doubt

represents fuel debris. The large quantities of burnt flint in the pits also suggests that they were the remnants of fire or cooking pits. Whether these pits were directly associated with the barrows on the top of Tolpuddle Ball cannot be determined. As noted above, no overall settlement focus is apparent for the Late Bronze Age and in general the activity seems fairly dispersed. The Late Bronze Age features and finds at Home Farm and Lower Eweleaze lie only 500 m apart and may have been directly associated with each other.

The Local Landscape and Farming Economy

Although the environmental evidence for the Neolithic and Bronze Age is limited, it does provide a general picture of the local landscape and the resources which were available in these periods, particularly with respect to the nature of the local woodlands. A similar range of woodland and shrubs is evident for the Neolithic and Bronze Age. Oak and hazel dominate in both periods and the presence of large number of hazelnut shells testifies to their importance not only as a food resource but also as a fuel source in the timber itself. The main woodland species are supplemented by ash, alder, hawthorn/blackthorn group and dogwood. Mollusc data also indicate that the Early/Middle Bronze Age enclosure at Tolpuddle Ball was located in open downland (as today, see Plate 55) surrounded by trampled grassland.

There is evidence for arable agriculture in both the Early/Middle and Late Bronze Age in the form of emmer wheat and hulled barley. Wheat appears to be the more important crop in the Late Bronze Age when both emmer and spelt wheats are present, along with evidence for a range of weed seeds such as goosefoot, trefoil and clover and cleavers. Pastoral agriculture is indicated by the small assemblage of animal bone. Again, a similar range is represented in both periods, namely horse, cattle, sheep and pig. As is common for the Bronze Age, cattle appear to be the most important species. Deer are also recorded for the Late Bronze Age period. The presence of dog during the Early/Middle Bronze Age is attested (indirectly) by gnawed bones. Whether these animals were exclusively sheep dogs, guard dogs or pets cannot be known, but in all probability they had a mixture of roles as also appears to be the case during the Iron Age (see below).

The Iron Age and Romano-British Settlements

Settlement Location and Chronology

Evidence for earlier Iron Age activity from the project is notably absent and only occurs in the form of a small residual group of pottery from Tolpuddle Ball (16 sherds). This apparent absence of settlement evidence may be linked to a general movement into hillforts during this period (Sharples 1991, 257–60). If this was the case, Weatherby Castle which lies only 1 km to the north of the Tolpuddle Ball site (see Fig. 65) is likely to have provided the contemporaneous settlement focus. Weatherby Castle presumably continued to play a major role in the later Iron Age landscape but since the hillfort has not been excavated (RCHME 1970a, 179–80) its chronological and economic relationship with the nearby settlement at Tolpuddle Ball remains unknown. What *is* clear is that Tolpuddle Ball was a major settlement throughout the later Iron Age and Romano-British periods.

Elsewhere on the project the only feature identified as of likely late prehistoric or Roman date is a single ditch (1324/1330), probably a field boundary, in the base of the dry valley at Burleston Down. Moreover, the combined total of later Iron Age and Roman pottery from *all* sites other than Tolpuddle Ball is a meagre 43 sherds. Over half this group (23 sherds) consists of stray, usually unstratified, material collected from most of the excavated sites (see Table 10). This certainly does not constitute enough evidence to suggest nearby settlement or agriculture on any scale.

The most coherent collection of pottery recovered away from Tolpuddle Ball was that from the Hill Barn evaluation (ten sherds). This group, although very small, is of some interest since it points to the existence of a Late Iron Age/Romano-British site on the slopes overlooking the village of Tolpuddle and only 2 km west of the archaeological site at Tolpuddle Ball. Further indications for Romano-British settlement in the local area are provided by the discovery of 3rd/4th century AD Roman finds at Basan Hill, approximately 1 km north-east of Puddletown on a hilltop overlooking the Devil's Brook (see Fig. 2) (Ensom 1988). Ashley Barn is also likely to mark a Roman site. It lies between the Tolpuddle Ball settlement and Weatherby Castle where the Roman Road crosses Milborne Water (Fig. 65). These glimpses suggest the presence in the Tolpuddle/Puddletown area of other later Iron Age and Roman sites, probably of a similar nature to that at Tolpuddle Ball.

The ceramic evidence suggests that the settlement at Tolpuddle Ball was established in the 3rd century BC (Fig. 64, Phases 3 and 4) and was thereafter probably occupied continually through the Late Iron Age and the early and later Roman periods (Phase 5), at least into the 4th century AD. Continuity is a theme which runs through various aspects of the Iron Age and Roman settlement.

The Local Landscape and Use of Natural Resources

The re-use of the Tolpuddle Ball site for settlement purposes from its Early/Middle Bronze Age (and possibly earlier) origins reflects its favourable position. It lies on gently sloping, south-east facing ground overlooking both Milborne Water (a tributary of the Bere Stream) and the Piddle Valley which lie 400 m north-east and 1 km south of the site respectively. The site was on light, calcareous soils. It also afforded easy access to other landscape zones, notably the heathland block to the south and south-east (Plate 56).

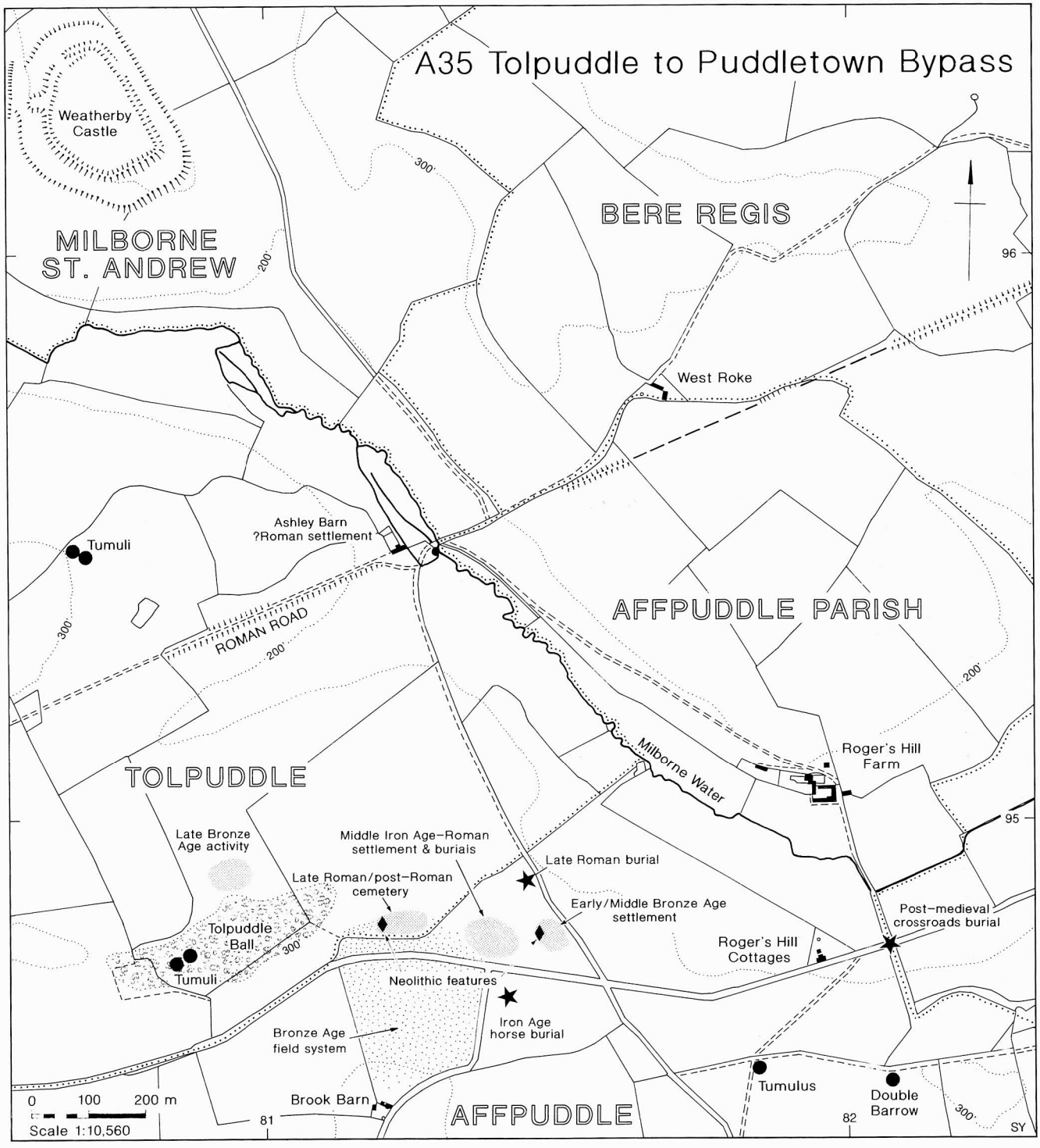


Figure 65 The archaeology of the Tolpuddle Ball area based on the Ordnance Survey map of 1902 (6 in to 1 mile, 2nd edn)

There is evidence from the charcoal for the existence of mixed woodland and shrubs within easy reach of the site during the Iron Age and Roman periods. The presence of deer also suggests nearby woodland cover. Oak (*Quercus*), hazel (*Corylus*), blackthorn/cherry (*Prunus*), hawthorn/whitebeam (Pomoideae), ash (*Fraxinus*) and elder (*Sambucus*) all appear to have been utilised on the settlement. Oak frequently included sap- and heartwood, and sometimes roundwood. For other taxa there was no evidence of coppiced stems. As in the Bronze Age, the local woodland appears to have been dominated by oak and hazel at this time. There was no evidence for the use of wetland species although it is likely that both willow (*Salix*) and alder (*Alnus*) would have been growing fairly locally in the Piddle Valley. The presence of heather (Ericaceae) and gorse/broom (*Ulex/Cytisus*) on the site also demonstrate that the local heathland landscape was being utilised. These plants were probably brought into the settlement primarily for fuel and possibly also for fodder; heather may

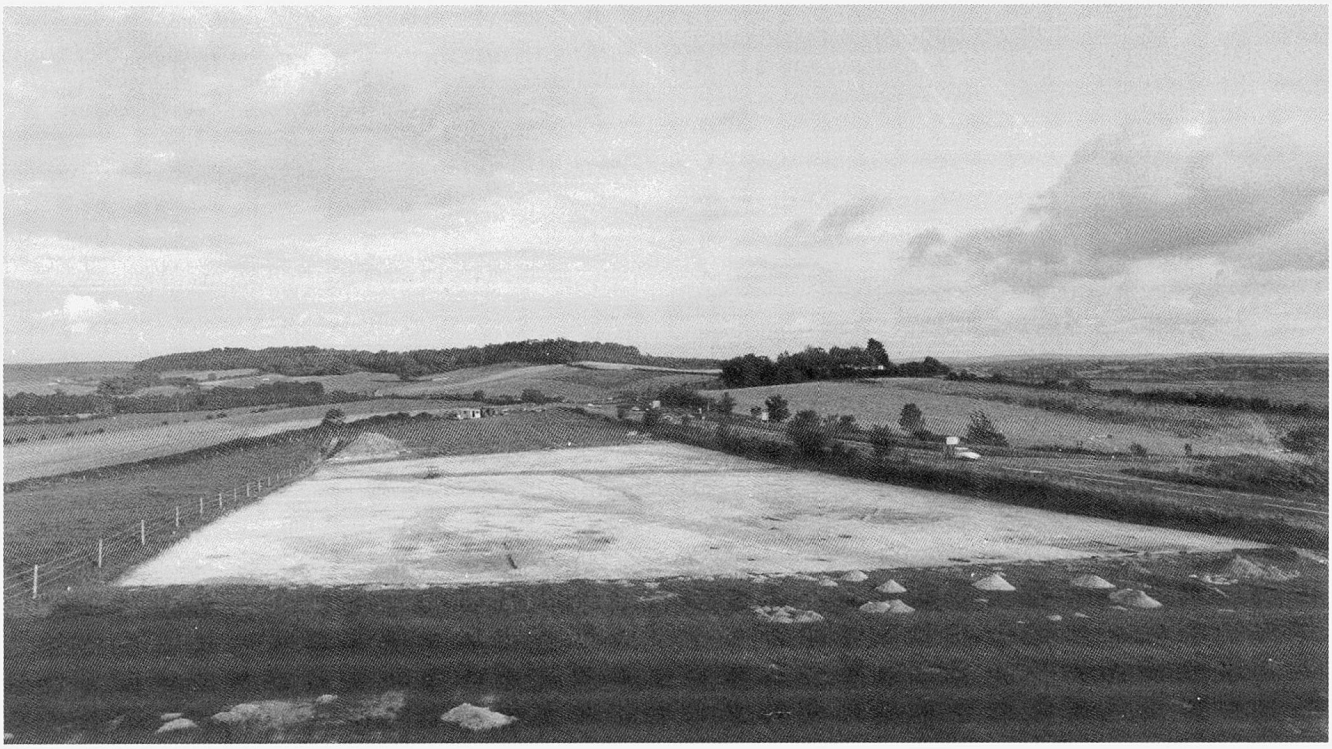


Plate 56 Tolpuddle Ball: a view of the 1993 excavations looking south-east to Piddle Wood and the Piddle Valley (right-hand side)

also have been used for bedding. The mollusc assemblage indicates the existence of well-established, grazed or trampled dry grassland.

The Settlements and Structural Evidence

The Middle/Late Iron Age settlement (Phases 3 and 4) was focused on a rectilinear enclosure approximately 40 m long and 30 m wide. This enclosure was aligned east–west and incorporated a single entrance-way in its south-east corner. It was associated (at least during Phase 3) with an east–west aligned 'antenna' ditch leading out from the entrance (see Fig. 64). No definite building remains of these periods were recognised within the enclosure during the 1993 excavations. It is possible that ploughing has removed all traces of Middle/Late Iron Age timber buildings within the enclosure.

Roundhouse 883 (Phase 4) was constructed 20 m east of main enclosure and over the antenna ditch which had partially or wholly silted up. It is notable that the entrance to the roundhouse faced directly towards that of the enclosure. This relative positioning appears to have been of some importance to those who built the roundhouse since it involved the excavation of the fills of the antenna ditch and their replacement with compacted chalk rubble (see Plate 8). If the building had been positioned slightly further north or south (i.e. off the line of the antenna ditch) this additional effort would have been unnecessary. It is uncertain whether the enclosure ditches had completely silted-up by the time of the construction of roundhouse 883. The fact that the position of the enclosure entrance was still of significance suggests that even if the ditches were no longer maintained, they were marked in some way. Respecting of backfilled or silted up enclosures has been noted on several similar sites of this date (e.g. Gussage All Saints and Winnall Down, see Hill 1995, 76–83). It may be noted that a number of the Phase 4 pits were cut into the upper fills of the enclosure ditches which must therefore have silted up by the end of this period. Overall it seems likely that the Phase 4 settlement was, like its predecessor, focused on the site of the rectilinear enclosure even if it was not physically confined to it. Further discussion on the alignment of the enclosure and its possible symbolic importance is provided below (*The People*).

Some of the Phase 4 features – for example the possible occupation deposits within roundhouse 883 – contained 1st century AD finds. While these may represent intrusive finds, they could equally indicate that the Roman Conquest of AD 43 had little or no immediate impact on the settlement and its residents. Life appears to have continued much as before until the construction of recognisably 'Romanised' structures, such as building 702 (Phase 5, see below). This 'blurring' in the archaeological record of the Late Iron Age and very early Roman periods is a frequent characteristic on rural Durotrigian settlements.

Overall, the form of the Middle to Late Iron Age settlement appears to represent a small, 'Little Woodbury' type enclosed farmstead with associated features both within and outside the main enclosure. Dating evidence from the lower fills of the Phase 3 enclosure ditch indicates that the settlement was established at some time around the latter end of the Middle Iron Age, probably in the 3rd century BC. Similar enclosures are a common feature on sites of this date in Wessex and local examples have been found near

Dorchester, both at Poundbury (Green 1987, 37–40) and Flagstones (Smith *et al.* 1997, 42–4).

The Romano-British settlement at Tolpuddle Ball occupied the same area as the Iron Age settlement but may have been slightly more localised (see Fig. 64). The only demonstrable structure of Romano-British date excavated on the site (702) was a small rectangular terrace with unmortared wall footings, which presumably would have supported the superstructure, and postholes possibly representing a timber framework. Similar structures, represented by shallow terraces cut into a slope with low, unmortared walls were excavated at Fordington Bottom near Dorchester (Smith *et al.* 1997, 218–9) and at Poundbury (Green 1987, 52–4). Dating evidence suggests that structure 702 was probably built in the early 2nd century AD. The later fills of the terrace, from which pottery of 3rd- to 4th-century date was recovered, are likely to be associated with the abandonment or disuse of the structure. The large collection of animal bones recovered from the fills of the building mostly comprised sheep and may represent slaughter waste. It is not possible to determine whether this indicates that the structure was used as a slaughterhouse or if the terrace was simply used for waste disposal after it was abandoned.

The large occupation deposit 64 near structure 702 (see Fig. 23) which appears, on ceramic evidence, to be contemporary with the abandonment phase of the building, may represent the fill of a similar but much larger building terrace. Although many features were cut into the base of the possible terrace, the difficulties encountered in differentiating natural (chalk solution) features from archaeological features means that it was not possible to discern any coherent patterning of possible postholes or other structural elements. It is also possible that deposit 333 and terrace 2899, respectively to the north and west of structure 702, supported structures but this cannot be proven. Although the excavated evidence for a substantial Romanised building is somewhat elusive, the combined evidence of the finds suggests that buildings of this type were present on the site or existed nearby. Ceramic roof and floor tiles (the former including *tegula* and *imbrex*), flue tiles, Roman window glass, a tessera and a stone architectural fragment point to the existence of major stone building(s), including one with underfloor heating.

The Farming Economy

Both the Iron Age and Romano-British settlements appear to be typical rural domestic farms encompassing both arable and pastoral agriculture. Unsurprisingly, a larger array of crops is associated with the Iron Age and Roman settlement than with the Bronze Age one. Hulled barley, including six-row variety, was evidently a major component of the cultivated cereals. Emmer and spelt wheats are also common. There is some evidence for free-threshing bread wheat, albeit in small quantities (Phases 3 and 3/4). There is limited evidence in the Late Iron Age for oats (either cultivated or wild) and opium poppy seeds (distinguishable from field poppies). Opium poppy has long been cultivated in continental Europe and has been recorded on other British Iron Age sites. The local calcareous soils provided the basis of the arable economy and, unsurprisingly, there is no evidence among the Iron Age and Roman deposits for the cultivation of acid soils. As noted above, there is evidence, however, that the nearby heaths were exploited as a resource, presumably both for fuel and fodder.

There is a lack of direct evidence for processing of crops at Tolpuddle Ball although the grain drier and quernstones provide indirect evidence. Although chaff is present, and it is clear that all the grain was not cleaned, the evidence does not indicate that large-scale processing, sieving or cleaning of cereals was carried out on the site (see Hillman 1984). Smaller scale processing for immediate use or consumption can be suggested. It appears that the main enclosure provided the focus for the majority of the domestic and processing activity, the preservation of charred plant remains from contexts outside the enclosure being noticeably sparse.

A large number (83) of Iron Age pits was excavated during the 1993 excavations and would normally be interpreted as grain storage pits. The majority lay within or around the area of the Phase 3 enclosure, with a second group located approximately 50 m east of the enclosure entrance. Very few pits lay beyond these two clusters. The pits within the enclosure appear to be located in two main areas, one in the north-east and one in the south-west. The north-eastern group contains a much higher proportion of bell pits than the south-western group (13 out of 32 in the north-eastern group, compared to 7 out of 31 in the south-western group). Even if some of the pits at Tolpuddle Ball had a special or symbolic function (see below), and despite the fact that some were apparently (re)used as rubbish pits, it seems reasonable to suggest that most were for storing grain, although none produced direct archaeological evidence in the form of burnt spent-grain. By the Roman period the presence of a grain drier indicates the necessity to dry grain for consumption or storage or perhaps to process barley for malting, although the latter is conjectural.

Animal husbandry and animals formed a significant part of the farming economy during both the Iron Age and Roman periods. Sheep and cattle formed the bulk of the faunal remains and there is a marked increase in the amount of sheep compared to the Early/Middle Bronze Age settlement. Sheep is the predominant species and seems to have been raised primarily for meat, and cattle as breeding stock rather than prime beef. Horse is less common and pig infrequent. Unsurprisingly there is little evidence of the use of wild resources, represented only by small occurrences of red deer and hare. Edible birds include goose, duck, and also fowl in later contexts (from the very Late Iron Age onwards). The other birds present – eagle, crow and gull – are scavengers and were probably not used for food, although the gull may have been.

Dogs were evidently commonly found on the Iron Age settlement at Tolpuddle Ball. There is evidence for their continued presence during the Roman period but apparently far less significant. The evidence for pups and adult dogs having a special meaning in ceremonies of the Iron Age community at Tolpuddle Ball is well attested (discussed below). No doubt these animals

performed other roles such as guard dogs, herding dogs and possibly pets but separation of these roles is impossible to gauge from the archaeological record.

Analysis of the Iron Age and Roman faunal assemblages indicates some real differences between them. Some of these are likely to be of cultural origin; for example, the placing of 'special' deposits ceases in the Roman period, and domestic fowl is introduced. Exploitation of sheep was probably less intensive during the Iron Age with loss or cull of animals under a year as well as utilisation of some prime animals and many older ones. In the Roman settlement sheep were being culled primarily for meat, but probably not until at least one shearing had taken place. This change of emphasis has also been recorded in Dorchester and may indicate a general cultural change in agricultural management.

There is no evidence for large-scale cattle-processing, which would indicate the production of meat for market, as is often recorded on urban sites. It may be concluded that any traded animals went to market on the hoof. As noted above, most of the cattle remains appear to be from breeding stock rather than prime beef cattle. This limited evidence for specialisation, which might be expected in larger farming units, has implications for a market and trading network and may be linked with known data about the supply of meat to Dorchester (discussed below). There are some indications of possible changes in the size and type of some the animals, particularly of sheep, but in general differences in pre- and post-Conquest stock are negligible and the animals at Tolpuddle Ball are typical of the small animals of the period. There is also evidence for the processing of animal by-products in the Roman settlement (discussed below). Overall, the nature and scale of the Romano-British farming economy at Tolpuddle Ball does not seem to differ significantly from that of the later Iron Age, with the exception of small-scale, semi-industrial rural processes such as grain drying and the preparation of leather.

Domestic Activities, Craft and Manufacture

A range of crafts and domestic 'industries' is represented on the Middle/Late Iron Age and Roman settlements. There is evidence for textile manufacture in the form of loomweights and spindle whorls, and lead-working in the form of pot mends. The occurrence of preparation and waste products from bone and antler working indicates that these materials were worked on site to produce functional items such as pins and needles, rather than (or as well as) finished products being brought on to the site. There is also evidence, albeit slight, for the working of Kimmeridge shale. This range of craft activities is typical for a small Iron Age and Roman rural farmstead which, although not wholly self-sufficient (see below), relied on the industry and skills of its own inhabitants for much of its domestic requirements. It might be expected, in the Iron Age at least, that small-scale iron-smithing was undertaken within the settlement although no direct evidence in the form of metal-working residues or slag was recovered. Overall there is no evidence that any of these activities were on anything other than a small scale, to serve the immediate needs of the community who lived and farmed there. This is in contrast to sites of the same period in parts of nearby Purbeck where the economy was of a specialised nature and not based on agriculture (see below).

Apart from the presence of quernstones, pestles and mortars, domestic food preparation is attested by the large dump of fired clay (interpreted as deriving from an oven structure) which was recovered from the north-eastern corner of the Phase 3 enclosure ditch. The amount of material is large (110 kg) and seems likely to represent the remnants of more than one oven, perhaps deposited in the same place over time.

Tolpuddle Ball has produced some interesting evidence for the processing of some of the by-products of animals which were being reared and slaughtered on the site. The production of hides and skins is attested indirectly by knife marks associated with skinning found on foot bones of horse, cattle, sheep and dog. A more unusual find is direct evidence for the preparation of leather in the Roman period, represented by concentrations of sheep metapodial bones in three pits (notably pit 5, see Plate 14). These bones are interpreted as waste products from the processing of sheepskins, the head having been removed and the lower leg bones and feet left in the skins to act as 'handles' and disposed of nearby when the process was complete. The grouping of the three pits which contained these sheep bones (5, 871 and 1013) around a small tank (2 m x 1.3 m) with a stone floor (see Plate 13) is notable and suggests that the tank was also used in the process of preparing the leather.

Direct evidence for the preparation of leather on Romano-British sites is rare. A likely tannery dated to the later 2nd century AD was excavated at Alcester in Warwickshire. The evidence there comprised a large timber building associated with a large waterlogged pit which contained leather offcuts and other organic residues (Mahany 1994, 29; Burnham and Wacher 1990, 95). Sheepskins are more likely to have been tawed than tanned. Tanning, usually associated with cattle hides, involved fairly complicated stages of processing to break down and remove the outer layer of skin (epidermis) leaving the crucial middle layer (corium) which then required softening before it could be subjected to the actual tanning process. Tawing was a much simpler process and could be applied to deer, horse and dog as well as sheepskins. Little is known of Roman methods for preparing sheepskins: during the medieval period, however, pre-cleaned skins were softened by being dipped in tanks of alum or placed in tanks and trampled in a paste of alum, egg-yolks, oil and flour. The skins were then oiled, stretched, flattened and hung to dry, and finally, if necessary, dyed (see Cherry 1991, 299).

The sheep bones in pits 5, 871 and 1013 represent those of at least 17 sheep. This might indicate the preparation of leather on a wider scale than necessary for the immediate needs of the inhabitants, such as for clothing and for use in buildings. If so, any surplus might have been a product for market. Otherwise the processing could have been purely on a domestic level linked to the breeding and slaughter of sheep on the settlement.

Non Local Resources: Trade and Exchange

From the Middle/Late Iron Age there is increasing evidence that the inhabitants at Tolpuddle Ball enjoyed wider contacts involving organised trade and exchange networks. It has been argued that the Middle to Late Iron Age well-sorted, flint-tempered ceramic fabrics (as occur at Tolpuddle Ball) may have had an origin outside Dorset, and were produced as part of a regional system of pottery production and exchange (Morris 1994, 28). However, there is no conclusive evidence in the form of obviously non-local fabric types to suggest anything other than fairly localised manufacture (within 10 km or so of the site) until the Romano-British period.

The local 'catchment' of Tolpuddle Ball includes the prime potting area of Wareham/Poole Harbour. The development of large-scale pottery production in this zone appears to date from the Middle Iron Age, linked to a sharp increase in the level of salt production in Purbeck (Cox and Hearne 1991, 228–30). Through the Middle/Late Iron Age the pottery industry became increasingly centralised and standardised, culminating in the *floruit* of the Durotrigian and subsequent Black Burnished Ware (BB1) industry of South Dorset. The predominance of the products of this industry within the assemblages of the Middle Iron Age to Late Romano-British period at Tolpuddle Ball is not therefore surprising, given both the site's proximity to Purbeck and the virtual monopoly that the industry had within Dorset and, increasingly, the surrounding regions. It should also be remembered that these vessels were containers. For the earlier period at least (Middle/Late Iron Age) they may not generally have been transported empty but containing local produce from Poole Harbour and north Purbeck such as salt or shellfish (Woodward 1987, 68; Cox and Hearne 1991, 230).

Exchange networks for manufactured goods and raw materials evidently did *not* include the redistribution of Iron Age imported wares, such as those recorded, for example, at Hengistbury Head. This phenomenon has also been demonstrated for sites in Purbeck and elsewhere in south Dorset, where imports are present only in very small quantities and at a limited number of sites (Fitzpatrick 1991). The absence of such wares at Tolpuddle Ball is therefore not surprising, and has an interesting parallel during the medieval period (see below).

It is not until the Romano-British period, and even then at a significant interval after the Conquest (perhaps a generation) that non-local pottery types appear at Tolpuddle Ball, from both Continental and British sources. Imported material is present in small quantities but includes Central Gaulish samian ware and Spanish olive oil amphora (Dressel 20). British pottery from non-local sources predominantly comprises products from the Late Roman New Forest and Oxfordshire kilns. These wider links are echoed in the sources of the stone objects (Isle of Wight and Bristol area) and the presence of other obviously non-local artefacts such as the coins and vessel glass.

The location of Tolpuddle Ball between a known Roman industrial and manufacturing zone (Purbeck) and the regional market centre of Dorchester is of interest in terms of trade and exchange networks. As discussed above, Purbeck provided the bulk of the pottery used on the later Iron Age and Roman settlement. Purbeck was also the source of the other main non-local raw materials and goods which occur at Tolpuddle Ball from the Middle/Late Iron Age, including shale from Kimmeridge on the South Purbeck coast and quernstones from the Upper Greensand deposits. It may also be assumed that salt was provided from the Poole Harbour area. Exactly how these goods were traded to Tolpuddle Ball during the later Iron Age is open to interpretation. Some may have come to the settlement direct but it is very likely that during the Romano-British period at least, the market of *Durnovaria* (Dorchester), 12 km to the west of Tolpuddle Ball, acted as a focus for the redistribution of goods to the smaller rural settlements (see Smith *et al.* 1997, 303). Tolpuddle Ball lies only 700 m south of the major Roman Road from Badbury Rings (*Vindocladia*) to Dorchester (Fig. 65). It has also been suggested that the mineral reserves of Purbeck were controlled by an Imperial Estate (Sunter 1987, 43).

The environmental evidence for trade and exchange is certainly less tangible than the artefactual evidence but it does indicate the exploitation of resources which were not available from the immediate locality and, therefore, involvement in exchange networks. Evidence for direct or indirect contact with the marine resources of the Dorset coast is provided by oyster shells which no doubt originated from Poole Harbour. The occurrence of the tooth of a blue shark from an Iron Age context (Phase 3/4) is less easy to interpret: it suggests contact with the south Dorset coast, but may have been simply a curio or token of some sort for its owner. The faunal evidence has provided interesting indications for the trading of animals, and possibly by-products from them, as discussed above.

To what extent the trade networks were developed in the Late Iron Age and Romano-British period is not clear, but Dorchester would have provided a ready market for any animal surplus from the settlement. An emphasis on sheep-rearing for meat after at least one shearing may suggest that the wool was for local use, but the meat may have been destined for both local consumption and market. Specialisation in cattle as breeding stock rather than prime beef also indicates a wider market-economy and there is some evidence that Dorchester was supplied with mature but not old animals (Maltby 1993, 335–6; Maltby 1994). Settlements like those at Tolpuddle Ball may conceivably have contributed to the Dorchester supply. The dichotomy of urban versus rural faunal assemblages in the Roman period strongly supports the view that Romanised settlements adopted Roman tastes and practices while native farming communities were less affected. The change in culling practices at Tolpuddle Ball may have been driven by an increased demand from the urban centres, but the majority of the pork supply for Dorchester was clearly not from Tolpuddle Ball, or any of the other hinterland sites.

The People

The excavations at Tolpuddle Ball have provided some limited glimpses into the lives and customs of the Iron Age and Romano-British inhabitants of the settlement. These glimpses are necessarily partial and undoubtedly unrepresentative of the settlement as a whole because they depend on those activities which have left durable artefacts or remains in the archaeological record, including the burial of some of the inhabitants themselves.

The remains of 26 individuals were recorded for the whole of the Middle/Late Iron Age and Roman phases (3–5, excluding the cemetery – see below). This group comprised 11 adults and 15 immature individuals, 12 of the latter being neonatal skeletons (less than six months old). It is debatable whether the 1993 excavation area represents the entire settlement during these periods but the associated field systems clearly extended over a wider area, as did burial areas in the Late Roman period at least.

The numbers of dated burials are spread fairly evenly throughout the Middle/Late Iron Age and Romano-British phases and overall the excavated evidence suggests a small farmstead, probably supporting a single extended family, throughout the later Iron Age and Romano-British period. The numbers of adult males and females are relatively even. The number of neonates in the group is high but not unusual. Oral health appears to have been adversely affected by poor diet to a relatively high degree, particularly for the females, although no other effects of dietary deficiency were observed. Common degenerative conditions such as osteoarthritis are well represented. The contrasts in the degree and focus of mechanical stress between males and females is likely to reflect occupational differences.

As noted above, many of the artefacts from the site relate to everyday domestic activities such as food preparation and cooking, textile manufacture and sewing. There are far fewer surviving traces of more personal possessions, the most obvious group being the copper alloy brooches, toe ring and armlet (Fig. 42). The two copper alloy mirror fragments (Fig. 43, 12–13), probably derive from a single object.

The Middle/Late Iron Age pits from Tolpuddle Ball have provided some interesting insights into what may be termed communal or symbolic customs. These take the form of 'special' or 'structured' deposits in the pits – a phenomenon common on Iron Age sites in Wessex. Indeed, the frequency of such deposits suggests that they are best interpreted as a regular symbolic custom or 'ritual' which was not necessarily distinct from the practical considerations of everyday life (for a full discussion see Hill 1994, 4–8; Hill 1995). Several of the pits excavated in 1993 contained structured deposits, in particular human remains, articulated animal remains, dog, horse or cattle skulls, complete or near-complete pots, groups of loomweights and a wide variety of other objects (see Fig. 18, Plates 10 and 11). Similar deposits have been considered in detail elsewhere (Hill 1995). The identification of these structured deposits is rather problematic as some of the material may be simply represent rubbish disposed of in a convenient disused pit. However, on the assumption that at least two instances of one or more of the above categories of finds deposited in a pit together represents some form of custom or ritual, it is estimated that approximately 15% of the excavated Iron Age pits at the site contained structured deposits.

The clearest example of such a deposit identified was that associated with the Late Iron Age (Phase 4) pit 1093 (Fig. 19, section). The basal fill of this pit comprised a thin layer of silty loam on or within which a dog's head was placed. Apparently following this, a very large perforated chalk disc was carefully deposited in the centre of the pit (Plate 11); the size and particularly the weight of this object (over 42 kg) imply that someone stood in the bottom of the pit while the object was passed down to them. The chalk disc has the appearance of a large quernstone but is clearly not functional. It appears to be an imitation quern, deliberately manufactured for deposition in the 'special' deposit. A near complete (though fragmentary) large pot was apparently also placed near the chalk disc. This deposit was then partly covered with a soil deposit and then completely covered with a layer of chalk rubble. A second layer of soil was then deposited, possibly covering a copper alloy brooch which was recovered from this layer. The remainder of the pit was then filled with further soil layer(s) from which a few sherds of pottery and small pieces of animal bone were recovered. The backfilled pit was finally capped with a layer of compacted chalk fragments. From the archaeological evidence it is unclear whether this sequence of deposits occurred as a single event or whether they represent sequential deposits over time, for example to coincide with the sowing or harvesting of crops.

Other notable examples of special deposits in pits at Tolpuddle Ball include a group of three beautifully-worked stone loomweights placed together in Phase 4 pit 223 (Plate 10) and horse and cattle skulls in Phase 3 pit 116 and Phase 3/4 pit 1302 respectively. The deposit in the latter pit may also have included two lambs. Dogs were recorded as special deposits in several pits including two examples of apparently skinned dogs represented by the head and feet bones only, one in Phase 3 pit 1264 and another, apparently laid on a bed of flint and pebbles in Phase 3/4 pit 403. All these deposits are described fully in the site report above (Section 2). The burial of two human neonates (1288A/B) recorded from a single context in Phase 3 pit 9 is also likely to represent a special deposit. A partial adult skeleton from Phase 3/4 pit 61 may also represent a special deposit but this is uncertain (Plate 18).

In discussing the symbolic importance of deposits and features it is relevant to consider the enclosure itself. The apparent importance of alignment in the layout of Iron Age settlement enclosures and their entrances has been discussed in detail by Hill (1995). Hill has stressed the significance of the rising sun and it may be noted that the Tolpuddle Ball enclosure conforms to this hypothesis in that it is aligned east–west and the entrance faces east/south-east. The apparent importance of an easterly orientation for the builders of the enclosure is emphasised by the eastern alignment of the associated antenna ditch and possibly also by a long curving ditch approximately 80 m east of the enclosure (ditch 2334, Phase 3/4) whose alignment

also appears to respect the enclosure entrance and the antenna ditch (see Fig. 64). Hill has also proposed that the enclosure ditches themselves had more of a symbolic rather than a simply functional role, based on the evidence for special deposits in enclosure ditches as well as in pits inside them (*ibid.*, 82). It is beyond the scope of this report to address this aspect of the site in any detail for Tolpuddle Ball and interpretation is hampered by the partial excavation of the enclosure ditch. This said, the north-east corner of the enclosure does appear to represent a special area of the ditch given the number of inhumation human burials recorded, especially those of neonates (see Fig. 26).

In terms of what are interpreted as 'ordinary' burials of the inhabitants, there is some evidence for burial ritual. Four graves, three Late Iron Age (Phase 4) and one Romano-British (Phase 5), contained grave goods. Of the Iron Age burials with grave goods, two were female adults. One (Burial 1541, Plate 22) was accompanied by a Maiden Castle 'war cemetery'-type bowl (Fig. 50, 52) and a copper alloy Colchester-type brooch (Fig. 42, 5). The other (Burial 1348) was wearing a copper alloy toe-ring around two toes of the left foot (Fig. 42, 11; Plates 20–21). The third Iron Age burial which included a grave good was that of a neonate (burial 568) which was accompanied by a small jar (Fig. 50, 39; Plate 24). The only Roman burial with grave goods was that discovered during the watching brief to the north of the main site (burial 5067, see Fig. 65). This probable female adult was buried with hobnailed boots and a coin dated AD 330–345.

The proportion of burials with grave goods at Tolpuddle Ball is lower than was noted at the small 1st-century BC/1st-century AD cemeteries at Fordington Bottom and Whitcombe (Smith *et al.* 1997; Aitken and Aitken 1990). It is possible that the low incidence of grave goods is not entirely representative. Many of the burials were in shallow graves (some very shallow) and associated goods may have been disturbed or removed from their original context. The likely origin of the Iron Age/Roman mirror fragments has already been noted in this respect. Perhaps more significant, however, is the apparent absence from any of the Iron Age graves of animal bones, which have been noted on other sites as being characteristic of the Durotrigian burial rite, and used as a means of expressing the sex of the individual (e.g. see Aitken and Aitken 1990).

The small number of individuals represented in any one phase and the wide overall date range precludes meaningful demographic analysis but some observations may be made on the location of burials in the two main periods of occupation. The Iron Age burials (Phases 3, 4 and 3/4), including both adults and neonates, but particularly neonates are clustered in the north-eastern area of the enclosure, including within the enclosure ditch itself (see Fig. 15). This part of the enclosure may be regarded as the main burial area during these periods. The outliers for this period are several adult inhumations and one neonate; one of the former lies within the enclosure (burial 60A) but the others are very dispersed.

A group of three Romano-British adult burials lay close together east of the main settlement (see Fig. 23). One of these burials, that of a female (908), included a young infant of between six and twelve months (1559). Two of the adults in this group were buried in coffins. Four other Roman neonate burials all lay away from this group, dispersed across the settlement area. One of the neonate burials (568) lay beneath Roman structure 702. Although the location could be coincidental there are parallels for the burial of neonates/infants in direct association with the construction of Roman buildings. At Charles Street, Dorchester, an infant buried within a jar under the floor of a substantial building appeared to represent a foundation burial for the building or a 'ritual' deposit (Davies and Farwell 1989, 109). At Poundbury an infant was buried in direct association with a Late Roman structure (Farwell and Molleson 1993, 222).

The relative absence of neonatal individuals from Romano-British cemeteries is not unusual. The burial of neonates within the proximity of the living rather than the dead is well recorded from other Roman sites in Britain. This phenomenon is apparently linked with the fact that infants of less than 40 days were not considered 'human' and were often not buried in the same manner as other members of society. Further discussion on the change in burial rites in the Late Roman and post-Roman period is provided below (*Tolpuddle Ball cemetery*).

The Economy and Status of the Settlements

There is sufficient evidence for the Middle/Late Iron Age and Romano-British periods at Tolpuddle Ball to characterise the settlement in terms of economy and suggest its position within the local and regional settlement hierarchy.

As for the Early/Middle Bronze Age period, the artefactual assemblage associated with the Iron Age settlement is essentially of a small-scale, domestic nature. The economy of the site was firmly based on agriculture but with links beyond the immediate locality for the procurement of goods such as pottery and stone artefacts, perhaps by the exchange of agricultural surplus. The transect provided by the Tolpuddle to Puddletown bypass has provided no evidence for sites on other levels within the Iron Age settlement hierarchy and as such may be contrasted with the more substantial cross-section of settlement types investigated along the route of the Dorchester by-pass (Smith *et al.* 1997).

The nature of the settlement at Tolpuddle Ball does appear to change during the Romano-British period, although in artefactual terms it seems that Romanisation more or less passed it by for a significant period after the Conquest (at least one generation) and the establishment *c.* AD 65 of *Durnovaria* (Dorchester). From the 2nd century AD onwards, however, the structural and artefactual assemblage reflects a relatively prosperous rural settlement of increasing social and economic status. As already noted, ceramic and stone building material indicate the presence of substantial buildings. The building stone would have been obtainable from sources in south or west Dorset (Forest Marble for the roof tiles, Inferior Oolite for the

architectural fragment). The stamped roof tile provides a direct link with Dorchester where similarly-stamped tiles are thought to represent the products of a local contractor (Woodward 1993b, 375). Pottery finewares and glass vessels are present, again presumably supplied through the market of Dorchester.

Overall, Tolpuddle Ball may be compared in terms of artefactual evidence to other small rural settlements on the periphery of Dorchester such as Poundbury, Maiden Castle Road, Fordington Bottom and Alington Avenue, all of which were primarily associated with agricultural activity (Smith *et al.* 1997). For the Dorchester by-pass project, an attempt to gain an indication of the relative wealth and status of sites by quantifying certain finds categories for earlier Roman and later Roman periods revealed some inter-site differences (*ibid.*, table 81). Using similar criteria Tolpuddle Ball produced less in the way of personal ornaments (one in the early Roman period and three in the later Roman period), but more coins (three and 101 coins respectively for the two periods). The relatively high incidence of later coinage on the site may well be significant. Quantities of vessel glass and pottery finewares are less at Tolpuddle Ball for the earlier period but comparable with the Dorchester by-pass sites for the later period. There is no sign that Tolpuddle Ball suffered economically during the early years of the *civitas* capital as has been suggested for other outlying settlements around Dorchester (*ibid.*, 303); indeed the continuity of settlement location suggests the opposite. The implications for settlement in the post-Roman period are discussed further below.

The economy of the Tolpuddle Ball settlement may be contrasted with Iron Age and Romano-British sites in Purbeck, for example those at Norden, Ower Peninsula and Rope Lake Hole (Sunter and Woodward 1987) and the Wytch Farm sites (Cox and Hearne 1991). These sites had a specialised economy based on industry and manufacture. The growing monopoly of the pottery industry based around Poole Harbour has already been discussed but during the later Iron Age and Roman periods sites in Purbeck were also exploiting the whole range of high quality mineral resources which Purbeck (alone) enjoys: clay, salt, shale, limestone, chalk and Purbeck 'marble'. This exploitation included both the supply of raw materials (e.g. building stone) but also large-scale manufacture of a range of finished and partly-finished goods, including high quality and luxury items such as marble inlays and finely-worked shale items. The inhabitants of Tolpuddle Ball were clearly undertaking a little craft activity themselves (as discussed above) but on nothing like the scale of the Purbeck sites, and it seems likely that the majority of their requirements for raw materials and/or finished goods would have been met from the production sites in Purbeck. In this respect Tolpuddle Ball is more closely comparable to settlement sites at the base of the Purbeck chalk ridge such as West Creech, which maintained an agricultural base while undertaking a low level of shale- and iron-working for domestic purposes (Cox and Hearne 1991, 64–5, 230).

Settlement status can also be inferred, to some extent, by comparing the size and nature of the farming economy with that, for instance, in the Dorchester environs where the land surrounding that town was well established agriculturally even in the earlier Bronze Age (Allen 1997b). It has been suggested that the immediate environs of Dorchester formed the centre of a farming economy and that by the later Bronze Age the nature of farming there was not of small individual farmsteads, but a larger-scale, socio-economic scheme of 'farm estates' (Allen 1997a). Although there is not the same level of palaeo-environmental detail in either time or space for the A35 project, there is clearly a contrast in the extent and nature of farming between the two zones. The Tolpuddle/Puddletown sites from the Bronze Age to the Roman period do not appear to have the intensity and cohesion associated with those in the Dorchester environs and this may be linked with status. There was clearly contact and trade between the two locales but, it may be suggested, the farming and settlement economy in the Tolpuddle/Puddletown area was of an essentially smaller-scale, domestic nature participating in a broader agricultural economy, but not as a fundamental component of it as the immediate Dorchester environs were.

As activity intensified in the Iron Age, so localised specialisation started to occur. There is evidence for a slight shift in the agricultural economy in the Roman period but this seems to reflect a more general response to changes in taste and culture that is a region-wide, if not a province-wide phenomenon. In essence there was no major Romanisation reflected by large changes in the rural farming economy, more a general trend towards increasing size and limited specialisation or selection in farming and of processing of farm products. Overall the Tolpuddle/Puddletown landscape appears to be characterised by a series of smaller scale farmsteads exploiting a diversity of habitats (chalk downland, heathland, valley margins). In fact, arguably, the strength of the local farming economy was the diversity of habitats which were easily accessible within the locality, in contrast to the 'mono-culture' evident around Dorchester which required trade with outside communities to sustain it.

Tolpuddle Ball Late Roman and Post-Roman Cemetery

The Date of the Cemetery

The cemetery was established in the Late Roman period. Based on both stratigraphy (grave 5131 was cut by grave 5165, see Fig. 29) and the radiocarbon date for burial 5198 (cal AD 250–450, OxA–8299, 95% confidence level) it appears that the row of six graves in the north-western part of the cemetery (that formed by burials 5184, 5198, 5207, 5249, 5125 and 5130) was one of the earliest, if not *the* earliest. The radiocarbon determination indicates these early burials date to the 'tail-end' of the Roman period, probably in the late 4th or early 5th century AD (P. Pettitt, pers. comm). This is significant when addressing the development of Late Roman burial tradition at Tolpuddle Ball and also for the wider archaeological debate on the origin of Late

Roman 'managed' inhumation cemeteries. Both these aspects are examined further below.

In assessing the period in which the cemetery was in use, the other four radiocarbon dates provide date ranges across the later 6th and 7th centuries AD (see Fig. 30) and might suggest that this was the main period of use of the cemetery. As a group, the five radiocarbon dates raise the fundamental question of whether or not the cemetery was in continual use from the Late Roman period to the 7th century AD. It could be argued from the radiocarbon dates that there was a break in use of the cemetery between the Late Roman and post-Roman periods. The fact that the earliest radiocarbon date (OxA–8299) is associated with a row of graves which is on a slightly different alignment to most of the other rows, could also be cited to support this argument. The alternative interpretation of continuity of use from the Late Roman period to the 7th century is equally plausible and perhaps more so for several reasons. Analysis of the human bones leaves no doubt that the individuals buried in the cemetery were a coherent group (see below). The abandonment of a newly-established cemetery and its later reuse is not impossible but seems somewhat unlikely. In wider terms, it is also pertinent to note that Samson has recently highlighted the lack of securely-dated 5th century AD burials as a phenomenon applicable to virtually the whole of Europe (Samson 1999, 132, 142 note 7). So we should perhaps not place too much emphasis on a 5th century AD hiatus in the use of the Tolpuddle Ball cemetery. For these reasons the author favours continuity of use of the burial ground within the period AD *c.* 400–700.

In some ways the radiocarbon dates from Tolpuddle Ball raise as many questions as they provide answers. The dates are, however, a good antidote to complacency. Without the benefit of the earliest of the dates (OxA–8299) and given the site's similarities with Ulwell (discussed below) the Tolpuddle Ball cemetery is likely to have been interpreted as wholly post-Roman.

The Arrangement of the Cemetery and the Community Represented

The cemetery falls within the class of so-called 'managed' Late Roman/post-Roman cemeteries (Thomas 1981, 232; Philpott 1991, 226–8). The origin and possible religious affinities of such cemeteries are discussed below. The cemetery is composed of west–east aligned graves in rows aligned north–south. Nine such rows are evident, each containing four to six graves (see Fig. 29). A small number of graves do not form part of an obvious row and there are also a few outliers (e.g. burial 5202). The overall range of individual grave alignments is 250°–270° (based on Ordnance Survey north as 0°) and the subtle variations in alignment are closely related to different rows of graves. The individual rows may well therefore relate to different periods of use of the cemetery. Whether any significance was attached to the slight changes in alignment of the rows cannot be known. It is reasonable to assume that graves were aligned with reference to the solar arc and so the slight shifts of alignment between some of the rows could merely relate to the time of year of the first-buried in each row (see Rahtz 1978, 9–10).

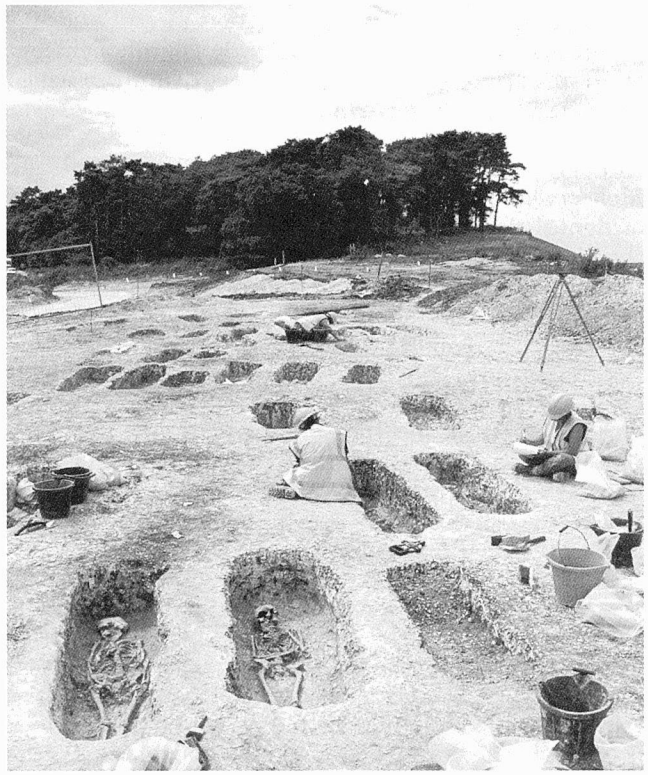


Plate 57 Tolpuddle Ball cemetery looking west to the Ball (July 1998)

Apart from the existence of rows of graves, the planned and orderly nature of the cemetery is reinforced by the near-complete lack of intercutting graves and the often minimal distance between them (Plate 57). This implies that individual graves, or more likely just the rows, were clearly marked and delimited throughout the period when the cemetery was in use. In view of the lack of excavated or artefactual evidence it can only be assumed that earthen mounds or stone/timber markers or settings were used. The layout of the cemetery leaves no doubt that the community using it attached great importance to avoiding disturbance to earlier graves.

Although the cemetery contains the full range of age groups – from young infants to older adults – neonates and young infants (less than two years old) only comprise four individuals and therefore appear to be under-represented. Given the presence of *some* young infants it seems unlikely that they were actively excluded from the cemetery. Grave 5175 which produced neonatal remains from soil samples was only 0.61 m long and 0.10 m deep and lay adjacent to a similar, tiny grave (5172) which produced no bone at all. This suggests that taphonomic processes are more likely to be responsible for the under-representation of young infants, both in terms of the survival of actual grave cuts and the preservation of very small bones. The distribution of infants of less than five years old indicates that they were not confined to a certain part of the cemetery. It is therefore possible that some or all of the grave-sized 'gaps' within the site (e.g. either side of infant burial 5266) originally contained the graves of young infants.

Although the spatial distribution of sex and age groups (see Fig. 32) does not provide definite evidence for family groups or plots their existence cannot be ruled out. The division of grave rows into family plots was recorded at Poundbury cemetery in Dorchester, largely through identification of genetic traits (Farwell and Molleson 1993, 146). At Tolpuddle Ball the observation of dental defects which are usually inherited within three adjacent individuals in the north-west of the cemetery (5184, 5198, 5207) may, similarly, indicate genetic links or a family group (McKinley, Section 3). The cemetery would provide an excellent sample for a genetical study (T. Brown, Department of Biochemistry and Applied Molecular Biology, UMIST pers. comm), particularly in view of the presence of earlier (Late Iron Age/Romano-British) burials to the east. It is only to be hoped that current advances in molecular archaeology will, in the future, be able to be applied to ordinary sites like Tolpuddle Ball (see Brown and Brown 1992).

The recovery of later Iron Age, Romano-British and post-Roman burials from the excavations at Tolpuddle Ball between 1993 and 1998 has provided an unparalleled opportunity in the region to assess continuity versus discontinuity of the communities represented, through detailed analysis of their mortal remains. The specialist evidence, particularly the observations of skull morphology, leaves little doubt that the post-Roman burials are those of an homogeneous British community (i.e. not a Saxon one). Given the small size of the cemetery and its likely duration of use it is considered highly unlikely that it was used by more than one community. The burials are therefore interpreted as those of a single extended family or very small community, perhaps over ten generations. These people were closely connected to those buried nearby in earlier periods (Iron Age and Roman), if not their actual direct descendants.

Beyond the general coherence of the Iron Age, Roman and post-Roman individuals, analysis of their bones has identified some very interesting differences in the diet and, it seems, the lifestyle of the two main groups (i.e. Iron Age/Roman and Late Roman/post-Roman). Indirect evidence for improved diet in the Late Roman/post-Roman period is manifested in markedly light levels of dental attrition and low levels of dental disease. The implications of this are that the diet was light in unrefined cereals and coarse foodstuffs and included a good level of meat-based proteins. Improved dental hygiene may also have contributed towards the good condition of the teeth compared with those of the Iron Age/Roman predecessors. There is also evidence for lower levels of fractures and joint disease among the Late Roman/post-Roman group indicating that they were occupied in less physically-stressful activities. It has been suggested that the data may reflect a slight change in agriculture, from a mixed economy to one with greater emphasis on cattle and/or sheep husbandry (McKinley, Section 3). These hints at lifestyle and occupation differences between the two chronological groups are tantalising and could generate a host of interpretations. For example, it could be speculated that the apparent differences between the two groups relate to the social standing or status of those buried.

Finally, the human bone analysis has also provided enigmatic evidence for some 'outsider' element in the post-Roman community buried at Tolpuddle Ball. The skull morphology of burial 5253, an adult male aged over 45 years, is significantly different from the rest of the group. This man was buried in the extreme eastern row of the cemetery and an adjacent burial produced a radiocarbon date of cal AD 600–690 (OxA–8297, 95% confidence level).

Burial Rite and Christianity

It is beyond the scope of this report to enter into the debate on 'the Christianity issue' in Late Roman cemeteries on anything other than a basic level (see Rahtz 1977; Thomas 1981; Philpott 1991; also Hase 1994 for a review of the Late Roman and post-Roman church). The data from Tolpuddle Ball do, however, provide a contribution to the debate and so some comments are offered. The cemetery has attributes which some would interpret as indicating the Christian beliefs of those buried. Using the nine 'Christian indicators' defined by Watts and Woodward for the Late Roman cemeteries at Poundbury (A. Woodward 1993, 236–7), Tolpuddle Ball cemetery has four: (i) the west–east alignment of graves with heads placed at the western end; (ii) the organisation of the cemetery and lack of intercutting graves; (iii) the lack of grave goods and (iv) the inclusion of neonates and young infants in the cemetery (albeit if under-represented in the archaeological record at Tolpuddle Ball). The other apparently Christian traits defined by Watts and Woodward are absent at Tolpuddle Ball, namely the presence of focal graves, mausolea, plaster burials and stone cists/grave linings. However these are attributes which are far less common.

Conversely, when assessing so-called pagan indicators, the Tolpuddle Ball cemetery has none of the defined attributes (decapitation, coins, hobnails, ornaments/equipment, prone burials, superimposed graves and north–south alignment of graves). Thus, using these criteria (and giving equal weighting to each) the Tolpuddle Ball cemetery would appear to be more strongly non-pagan than positively Christian. If nothing else this exercise well demonstrates the danger of oversimplification and the difficulty for archaeologists in trying to identify '... a cemetery of persons whose Christian allegiance necessarily resided in their minds not their cadavers' (Thomas 1981, 230).

Some favour the development of west–east aligned, 'managed', findless, inhumation cemeteries as a change in burial tradition whose catalyst was Christianity. Others consider that there is a considerable amount of data which supports the view that this type of cemetery layout and burial rite had earlier origins and was merely 'adopted and rationalised' by Christianity (Rahtz 1977, 54). The implication of the latter interpretation is that identification of Christian burials or cemeteries can only be certain if associated with specifically Christian symbols (such as inscriptions) or buildings. Philpott states that 'managed' cemeteries containing unfurnished, extended inhumations in rows are '... entirely typical of a class which were laid out *de novo* in the early

or mid 4th century AD ...' (Philpott 1991, 239) and considers that cemeteries of this type were an urban phenomenon in origin. Not all such cemeteries were laid out *de novo*, however, since some examples appear to be later phases of an existing cemetery (see Rahtz 1977, 54).

In assessing the relevance of the Tolpuddle Ball cemetery to this debate it is necessary to recall (briefly) the evidence for dating and burial tradition in earlier periods of occupation at the site. Middle/Late Iron Age adult burials are mostly crouched inhumations including a 'classic' example of a Late Iron Age Durotrigian burial (a female) accompanied by a Colchester type brooch and a 'war cemetery' bowl (Phase 4, burial 1541 – Plate 22). One Middle/Late Iron Age burial was apparently prone in a grave aligned south–north with the head towards the south. The succeeding Roman adult burials were, with one exception, not dated more closely than 2nd to 4th century AD by reference to the associated settlement. Three were slightly flexed burials, lying on their sides in a close group and two of these were west–east aligned and in coffins (burials 802 and 908, the latter a mother and child). However, two other Roman burials were not orientated (burials 7/3 and 5067). The last of these, the only securely-dated Roman burial on the site, was discovered during the watching brief some 100 m north-east of the main settlement (5067, Plate 23). This extended supine burial of an adult female was aligned south to north (with the head at the southern end) and included hobnail boots and a coin placed on the base of the grave. These attributes are normally interpreted as those of a pagan burial – with boots for the journey to the Underworld and a coin to pay Charon the ferryman. Whether burial 5067 was isolated or part of a larger area of Late Roman graves is, unfortunately, unknown but the latter is considered more likely.

The Constantinian coin associated with burial 5067 provides a *terminus post quem* of AD 330. This is a crucial piece of dating evidence when considering the establishment of the Late Roman/post-Roman cemetery which lies some 250 m to the south-west (see Fig. 65). It seems unlikely that burial 5067 and the cemetery (in its first stages) were contemporaneous, although this cannot be ruled out. What seems more likely is that the cemetery replaced these earlier burial areas, being laid out *de novo* no earlier than the second quarter of the 4th century AD and then continued in use through to the 7th century. This chronology ties in well with the start of the main Late Roman ordered cemetery at Poundbury (Phase IV B–C) which was in use '... at least from the end of the first quarter of the 4th century AD' (Farwell and Molleson 1993, xii). It is possible therefore that the establishment of the large ordered cemetery at Poundbury was the stimulus for the creation of that at Tolpuddle Ball. Philpott (1991, 227) has suggested that the creation of the new 'managed' cemeteries in Late Roman Britain reflects increased bureaucratic control over burial (at least in urban and administrative centres) which was generated by major reorganisation of the provinces of Britain under Diocletian (AD 284–305) and Constantius I (AD 305–6).

Tolpuddle Ball and Ulwell

The cemetery at Tolpuddle Ball has close parallels with that at Ulwell near Swanage (Purbeck) which was radiocarbon dated to the 7th century AD, possibly extending into the 8th century (Cox 1988). Since Ulwell and Tolpuddle Ball are the only two 'British' cemetery sites in Dorset which (so far) can be demonstrated to have been in use during the post-Roman period it is pertinent to compare the character of the two sites.

Both sites contained similar numbers of graves (Tolpuddle Ball 50; Ulwell 58 including the three graves originally discovered on the site by Farrar in the 1940s). Extended supine inhumation in a grave aligned roughly west–east and with the head at the western end was the predominant burial rite at both sites (overwhelmingly so at Tolpuddle Ball). Both cemeteries were composed of north–south rows of graves and were of an orderly, compact nature. Although Tolpuddle Ball appears the more orderly and compact of the two sites this may be related to topography since Ulwell cemetery lies on a very steep slope. Both sites contain a wide range of age groups but neonates and young infants are under-represented (only one infant skeleton was preserved at Ulwell). The location of the settlement attached to each site is unknown; that for Ulwell was suggested to coincide with the present-day village which lies a few hundred metres to the south on the valley floor. The Ulwell cemetery does not lie *on* a parish boundary (as Tolpuddle Ball did, see below) but the nearest boundary is only a few hundred metres to the north of the cemetery, along the top of Ballard Down on the Purbeck Hills.

Basic similarities between the two cemeteries are evident therefore but there are also significant differences. These differences principally concern grave types and the superimposition of burials. Tolpuddle Ball had only two examples of graves with partial stone rubble lining (Fig. 31, burials 5149 and 5241). The custom was far more common and apparently more formalised at Ulwell where 13 examples had stone rubble lining or kerbs along the side(s) of the grave or stone slabs at the head and foot ends. Moreover, one quarter of the graves excavated in 1982 at Ulwell (13 examples) were stone cist graves. The Ulwell cemetery also produced evidence for intercutting graves (six examples) and the re-opening of graves to allow the insertion of secondary burials. One such secondary burial at Ulwell, that of a probable male adult, contained an iron knife – the only grave good from the site. At Tolpuddle Ball possible evidence for secondary burials was confined to very small quantities of redeposited bone in two graves (5262 and 5123) which does not appear to represent contamination or mixing from adjacent graves. Overall, the evidence for secondary burials at Tolpuddle Ball is neither conclusive nor compelling.

As discussed above, The Tolpuddle Ball cemetery was established in the Late Roman period and continued in use to the late 7th century. The radiocarbon dates from Ulwell indicate that it was wholly post-Roman, established in the 7th century and probably continuing into the 8th century (Haddon-Reece 1988). The differences in burial rite at the two sites may

therefore be chronological, particularly in the case of the cist graves at Ulwell (Keen, pers. comm.)

Britons and Saxons

The Tolpuddle Ball cemetery will undoubtedly enjoy an important place in ongoing debate concerning the continuity of Romano-British culture in Wessex after the end of Roman administration and how it related to the chronology of Saxon 'arrivals' into the area and the establishment of the kingdom of the West Saxons. The relevant data for the region have recently been summarised and discussed elsewhere (Eagles 1994; Taylor 1997; Hinton 1994; Hinton 1998) and wider-ranging studies on post-Roman/sub-Roman Britain are provided by Dark (1993) and Snyder (1998). Suffice to say that the Tolpuddle Ball cemetery supports the evidence for continuity of Romano-British culture in Dorset into the late 7th century AD. The five memorial stones in Lady St. Mary Church, Wareham, inscribed with the names of British Christians on re-used Roman masonry, are generally assigned to *c.* AD 600–800 (RCHME 1970b, 310–12, plates 165, 166). Although the precise dating and the origins of the stones are much debated (see Hinton 1992) the stones do at the least imply the existence of a Christian church at Wareham between or during the 7th/8th centuries AD. Taylor has suggested that the 5th- and 6th-century Saxon finds in Dorset represent those of mercenaries (Taylor 1997, 12). The later 6th-/7th-century Saxon inhumation cemetery at Christchurch in east Dorset (Jarvis 1983) has been suggested to represent a Saxon enclave (Hinton 1998, 29) and the Saxon burials at Hardown Hill in west Dorset (Evison 1968) may also reflect localised coastal incursions.

There is also evidence for likely Anglo-Saxon burials at various locations around Dorchester itself, at Bradford Peverell, Mount Pleasant, Maiden Castle and Trumpet Major (see Hinton 1998, 6). Overall, it is true to say that our understanding of early Anglo-Saxon settlement in Dorset is still in its infancy due to the limited nature of the data currently available. The idea of an 'Anglo-Saxon tide [which] rolled westwards, reaching Devon by the mid seventh century' (Hooke, 1994, 83) is no doubt too simplistic a model and it is only to be hoped that further important discoveries will be made in the region before too long to help refine the model.

A further question which the discovery of the Tolpuddle Ball cemetery raises is the date of the Late Roman cemeteries at Poundbury and in particular how late they continued in use. The Poundbury cemeteries do not (at present) have the benefit of radiocarbon dates. On stratigraphic and artefactual evidence the Poundbury Late Roman cemeteries are interpreted as *not* continuing in use into the 'post-Roman' phase (Period V) and the number of burials securely ascribed to that phase is only three (Farwell and Molleson 1993, 83). The radiocarbon dates obtained for Tolpuddle Ball encourage speculation that some of the burials at Poundbury ascribed to the Late Roman period are in fact of post-Roman date, contemporary with the recorded evidence for post-Roman settlement at the site (Green 1987, 71–92).

Settlement, Boundaries and Landscape

The discovery of the Tolpuddle Ball cemetery brings with it the obvious question of where was the contemporaneous settlement? The archaeological evidence from the project, including negative evidence, allows the following basic statements to be made:

1. If the post-Roman settlement was on the same site as that of the Roman period (as excavated in 1993), or its immediate environs, the post-Roman settlement evidence was either not preserved, not recognised during the 1993 excavation or is indistinguishable (in the archaeological record) from the 2nd–4th-century AD settlement.
2. The post-Roman settlement may have been located nearby but beyond the extent of the areas examined for the A35 project.
3. The settlement may have been remote from the cemetery site.

The location of the cemetery alongside the parish boundary may be significant when discussing the elusive settlement. The line which now marks the parish boundary between Affpuddle and Tolpuddle is no doubt a land division of ancient origin but whether the boundary or the post-Roman cemetery existed first cannot be proven. The phenomenon of pagan Saxon burials on parish boundaries has been recognised for some time (e.g. Bonney 1966). It could be used to support the argument that the boundary was already in existence and that the cemetery was deliberately sited alongside it – although this argument would raise interesting issues on Saxons and Britons. Alternatively, it could be argued that the cemetery pre-dates the boundary and that the latter respects and in fact deviates around the cemetery (see Fig. 65). The line of the boundary immediately south of the cemetery follows the contour of the slope but then swings round to the north-east and runs down the slope towards the Milborne Water. Excavation of a segment of the Tolpuddle/Affpuddle parish boundary ditch during the watching brief produced mainly post-medieval pottery (Phase 7, ditch 5023). It is therefore likely that even if the line of the boundary pre-dated the cemetery the ditch itself was a later feature in the landscape. It is also interesting to note that a much later example of the link between human burials and parish boundaries was discovered nearby during the project, in the form of a post-medieval crossroads burial near Roger's Hill Farm.

Returning to the Tolpuddle Cemetery, it may also be noted that the Late Roman and post-Roman cemetery lies on the *other* side of the parish boundary from the Iron Age and Roman settlement and burials. If the boundary was not in existence when the cemetery was in use this observation is of course irrelevant. If, however, the boundary was in existence and the cemetery was associated with a community based within the land unit(s) marked by it, it can at least be suggested that the post-Roman settlement lay to the north or west of the cemetery. The present-day village of Tolpuddle is perhaps too remote to be considered the settlement site for the cemetery since it lies some 2 km away. The earliest origins of the village are uncertain. Tolpuddle lies on the route of the Roman Road from Badbury Rings to Dorchester at a potential crossing

point on the River Piddle (see Fig. 2). It might be reasonable, therefore, to expect a Roman settlement (or activity of some sort) although to date no Roman material has been reported. The earliest documentary evidence for the village is the Domesday survey when the manor was held by Abbotsbury Abbey. The village is considered likely to have originated in the 8th or 9th century AD (Keen pers. comm.). It could even be speculated that the demise of the Tolpuddle Ball cemetery was linked to settlement relocation and the formation of the village.

Tolpuddle Ball also lies close to an interesting junction of four parish boundaries: Affpuddle, Tolpuddle, Milborne St Andrew and Bere Regis. Figure 65 shows the boundaries and fields which existed in 1902. The parish boundaries coincide with those on the Tithe Maps (1839 to 1845). The land divisions in 1902 are generally similar to the Tithe Maps although some rationalisation of the fields is evident. The intersection of the Roman Road and Milborne Water appears to provide the focus for the junction of these parish boundaries and coincides with Ashley Barn, again hinting at its potential importance as an archaeological site. Apart from this intersection the Roman Road appears to be of limited significance for the parish boundaries (as has frequently been recorded elsewhere), its line only being followed for two short stretches.

The northernmost part of Affpuddle parish has a very unusual configuration. It stretches across the Milborne Water (which might be regarded as the natural landscape boundary) to include a spur the land around Roger's Hill Farm. Roger's Hill Farm is considered likely to be of medieval origin but is not documented until the early 16th century (Brocklebank 1968, 83–4). It is quite conceivable that the farm marks the site of a much earlier settlement and that the northernmost part of Affpuddle parish delimits the original extent of its land-holding.

Across Wessex observations of this sort and their relevance for the origins of parish boundaries, Saxon estates and wider issues of settlement patterns have been the subject of much recent debate (e.g. see Hase 1994; Hooke 1994; Costen 1994). The countryside around Tolpuddle Ball clearly preserves as much information on this subject as other parts of Dorset, if not more. Few other areas in the county have the benefit of recently-recorded settlement evidence from the Earlier Bronze Age, Middle/Late Iron Age, Romano-British and post-Roman periods, as is now the case for Tolpuddle Ball. Even without opportunities for further local excavation, documentary research on the Tolpuddle area combined with accurate recording and identification of other archaeological finds which have been made locally (for example around Ashley Barn, Mrs V. Tory, pers. comm.) could prove very fruitful.

A 13th-Century Archaeological 'Snapshot'

The project has produced coherent data on the medieval period from only one site and it is beyond the scope of the project to consider the medieval landscape of the whole of the Tolpuddle and Puddletown area (see Aston and Lewis 1994 for a recent review of the medieval landscape of Wessex). The information from West Mead, near Bere Regis does, however, provide an unusual 'snapshot' into the natural environs of the site and the medieval farming economy in the earlier 13th century. This information is particularly valuable since deliberate rural midden deposits of this date are rare, or at least rarely excavated.

The deposits at West Mead clearly do not represent a settlement site, although the amount of pottery recovered (6 kg) suggests domestic occupation nearby. The features and deposits excavated appear to represent a small enclosure of agricultural function with an associated midden deposit. The fills of the enclosure ditches and the midden appear to comprise domestic and agricultural refuse, for example kitchen waste, fuel debris and animal bedding. The ceramic evidence suggests that the activities represented occurred over a short duration in the earlier 13th century.

The livestock comprised a mixed collection containing horse, cattle, sheep/goat and pig along with small quantities of red deer, cat and fowl. There was frequent indirect evidence for dogs in the form of gnawing. The enclosure ditches appear to have been used mainly for dumping large items of waste (as might be expected) but the midden deposits are more mixed. Some of the material was derived from slaughter waste but there is also some butchery and kitchen waste. The variable condition of the bones suggests that some were rapidly covered while others were left exposed, gnawed by dogs and trampled before final disposal on the midden. In comparison with urban medieval deposits there is more large waste from horse and cattle at West Mead and virtually none of the birds, fish and bones of other small species which can be very prominent in urban assemblages, especially in cess pits. Few comparable rural assemblages, however, have been published (see Sadler 1990).

The evidence from the plant remains is also informative and indicates diversity in both the local landscape and the farming economy in the 13th century, including the cultivation of cereals and pulses on heavy and occasionally wet soils. Among the large number of cereal remains a compact form of free-threshing wheat was predominant along with smaller quantities of hulled barley and oats, the latter probably wild as a weed of the cereal crops. Other cultivated plants include a range of pulses (including pea and broad bean) and common vetch. The evidence for cultivated vetch is interesting and it may well have been grown for fodder, for example for horses. The wild plant seeds are mostly those of fairly acid soils and the midden also contained direct evidence of heathland plants in the form of heather flowers and gorse/broom charcoal. The mixed nature of the local woodland and scrub is evident in the list of species present: dogwood, hazel, hawthorn, blackthorn/cherry, oak, elder and alder, the last presumably growing in damp conditions on the margins of the Milborne Water which lies immediately north of the site.

The pottery from West Mead originated from a range of sources, all within Dorset. This would fit the known pattern of pottery production and distribution in the early 13th century. Most coarseware production centres

at this time had a distribution area of between 10 and 30 miles (16–48 km) and few consumer sites were supplied by a single industry (Vince 1981, 313). Notable among the West Mead assemblage, however, is an absence of imported wares and indeed finewares in general which are known to have been imported in some quantity at Poole amongst other ports on the south coast (Barton *et al.* 1992). For the most part, the pottery recovered from the site comprises local coarsewares and does not suggest any high status connections. This said, the dangers of viewing pottery assemblages as a reflection of site status have been amply discussed elsewhere, particularly from the point of view of the presence/absence of imported wares (e.g. Allan 1983). The large assemblage of metalwork recovered by metal detector survey during evaluation of the site by Liverpool University (Higgins 1995) includes a few items which may indicate a slightly above-average status, for example a gilded buckle. However, the majority of the medieval finds are of a more mundane nature.

The enclosure and midden at West Mead lie in the corner of a roadside field which was part of the Manor of Shitterton and which lay in the extreme corner of the parish of Bere Regis (see Plate 34). The site lies close to the complex junction of four medieval parish boundaries; Bere Regis, Turner's Puddle, Affpuddle and Tolpuddle. This location may have been a convenient one for storing refuse which was destined to be spread on nearby arable fields as part of the manuring process, or may simply have been the disposal point itself. What remains elusive is exactly which farm or settlement generated the refuse. Roger's Hill Farm lies 1 km to the west of the site. Shitterton Manor (now farm) lies 1 km to the east, at the western end of Bere Regis. The similarity of the date of the pottery from West Mead (early 13th century) with King John's regular visits to the Royal Manor of Bere Regis between 1204 and 1216 is notable but any connection between the two must remain enigmatic since unfortunately there is no direct evidence to link them and indeed the Manor of Shitterton was not part of the Royal holding.

Archaeology and DBFO, Carrie M. Hearne

The incorporation of archaeology into DBFO schemes marks a new development for the profession of archaeology and the A35 Tolpuddle to Bere Regis Bypass was in the first tranche of such schemes. Although it is too early to review the success of these schemes in general terms, some personal thoughts are offered by way of a conclusion to the project report.

DBFO schemes offer a new framework for the execution of archaeological projects. They place archaeology and archaeologists at the cutting edge of commercial and contractual strategies for major infrastructure projects. In doing so they bring the profession face to face with several of its current dilemmas. What is the place and role of archaeology as we approach the 21st century? Is it right or appropriate that archaeology finds a niche as a pure sub-contract service and does this jeopardise wider aspirations for education and heritage? Should archaeological projects be cost- and programme-driven? Can an archaeological contractor really balance legal and contractual liabilities with other considerations such as a desire to involve the local community, amateur archaeologists and a need to adhere to national academic research frameworks?



Plate 58 Monitoring visit at Burleston Down (November 1996)

Bringing archaeology into the world of commercial contracts brings it at the same time into that of quality assurance, efficiency and performance targets. Professionalism is a pre-requisite for participation in DBFO schemes and this formal 'driving up' of standards is undoubtedly of benefit to the profession. Standards are actively monitored through all the various stages of fieldwork and post-excavation. Archaeological projects have not routinely been monitored in such an intensive and formal way before (Plate 58). As a result, high-quality archaeology is being achieved through DBFO projects. The enforced rapid turn-around of post-excavation and publication are also to be welcomed, particularly when sites as important as the Late Roman and post-Roman cemetery at Tolpuddle Ball are discovered.

Another major advantage of the approach enshrined in DBFO schemes is the integration of archaeology into the construction project. Archaeologists cannot be 'side-lined' in such projects; they are a key part of the team and hence the profile of archaeology is raised. At the same time archaeologists are made far more aware that they do not operate in a vacuum. In the author's view the level of professional co-operation and mutual respect between archaeologists and engineering staff on the A35 far exceeded that experienced as a Project Manager on any previous project. Archaeology has come a long way since the 'rescue' days of the 1970s.

The acceptance of risk is the basis of DBFO schemes and by the very nature of such schemes risk is passed-down-the-line wherever possible. For most commercial archaeological projects today risk is a fact of life. For DBFO schemes the concept of risk is, arguably, raised to a higher level and requires very serious consideration by any field unit which is under consideration to take part. For the archaeological participants a small budget (that is, within the total cost of the scheme) is attached to a proportionately very high risk.

The assessment of risk, for the Highways Agency, the DBFO Company and its archaeological sub-contractor relies heavily on the pre-contract (evaluation) stage of the project. The strategy and methods of the evaluation and their effectiveness therefore have a major impact on the implementation and success of the ensuing DBFO project. It is clear that minimising the risk, for all parties, depends on very high quality evaluation being achieved. Without it, risk cannot be assessed and minimised or priced appropriately in the contract by the DBFO Company. Moreover, being at the 'front end' of construction, archaeology has a real potential to impact on the critical path of the project. The possible wide-reaching consequences for programmes and costs should not be underestimated.

In conclusion, archaeology in DBFO schemes is not recommended for the faint-hearted. It presents a challenge to individuals, units and the profession as a whole. The challenge is surely worthwhile when measured against the standards and professionalism being achieved through such projects. DBFO schemes may encompass new structures and procedures but it would be wrong to single them out as a 'breed apart' in archaeological projects. They are, arguably, merely a continuum of recent developments in contract archaeology and many of the issues raised are relevant to any large construction project. There are valuable lessons to take forward from DBFO schemes and they will undoubtedly feed into further changes in the profession and the way in which major projects are undertaken.

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Appendix 1: The Project Archive

The A35 Tolpuddle to Puddletown bypass archive comprises three main components:

a. archive material relating to fieldwork at Tolpuddle Ball carried out by the Liverpool University Archaeological Field Unit in 1991 (evaluation) and 1993 (excavation);
b. archive material relating to excavations and watching briefs carried out by Wessex Archaeology in 1996 to 1999;
c. archive material relating to post-excavation work carried out on (a) and (b) above.

Liverpool University records

The Liverpool University records from the Tolpuddle Ball site include those generated by the evaluation in 1991 (TP91, Site A) and by the excavation in 1993 (TP93). The archive contains all records which were submitted by Liverpool University to Wessex Archaeology, including background information, field records, post-excavation finds assessments and final finds reports (coins and oyster shells). The archive also includes primary field records on Late Iron Age burial 1541 which were kindly passed on to Wessex Archaeology by Mr P. and Mrs M. Roberts who excavated the burial. The 1991 and 1993 finds have been deposited with the Dorset County Museum with the exception of the Roman coins and conserved copper alloy metalwork which have been retained by the landowner Mrs V. A. Tory. Two reconstructed Iron Age vessels (Plate 46) have been retained by Mr P. Roberts in accordance with the wishes of Mrs V. A. Tory.

Wessex Archaeology records

Site Code	*Site name*	*Evaluation Ref.*
W2402.1	Druce Lane Watermeadows, Puddletown	Site D
W2402.3	Downtons Farm, Puddletown	Site F/AP 2
W2402.4	Puddletown Hollow way	Site I
W2402.5	Lower Eweleaze, Puddletown	AP 3
W2402.6	Home Farm, Puddletown	Site J/AP 4
W2402.7	Devil's Brook watermeadows, Burleston	Site L
W2402.8	Burleston Down, Tolpuddle	Site O/R/AP 5
W2402.10	Roman Road, Tolpuddle Common	Site T
W2402.12	North of Tolpuddle Ball	Site U/AP 13
W2402.13	Tolpuddle Ball	–
W2402.14	South of Tolpuddle Ball	AP 14
W2402.15	West of Roger's Hill Farm	AP 15
W2402.16	West Mead, near Bere Regis	Site C
W2402.18	Hill Barn, Tolpuddle	–
W2402.19	Roger's Hill Farm Burial	–
W2405.17	Tolpuddle Ball Cemetery	–
W2405	Watching Brief	–

The archive contains records relating to all stages of fieldwork carried out between October 1996 and February 1999. It includes 17 separate sites codes, each relating to a specific site or component of the works, as summarised above. The archive also includes all relevant background documentation including the *Outline Project Design*, *Archaeological Project Designs* and the evaluation specifications and reports for Hill Barn borrow pit. The archive also includes all post-excavation records and specialist reports. Finds from the project have been deposited with the Dorset County Museum, Dorchester, and the skeletal remains from the Roger's Hill Farm post-medieval burial (W2402.19) which were reburied in St Laurence's Church, Affpuddle on 19 November 1998.

The organisation of the archive

The archive is ordered as follows.

Archive block	*Summary of contents*	*File nos*
1	Archive index, general background information, specifications, reports & publication (Wessex Archaeology)	1–2
2	Liverpool University excavation records (1991; 1993)	3–13
3	Wessex Archaeology excavation records (1996–7) & watching brief records (1997–9)	14–21
4	Wessex Archaeology excavation records (1998: Tolpuddle Ball Cemetery)	22–25
5	Post-excavation records (general)	26–29
6	Liverpool University photographic archive	30–33
7	Wessex Archaeology photographic archive	34–36
8	The digital archive	n/a
9	Microfilm copy of the archive	n/a
–	The finds and environmental materials	
	– Liverpool University finds	Boxes 1–117
	– Wessex Archaeology finds	Boxes 1–88

The full index to the digital archive has been deposited with the Archaeological Data Service, York.

A microfilm copy of the archive has been deposited with the National Archaeological Record, English Heritage, Swindon.

Appendix 2: Tolpuddle Ball (TP93). Summary of Iron Age Pits

Pit	*No. fills*	*Dimensions (m)*	*Depth (m)*	*Phase*	*Type*	*Notes*	*Finds (quantified as no./ wt in g)*
9	19	1.50 diam. (top) 1.75 diam. (base)	1.90	4	B	Large pit in NE area of Phase 3 enclosure.	LIA Pottery (211/1998), 2 human neonate skeletons, animal bone (mostly sheep), grain, chaff, charcoal
13	2	1.00 diam. (top) 1.40 diam. (base)	0.95	3/4	B	In NE area of Phase 3 enclosure. Intercuts with pit 15, but relationship uncertain.	LIA pottery (13/148), animal bone, burnt flint.
15	8	1.20 diam (top) 1.50 diam. (base)	1.25	3/4	B	In NE area of Phase 3 enclosure. Intercuts with pits 13 & 17, but relationships uncertain.	LIA pottery (41/372), animal bone, disarticulated human bone & fired clay.
17	6	1.50 x 1.20 (top) 1.55 wide at base	1.30	3/4	B	In NE area of Phase 3 enclosure. Intercuts with pit 15, but relationship uncertain.	LIA pottery (7/110) & animal bone.
19	9	1.25 diam (top) 1.65 diam. (base)	1.2	3	B	In NE area of Phase 3 enclosure. Intercuts with pit 21, but relationship uncertain.	M-LIA pottery (30/368) & animal bone including dog skeleton (SF 158).
21	3	0.90 diam (top) 1.00 diam (base)	0.50	3/4	B	In NE area of Phase 3 enclosure. Intercuts with pit 19, but relationship uncertain.	Bone needle (SF 161), unidentified Fe fragment (SF 162), LIA pottery (5/34) & animal bone.
23	5	1.40 diam	0.70	3/4	C	In NE area of Phase 3 enclosure.	LIA/ERB pottery (1/37).
29	4	1.40 diam	?0.75	3/4	?	In NE area of Phase 3 enclosure.	LIA pottery (9/157) & animal bone.
31	1	1.40 diam	0.80	3	C	In NE area of Phase 3 enclosure.	M-LIA pottery (22/355) & animal bone.
33	3	1.80 diam	1.60	3	C	In NE area of Phase 3 enclosure.	M-LIA pottery (87/844) & animal bone.
35	2	1.00 diam (top) 1.15 diam (base)	0.85	3/4	B	In NE area of Phase 3 enclosure.	LIA pottery (36/1030) & animal bone.
37	2	1.20 diam	0.45	4	C	In NE area of Phase 3 enclosure. Cuts upper fill of pit 1264.	LIA pottery (12/78) & animal bone.
45	17	1.80 diam (top) 2.25 diam. (base)	1.95	3	B	In NE area of Phase 3 enclosure.	M-LIA pottery (34/340), animal bone & possible human neonate burial (1403).
61	?1	2.00 x 1.60 m	?1.30	3/4	?	In SW area of Phase 3 enclosure. Intercuts with pit 353, but relationship unclear.	Possibly plough damaged human skeleton, disarticulated human bone, LIA pottery (14/968) & animal bone.
66	10	1.60 diam (top) 1.75 diam. (base)	1.50	3/4	B	One of a group of pits *c.* 50 m to the SE of the Phase 3 enclosure.	M-LIA pottery (13/156) & animal bone, including antler.
68	2	1.40 diam. (top) 1.45 diam. (base)	1.30	3/4	B	One of a group of pits *c.* 50 m to the SE of the Phase 3 enclosure. Has a small pit/posthole 0.45 m diam. & 0.35 m deep in the base, close to the southern edge.	LIA pottery (25/259) & grain.
72	8	1.25 diam. (top) 1.45 diam. (base)	1.05	3/4	B	One of a group of pits *c.* 50 m to the SE of the Phase 3 enclosure. Has a small pit/posthole 0.45 m diam. & 0.60 deep in the base, close to the eastern edge.	LIA or ERB pottery (9/80), fired clay & animal bone.

Pit	*No. fills*	*Dimensions (m)*	*Depth (m)*	*Phase*	*Type*	*Notes*	*Finds (quantified as no./ wt in g)*
74	2	1.50 diam.	0.75	3/4	C	One of a group of pits *c.* 50 m to the SE of the Phase 3 enclosure.	Animal bone only, no datable finds.
76	2	1.15 diam.	1.05	3/4	C	One of a small group of pits *c.* 60 m to the SE of the Phase 3 enclosure.	LIA pottery (1/22) & animal bone
82	5	1.30 diam.	1.20	3/4	O	Very irregular pit in NE area of Phase 3 enclosure. Possibly an unfinished bell pit. One side undercut, very irregular base.	None.
84	3	1.20 diam.	0.45	3	C	In the NE of the Phase 3 enclosure.	M-LIA pot (9/64) & animal bone, all from basal fill.
90	1	1.40 diam.	0.30	4	C	Cuts southern ditch of Phase 3 enclosure.	LIA & LRB pottery (18/152) & animal bone.
92	2	1.90 diam.	0.35	3/4	C	*c.* 1 m to the south of the southern ditch of the Phase 3 enclosure.	LIA pottery (17/118) & animal bone.
94	10	1.75 diam.	1.35	3	C	*c.* 1 m to the north of the NE corner of the Phase 3 enclosure.	M-LIA pottery (8/35), one sherd of RB pottery (1/11), assumed to be intrusive, & animal bone.
104	1	1.90 diam.	0.90	3/4	C	In NE area of Phase 3 enclosure.	Animal bone.
108	5	1.80 diam. (top) 2.10 diam. (base)	1.15	4	B	*c.* 4 m to the south of the southern ditch of the Phase 3 enclosure.	1st century BC/AD pottery (1278/5914), including two complete pots, disarticulated human bone & animal bone.
116	10	1.25 diam. (top) 1.50 diam. (base)	1.10	3	B	In SW area of Phase 3 enclosure.	M-LIA pottery (43/540) & animal bone including a horse skull (SF 230).
118	3	0.90 diam.	0.65	3/4	O	In SW area of Phase 3 enclosure.	M-LIA pottery (11/71) & animal bone.
120	7	1.30 diam. (top) 1.35 diam. (base)	1.50	4	B	In SW area of Phase 3 enclosure. Intercut with pit 122 but relationship unclear.	LIA pottery (127/1525), including a complete, though fragmentary pot, & animal bone.
122	5	1.30 diam.	1.30	4	C	In SW area of Phase 3 enclosure. Intercut with pit 120 but relationship unclear.	Large quantities of LIA pottery (2293/24278), including a complete, though fragmentary, very large pot (SF 152) & animal bone.
172	?1	0.70 x 0.40 m	0.30	3/4	O	Very irregular pit *c.* 5 m to the north of the NW corner of the Phase 3 enclosure.	LIA-ERB pottery (38/1706) & animal bone.
207	?1	1.10 x 1.00 m	?	3/4	?	In SW area of Phase 3 enclosure.	LIA-ERB pottery (24/201) & animal bone.
209	1	1.15 diam.	0.60	3/4	O	In NE area of Phase 3 enclosure.	Pottery recorded but not located in archive.
217	8	1.85 diam.	1.35	3/4	C	In NE area of Phase 3 enclosure.	LIA-ERB pottery (6/57) & animal bone.
219	2	1.80 x 1.50 m	0.45	3/4	C	In NE area of Phase 3 enclosure.	LIA-ERB pottery (3/23) & animal bone.
221	?1	1.15 m	0.67	3/4	C	In SW area of Phase 3 enclosure	LIA pottery (3/14), animal bone & fired clay
223	4	1.70 m	0.90	4	O	In SW area of Phase 3 enclosure. Cuts pit 225.	Loomweights (SF 188, 189, 190), LIA pottery (46/466) & animal bone.
225	5	1.30 x 1.10 m	0.60	3/4	O	In SW area of Phase 3 enclosure. Cut by pit 223.	LIA pottery (1/62) & animal bone.
227	?1	0.66 x 0.56 m	?	3/4	?	In SW area of Phase 3 enclosure.	LIA-ERB pottery (9/116) & animal bone.
231	5	1.30 x 1.40 m	0.85	4	B	In NW area of Phase 3 enclosure.	LIA pottery (74/1038) & animal bone.

Pit	*No. fills*	*Dimensions (m)*	*Depth (m)*	*Phase*	*Type*	*Notes*	*Finds (quantified as no. / wt in g)*
233	4	1.25 diam. (top) 1.40 diam. (base)	0.80	3/4	B	In NW area of Phase 3 enclosure.	LIA pottery (4/36) & animal bone
235	?1	1.15 x 1.00 m	?	3/4	?	*c.* 1 m to the north of the northern ditch of the Phase 3 enclosure.	LIA-ERB pottery (16/67) & animal bone.
353	?1	1.40 x 0.70 m	?	3/4	O	In SW area of Phase 3 enclosure, intercuts with pit 61, but relationship unclear.	Dog skull (with butchery marks. Other dog bones were present could possibly have been a complete skeleton) & LIA pottery (11/158).
359	6	2.00 x 1.70 m	1.10	3/4	C	In NE area of Phase 3 enclosure.	LIA-ERB pottery (5/23) & animal bone.
363	6	2.50 x 2.10 m	0.80	4	O	In NE area of Phase 3 enclosure.	LIA pottery (12/110) & animal bone.
403	6	3.40 diam (top) 1.85 (base)	3.15	3/4	O	Very large pit situated *c.* 50 m to the SE of the Phase 3 enclosure.	LIA pottery (12/158) & animal bone, including an articulated dog skeleton (SF 123)
415	1	0.60 diam. (top) 0.70 diam. (base)	0.40	3/4	B	One of a group *c.* 50 m to the SE of the Phase 3 enclosure.	LIA-ERB pottery (3/8) & animal bone.
429	1	0.95 diam.	0.35	3/4	C	*c.* 1 m to the north of the southern ditch of the Phase 3 enclosure, close to the entrance.	IA pottery (2/46) & animal bone.
775	?1	0.80 diam. (top) 1.25 diam. (base)	0.85	3/4	B	The most southerly of two pits to the NE of the Phase 4 roundhouse to the east of the Phase 3 enclosure.	LIA pottery (6/50) & animal bone
777	5	1.60 diam.	1.45	3/4	C	The most northerly of two pits to the NE of the Phase 4 roundhouse to the east of the Phase 3 enclosure.	IA or RB pottery (1/6) & animal bone.
799	1	1.05 diam.	1.40	3/4	C	One of a group *c.* 50 m to the SE of the Phase 3 enclosure. Cut by pit 815.	LIA pottery (1/15) & animal bone (inc. possible dog skeleton)
811	9	2.5 diam. (top) 1.35 diam. (base)	1.35	3/4	O	One of a group *c.* 50 m to the SE of the Phase 3 enclosure. Possibly two intercutting pits (excavated as a single feature). Cuts pit 815.	LIA-ERB pottery (1/4) & animal bone.
815	4	3.35 x 2.5 (top) 1.80 diam (base)	1.9	3/4	O	One of a *c.* 50 m to the SE of the Phase 3 enclosure. Cuts pit 799, cut by 811. Small 0.50 m diam., 0.30 m deep hole in base.	LIA pottery (21/237) & animal bone, including a worked antler object, possible linch-pin (SF 110), hare bones & a shark tooth
1019	7	1.30 diam. (top) 1.50 diam. (base)	1.10	3/4	B	In NW area of Phase 3 enclosure.	LIA pottery (37/553), animal bone (including possible whole lamb carcass) & grain.
1037	2	1.25 x 1.10 m	0.45	3/4	C	In SW area of Phase 3 enclosure.	LIA pottery (12/481) & animal bone.
1041	9	1.50 x 1.30 m	0.65	3/4	C	In NW area of Phase 3 enclosure.	Loom weight (SF 204), LIA pottery (8/94), animal bone, fired clay & a possible Fe blade (SF 177)
1047	11	3.0 x 2.10	1.90	3/4	O	In SW area of Phase 3 enclosure. Intercuts with pit 1049, but relationship uncertain. Almost completely truncates an earlier pit (1224).	LIA-ERB pottery (49/666) & animal bone.
1049	6	1.50 x 1.10 m	1.25	3/4	O	In SW area of Phase 3 enclosure. Intercuts with pit 1047, but relationship in uncertain.	LIA-ERB pottery (50/1139).

Pit	*No. fills*	*Dimensions (m)*	*Depth (m)*	*Phase*	*Type*	*Notes*	*Finds (quantified as no./ wt in g)*
1057	4	1.70 x 1.0 m	0.90	3/4	O	In SW area of Phase 3 enclosure.	LIA-ERB pottery (26/570) & animal bone.
1059	2	1.20 x 1.00 m	0.30	3/4	O	In SW area of Phase 3 enclosure.	LIA-ERB pottery (15/54) & animal bone.
1067	1	1.30 diam. (top) 1.50 diam. (base)	0.75	3/4	B	One of a group *c.* 50 m to the SE of the Phase 3 enclosure.	LIA pottery (29/312), animal bone & a whetstone
1069	4	1.00 diam.	1.0 +	4	C	In SW area of Phase 3 enclosure. Not bottomed.	LIA pottery (1334/5392), & animal bone.
1071	?1	1.40 diam.	?	3/4	?	In SW area of Phase 3 enclosure.	LIA-ERB pottery (4/10), animal bone, Fe disc, Fe knife & large quern fragment (SF 149)
1083	4	1.10 diam.	1.0	3	O	In SW area of Phase 3 enclosure.	M-LIA pottery (88/773), animal bone & burnt flint.
1085	4	1.60 x 1.25 m	0.90	3/4	O	In SW area of Phase 3 enclosure.	LIA-ERB pottery (15/205) & animal bone.
1087	?1	0.70 diam.	?	3/4	?	In SW area of Phase 3 enclosure.	? None
1093	11	1.50 x 1.30 m	1.05	4	B	Cuts Phase 3 enclosure ditch near SW corner. Contains structured deposit.	Large chalk disk (SF 159), Cu alloy brooch (SF 164), LIA pottery (62/1634), including a near complete pot, & animal bone (including a dog skull, jaws & neck vertebra)
1095	3	1.40 x 1.20 m	0.65	3	C	In SW area of Phase 3 enclosure.	M-LIA pottery (18/60), animal bone & burnt flint.
1099	1	1.50 x 1.30	0.35	3/4	C	In SW area of Phase 3 enclosure.	Animal bone, no datable finds.
1109	5	1.10 diam. (top) 1.20 diam. (base)	0.70	3/4	B	To west of the Phase 3 enclosure ditch by the SW corner.	Finds of pottery, daub & animal bone recorded, but only animal bone found in archive.
1172	8	1.80 diam. (top) 2.20 diam. (base)	1.25	4	B	Cuts Phase 3 enclosure ditch near SW corner.	LIA pottery (25/365) & animal bone.
1224	3	Uncertain	1.30	3/4	?	In SW area of Phase 3 enclosure. Almost completely truncated by later pits (only seen in section).	LIA pottery (7/113)
1264	9	2.30 x 2.0 (top) 2.40 diam. (base)	1.60	3	B	In NE area of Phase 3 enclosure. Upper fills cut by pit 37.	M-LIA pottery (5/97), animal bone, including skull & footbones of a dog (SF 172) & grain.
1288	8	1.90 diam. (top) 2.20 diam. (base)	0.90	3/4	B	In NE area of Phase 3 enclosure. Intercut with pit 1302 but relationship uncertain.	LIA pottery (6/71).
1302	3	1.70 diam.	0.60	3/4	C	In NE area of Phase 3 enclosure. Intercut with pit 1288 but relationship is uncertain.	LIA pottery (10/505), including near complete pot, animal bone (including a cattle skull, ?deliberately placed) & shale
1412	17	1.60 x 1.20 m	1.05	3/4	O	In NE area of Phase 3 enclosure.	Animal bone.
1423	9	1.35 x 1.65 top 1.65 diam. (base)	0.95	3/4	B	In NE area of Phase 3 enclosure.	Animal bone
1429	6	1.55 diam	1.0	3/4	C	In NE area of Phase 3 enclosure.	Animal bone
1431	3	1.20 x 1.05 top 1.40 diam. (base)	0.85	3/4	B	In NE area of Phase 3 enclosure.	LIA pottery (7/107) & animal bone.
1433	1	?1.40 diam. or	0.55	4	O	In NE area of Phase 3 enclosure, cuts enclosure ditch.	LIA pottery (19/218) & animal bone.
1446	7	1.55 diam. (top) 1.75 diam. (base)	1.45	3/4	B	In NE area of Phase 3 enclosure.	LIA-ERB pottery (28/825) & animal bone.
1542	?	?1.50 diam.	?	4	?	Location not recorded. Position on Fig. 18 estimated from photographs.	Two near-complete (& subsequently reconstructed) LIA pots (see Plate 46) & animal bone.

Key to pit types:
B = Bell pit; C = cylindrical; O = other; ? = not recorded

Appendix 3: Tolpuddle Ball Cemetery. Summary of Burials

(For sex and age determinations see Table 31)

Skeleton no.	*Grave cut*	*Grave fill*	*Grave depth (m)*	*Grave length (m)*	*Grave width (m)*	*Burial attitude / Position of arms (Type)*	*Coffin*	*Stone packing*	*Finds*	*Comments*
5070	5069	5071	0.20	1.94	0.65	Extended, supine. Hands together on abdomen; slightly disturbed (Type 1).	No	No	–	Skeleton truncated, ?by machine. Upper arms, part of skull, & l.-hand side ribs absent. Grave cuts posthole 5069.
5082	5083	5081	0.20	2.10	0.57	Extended, supine. L. forearm slightly disturbed (Type 1).	No	No	Pot	Narrow grave; appears over-long for body. Very few foot bones recovered possibly due to post-depositional disturbance. Posthole 5258 0.10 m W of head end.
5085	5087	5086	0.15	1.76	0.70	Extended, supine. Hands over l. hip (Type 2).	No	No	Pot,flint animal	Grave disturbed at E end by ?machine & also ?animal disturbance. Redeposited juvenile bone (?5096).
5091	5090	5089	0.11	1.85 est.	0.63 est.	Unknown.	No	No	Flint Animal	Severely disturbed by machining & animal activity. Frags skull & partial long bones remaining.
5094	5092	5093	0.16	2.37	0.86	Extended, supine. Arms flexed 90° across stomach; slightly disturbed (Type 3).	No	No	Animal	S edge truncated during machining, Probable animal disturbance also.
5096	5097	5095	0.15	1.44	0.53	Extended, supine. Hands on pelvis (Type 1).	No	No	–	Truncated by machine & animal disturbance on N/S sides.
5104	5102	5103	0.17	1.15	0.58	Extended, supine. R. arm extended; l. hand on r. elbow (Type 2).	No	No	Pot Flint	Grave cuts a natural solution hollow.
5108	5109	5107	0.11	2.05	0.70	Extended, supine. Hands on respective hips, head end disturbed (Type 1).	No	No	Pot Flint	Sides appear to be mostly machined away to W & in SE corner.
5111	5110	5112	0.24	2.08	0.85	Extended, supine. L. hand at r. shoulder; r. forearm disturbed (Type 5).	No	No	–	Redeposited subadult/young adult bone.
5114	5115	5113	0.11	2.05	0.65	Extended, supine. R. hand at neck, l. hand on r. hip; forearms disturbed (Type 4).	No	No	Pot Flint	–
5118	5116	5117	0.49	2.14	0.69	Extended, supine burial. R. arm extended; l. hand on r. hip (Type 2).	No	No	Pot	Skull tilted forwards. Posthole 5196 lies 0.50 m W of head end of grave. Redeposited adult bone (=?5108).
5122	5123	5121	0.39	2.10	0.69	Extended, supine. Arms extend to side; slight disturbance (Type 1).	No	No	–	Redeposited neonatal bones.
5125	5126	5124	0.18	1.16	0.49	Extended, supine. L. arm across body, r. hand on abdomen (Type 1).	No	No	Pot	–
5130	5131	5129	0.20	2.00	0.50	Extended, supine. R. hand on abdomen, l. arm disturbed (Type 1).	No	No	–	L. side of body severely disturbed, ?animal activity. Grave cut at W end by corner of Grave 5165.

Skeleton no.	*Grave cut*	*Grave fill*	*Grave depth (m)*	*Grave length (m)*	*Grave width (m)*	*Burial attitude / Position of arms (Type)*	*Coffin*	*Stone packing*	*Finds*	*Comments*
5135	5134	5136	0.26	1.90	0.59	Extended, supine. L. hand on l. shoulder, r. hand on abdomen; skull & pelvic area disturbed (Type 4).	No	No	Animal	Grave cuts BA ditches 5302 & 5303.
5140	5139	5137	0.15	1.90	0.60	Extended, supine. L. hand on abdomen, r. hand by head/r. shoulder; disturbed distal end (Type 4).	Yes	No	Pot	Fill of grave indicates coffin; outer chalk rubble & dark sandy loam fill in centre, above skeleton.
5142	5143	5141	0.15	1.45	0.57	Extended, supine. L. arm extended; r. hand on r. hip; thorax disturbed (Type 1).	No	No	–	Truncated by machine & animal disturbance.
5149	5150	5148	0.31	1.93	0.64	Extended, supine. R. arm extended; l. hand on pubis (Type 1)	Yes	Yes	–	Row of flint nodules along S edge of grave, ?coffin packing. Differential fills also suggest coffin.
5152	5153	5151	0.25	1.92	0.57	Extended, supine. L. hand extended, r. hand on pubis (Type 2).	No	No	–	–
5155	5156	5154	0.28	0.97	0.29	Extended, supine. ?arms extended.	No	No	–	Skeleton in very fragmented condition.
5158	5159	5157	0.21	1.84	0.65	Extended, supine. R. arm extended; l. hand on l. hip – forearm disturbed (Type 1).	No	No	Bead Pot	Very small blue glass bead from fill of grave (sieving find). ?casual inclusion.
5162	5160	5161	0.23	2.06	0.65	Extended, supine. Arms folded; l. hand in crook of rt. arm, r. arm cups l. elbow (Type 3).	No	No	Pot Animal	–
5164	5165	5163	0.35	1.46	0.60	Extended, supine. Arms ?extended.	No	No	–	Very few skeletal remains, skull & few long bones. Cuts grave 5131 at E end.
5167	5168	5166	0.48	1.40	0.70	Flexed , supine. R. hand on r. hip, l. hand on abdomen; lower limbs flexed acutely at hip & knee? - leg bone disturbed.	No	No	–	Animal disturbance on N & S side. Only flexed burial in cemetery. Note also different size/shape of the grave. Redeposited subadult bone (=?5229).
5184	5185	5183	0.34	1.87	0.51	Extended, supine. R. arm extended, hand on lateral r. hip, l. hand on abdomen (Type 1).	No	No	–	–
5189	5190	5188	0.18	1.10	0.44	Extended, supine. Arms ?extended (Type 1).	No	No	–	Very little human bone remaining.
5192	5191	5193	0.17	1.35	0.58	Extended, supine. R. arm flexed slightly at elbow (Type 1).	No	No	Pot	Skeleton in very poor condition, little remaining.
5198	5182	5181	0.50	1.73	0.48	Extended, supine. R. arm extended, l. hand on pubis; ?disturbance in abdominal area (Type 1).	No	No	–	–
5201	5199	5200	0.20	1.51	0.49	Extended, supine. ?l. hand over pelvis; disturbance central area (Type 1).	No	No	Pot Flint	–
5202	5203	5230	0.34	2.45	0.70	Extended, supine. Hands together on r. hip; disturbance central & distal end (Type 2).	No	No	–	Grave cuts treebowl 5205.
5207	5208	5206	0.22	1.65	0.46	Extended, supine. R. arm extended, r. hand lateral r. hip, l. hand medial r. hip (Type 2).	No	No	–	–
5209	5216	5215	0.17	1.25	0.48	Unknown.	No	No	–	Highly disturbed grave – animal activity, only remains are several skull frags.
5213	5214	5212	0.31	1.70	0.55	Extended, supine. Hands on respective hips - both flexed medially at wrist (Type 1).	No	No	–	Grave truncated by machining & animal disturbance.

Skeleton no.	*Grave cut*	*Grave fill*	*Grave depth (m)*	*Grave length (m)*	*Grave width (m)*	*Burial attitude / Position of arms (Type)*	*Coffin*	*Stone packing*	*Finds*	*Comments*
5218	5217	5219	0.20	1.88	0.56	Extended, supine. R. hand across r. side neck, l. hand r. side chest; legs disturbed (Type 5).	Yes?	No	–	Differential fill may suggest that this burial was within a coffin.
5227	5225	5226	0.51	1.96	0.49	Extended, supine. R. hand lower l. side chest, l. hand under r. elbow; r. arm disturbed (Type 3).	No	No	–	–
5229	5251	5228	0.30	1.58	0.57	Extended, supine. ?extended; feet & l. arm disturbed (Type 1).	No	No	Pot Flint	–
5238	5237	5239	0.35	2.00	0.52	Extended, supine. Arms extended, hand on respective thighs, upper limb disturbed (Type 1).	No	No	–	–
5241	5240	5242	0.47	2.00	0.67	Extended, supine. R. hand under l. elbow, l. hand on l. shoulder/neck (Type 4).	Yes	Yes	–	Three large flint nodules at E end of grave , ?coffin packing.
5244	5243	5243	0.30	1.08	0.54	Extended, supine. Extended; legs slightly disturbed (Type 1).	No	No	–	–
5249	5250	5248	0.42	1.32	0.51	Extended, supine. Arms extended (Type 1).	No	No	–	Very little human bone remaining.
5253	5254	5252	0.32	1.97	0.56	Extended, supine. R. hand pronated at side, l. hand on pelvis; slight disturbance (Type 1).	No	No	Pot	Animal disturbance to N & S edges.
5256	5257	5255	0.40	2.00	0.60	Extended, supine. R. hand in crook of l. arm; central disturbance (Type 3).	No	No	Pot	Some animal disturbance.
5261	5262	5260	0.25	1.02	0.50	Extended, supine. Arms ?extended.	No	No	–	Very poorly preserved, only skull frags. Redeposited young adult bone
5266	5267	5265	0.28	1.74	0.40	Extended, supine. R. extended; arms disturbed (Type 1).	No	No	–	E end disturbed by animal activity, little human bone remaining.
5271	5272	5270	0.36	1.21	0.42	Extended, supine. Hands on respective hips; central area & feet disturbed (Type 1).	No	No	Pot Flint	–
5298	5088	5084	0.05	1.50 est.	0.50 est.	Unknown.	No	No	–	Truncated by machining & animal activity, several small skull fragments.
5299	5144	5145	0.24	0.72	0.32	Unknown.	No	No	–	Small grave cut; no human remains from excavation. Infant bone retrieved from sampling.
5300	5175	5174	0.10	0.61	0.24	Unknown.	No	No	–	Small grave cut; no human remains from excavation. Young infant bone retrieved from sampling.
-	5172	5171	0.10	0.56	0.20	Unknown.	No	No	–	No skeletal remains from excavation or sampling. Probable grave of a young infant. Lies adjacent to burial 5300
-	5187	5186	0.20	0.62	0.33	Unknown.	No	No	–	No skeletal remains from excavation or sampling. Probable grave of a young infant. Outlying location.
TOTAL : 48 BURIALS + 2 INFANT GRAVES WITHOUT BONE									–	–

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Barbara Hird

NOTE: Figures in italics denote illustrations. Abbreviations used in the index: BA = Bronze Age; EBA = Early Bronze Age; MBA = Middle Bronze Age; LBA = Late Bronze Age; IA = Iron Age; EIA = Early Iron Age; LIA = Late Iron Age; RB = Romano-British

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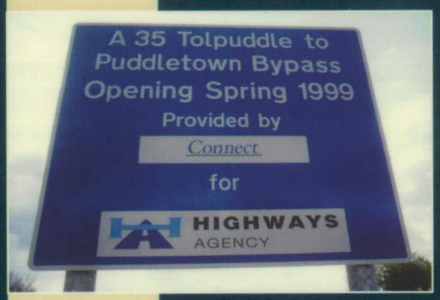
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The A35 Tolpuddle to Puddletown Bypass in Dorset was one of the first tranche of *Design, Build, Finance and Operate* road schemes whereby responsibility for undertaking archaeological work is transferred from the Highways Agency to the DBFO Company.

The bypass provided a 9 km long transect on the margins of the chalk uplands of Dorset at their interface with the Piddle valley and the Hampshire Basin. This is a zone of particular interest for the later prehistoric and Roman periods since it lies between the regional centre of Dorchester and the industrial zone of Purbeck.

Fourteen different areas of interest were identified along the route, ranging in date from the Neolithic to post-medieval. The most important site was a multi-period settlement near Tolpuddle Ball. An Iron Age and Romano-British site was first examined here in 1993 by Liverpool University for the Highways Agency. The DBFO project has demonstrated settlement on this site extending back to the earlier Bronze Age. An inhumation cemetery was also discovered near Tolpuddle Ball dating from the Late Roman period to the 7th century AD - a rare and most important discovery for the region.

ISSN 0965-5778

ISBN 1-874350-30-2



