

Coton Park, Rugby, Warwickshire: A Middle Iron Age Settlement with Copper Alloy Casting

Andy Chapman

with contributions by

Trevor Anderson, Paul Blinkhorn, Pat Chapman, Steve Critchley,
Karen Deighton, Tora Hylton, Dennis Jackson, Ivan Mack, Anthony Maull,
Gerry McDonnell, Matthew Ponting and Jane Timby

Illustrations by

Andy Chapman, Pat Walsh and Mark Roughley

ARCHAEOPRESS ARCHAEOLOGY



ARCHAEOPRESS PUBLISHING LTD

Summertown Pavilion

18-24 Middle Way

Summertown

Oxford OX2 7LG

www.archaeopress.com

ISBN 978-1-78969-645-5

ISBN 978-1-78969-646-2 (e-Pdf)

© the individual authors and Archaeopress 2020

Front cover: View of ring ditch RD3, which produced the copper alloy and bone working debris, looking north.

Back cover: A triangular crucible for copper alloy casting, top, and a sprue-cup from a lost wax investment mould, bottom.

All rights reserved. No part of this book may be reproduced, or transmitted, in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of the copyright owners.

Printed in England by Holywell Press, Oxford

This book is available direct from Archaeopress or from our website www.archaeopress.com

Contents

List of Figures.....	vii
List of Tables	x
Acknowledgements	xii
List of Contributors.....	xiii
Chapter 1 Introduction	1
Background.....	1
Location, topography and geology	1
Objectives	1
Methodology.....	2
Machine excavation	2
Hand excavation and recording.....	2
Later disturbances	5
Chapter 2 Neolithic and Bronze Age activity	9
The worked flint	9
The Middle Bronze Age pits	9
Pit 100	9
Pit 530	10
The radiocarbon dates	10
The copper alloy dagger	11
The Bronze Age pottery.....	11
Pit 100	11
Vessel 1.....	11
Vessel 2.....	11
Pit 530	11
Discussion	12
Wood species identifications	12
by Rowena Gale	
Discussion	12
Chapter 3 The Iron Age settlement: chronology and development	13
The pottery chronology.....	13
Radiocarbon dating	13
Settlement development	13
Phase 1: later Early Iron Age (c.450-400 BC)	14
Phase 2: earlier Middle Iron Age: (c.400-350/300BC).....	18
Phase 3: earlier Middle Iron Age (c.350/300-250/200BC).....	22
Phase 4: later Middle Iron Age (c.250/200-150BC)	23
Phase 5: Late Iron Age to early Roman (c.0BC-c.75AD).....	24
Chapter 4 The Iron Age settlement: structural evidence	25
Andy Chapman and Pat Chapman	
Ring ditches and enclosures	25
Early ring ditches and pit groups:	25
Enclosure E5, ring ditches RD14, RD34, RD6 and RD23	25
Enclosure E5	25
Ring ditch RD14.....	26
Ring ditch RD34.....	26
A line of pits.....	26
Principal roundhouse RD6	28
The wall slot and portal postholes.....	28
The ring ditch	28
Pit cluster beneath RD5	28
The linear pit group or pit alignment	29

The northern linear gully	29
Ring ditch RD23	29
Ring ditch RD24 and enclosure E11	30
Middle Iron Age, Group 1:	30
The copper alloy and bone working area	30
Ring ditch RD2.....	31
Ring ditch RD3.....	31
Ring ditch RD4.....	32
Enclosure E1	36
Enclosure E2	36
Middle Iron Age, Group 2:	37
The principal roundhouse RD5 and associated ring ditches	37
Principal roundhouse RD5	37
The wall slot and portal post-pits.....	37
The northern slot	37
The inner ring ditch.....	39
The outer ring ditch.....	39
The middle or realigned ring ditch	40
The enclosure ditch	40
Ring ditch RD17.....	42
Ring ditch RD16.....	42
Ring ditch RD33.....	43
Ring ditch RD15.....	43
Middle Iron Age, Roundhouse Group 3	43
Ring ditch RD10.....	43
Ring ditch RD18.....	44
Ring ditch RD19.....	45
Enclosure RD9.....	45
Ring ditch RD11.....	46
Middle Iron Age, Roundhouse Group 4	48
Ring ditch RD12.....	48
Linear ditch.....	50
Ring ditch RD20.....	50
Ring ditch RD13	50
Ring ditch RD26.....	50
The southern roundhouses	51
Ring ditch RD27.....	51
Ring ditch RD28.....	51
The eastern ring ditches and enclosures	51
Ring ditch RD1.....	51
Ring ditch RD21.....	52
Ring ditch RD22.....	52
Ring ditch RD29.....	53
Enclosure E10	53
Enclosure E9	54
Enclosure E12	54
Ditch system D7	54
Enclosures north of the principal roundhouse group	54
Enclosure E6	54
Enclosure E7	55
The north-western enclosures abutting boundary ditch D1	55
Enclosure E8	55
Ring ditch (enclosure) RD7.....	57
Ring ditch RD8.....	59
The main boundary system, D1 and D3.....	60
Ditch D1, the east-west boundary	60
Ditch D3, the eastern boundary	61

The northern enclosures	61
Enclosure E3	63
Ditch D2	63
Ditch D4	64
Ring ditch RD25	64
Ring ditch RD32	64
Ring ditch RD30	64
Enclosure E13	64
Enclosure E14	65
Chapter 5 The Iron Age pottery	66
Paul Blinkhorn, Dennis Jackson and Andy Chapman	
Introduction	66
Summary of Chronology	66
Fabrics	66
Vessel Fragmentation	67
Vessel forms	67
Jars	68
Decoration	68
A possible dairy bowl	70
The scored ware	70
Catalogue of illustrated pottery	72
Vessel size analysis	75
Paul Blinkhorn	
Quantification of the Iron Age pottery by structure	75
Chapter 6 The copper alloy working debris	79
Andy Chapman and Matthew Ponting	
Introduction	79
The crucibles	79
Fabric and condition	79
Forms	79
Type A	80
Type B	81
Investment moulds	81
Fabric	81
Form	81
Sprue-cups	81
Runners	84
The mould matrix	84
Conclusions	85
The bar mould	85
Copper alloy working dross	86
Metallurgical analysis of crucible fragments	87
by Matthew Ponting	
The analysis	87
Discussion	88
Chapter 7 Other finds	90
Pat Chapman and Andy Chapman with Ivan Mack, Gerry McDonnell, Steve Critchley and Karen Deighton	
An Iron Age coin	90
by Steve Critchley and Andy Chapman	
Other metal and stone finds	90
by Pat Chapman	
Iron	90
Copper	90
Shale	91

Fired clay loomweights	91
by Pat Chapman and Andy Chapman	
Form and manufacture	91
Distribution	92
Catalogue of illustrated weights (Fig 7.3)	93
Querns, rubbing stones and grinding stones	94
by Andy Chapman	
Saddle querns	94
Rubbing stones.....	94
Rotary querns	94
Distribution	95
Sharpening stones	97
by Pat Chapman	
Slags	97
by Ivan Mack and Gerry McDonnell	
The worked bone	97
by Pat Chapman, bone identifications by Karen Deighton	
Combs	98
Handles.....	98
Point/awl	98
Miscellaneous	98
Distribution	98
Catalogue of illustrated worked bone (Fig 7.6).....	98
Bone and antler working debris	99
by Andy Chapman, bone identifications by Karen Deighton	
Bone	99
Horn cores	99
Antler.....	99
Catalogue of illustrated bone working debris (Fig 7.7)	99
Fired clay	101
by Pat Chapman	
Roman ceramic tile.....	101
by Pat Chapman	
Chapter 8 Animal Bone and Environmental Evidence	102
Karen Deighton and Rowena Gale	
The animal bone	102
by Karen Deighton	
Methodology	102
Preservation	103
Ageing.....	103
Sexing	105
Pathologies	105
Skeletons	105
Body part analysis	105
Discussion	108
Environmental sampling	114
Wood species identifications	114
by Rowena Gale	
Materials and methods	114
The Iron Age wood species.....	114
Roundhouse RD1.....	114
Ring ditches RD2 and RD3	114
Roundhouse RD5.....	115
Discussion	116
Environmental evidence	116

Chapter 9 The medieval field system and modern field drains	117
The medieval field system.....	117
The modern field drains	117
Chapter 10 Discussion	118
Middle Bronze Age pits and a cremation cemetery	118
The physical structure of the Iron Age settlement	118
The social structure of the Iron Age settlement.....	120
The economic structure of the Iron Age settlement.....	121
Distribution of pottery and animal bone within ring ditches	122
The rate of finds deposition in comparison to DIRFT Lodge and Long Dole.....	123
The size of the roundhouses	124
The Iron Age roundhouse.....	126
Background.....	126
The evidence from Coton Park.....	127
Ring ditches.....	127
The roundhouse doorway and wall slots.....	127
A northern slot	131
The Brigstock roundhouse: ring ditch, wall slot and door posts	131
Aldwinckle, Hut 2: wall trench with posts	134
Wakerley roundhouses: wall slots and inner post rings	136
An Iron Age pottery typology and chronology for the south Midlands	137
Early Iron Age (650-400 BC)	139
Earlier Middle Iron Age (400-250/200 BC)	139
Later Middle Iron Age (250/200-100 BC).....	139
Late Iron Age (100-0 BC)	140
Late pre-Roman Iron Age (0-43AD).....	141
The Coton Park saddle querns	141
The introduction of the rotary quern in the Middle Iron Age	141
Storage jars and the introduction of the rotary quern: cause and effect?	144
Final thoughts	146
Interpreting the data	146
Recording the data	147
Chapter 11 Prehistoric and early Roman activity at Coton medieval village	149
Anthony Maull and Andy Chapman	
Background.....	149
Acknowledgements	149
Topography and geology.....	149
Neolithic and Early Bronze Age activity	150
The flint assemblage and a polished stone axe.....	150
by Andy Chapman	
The Middle Bronze Age pits	151
The Middle Bronze Age pottery	151
by Andy Chapman	
Catalogue of vessels from pit 1493 (Fig 11.3, 1-5).....	151
The Middle Bronze Age cremation cemetery	152
The cemetery.....	152
The cremation deposits	154
The Bronze Age pottery	155
by Andy Chapman	
The cremated human bone.....	156
by Trevor Anderson	
Charcoal from the cremation deposits	156
by Rowena Gale	
Discussion	157
The radiocarbon dates	157

The Iron Age and Roman settlement.....	157
Iron Age settlement.....	158
Enclosure E1 and E2, Building B1 and Structure S1	158
Roman settlement	158
The Southern Group (Enclosures E3-E6 and building B2).....	158
Ditch groups DG1-DG3	160
Enclosure E7 and Building B3	161
Enclosures E8-E13.....	162
The Iron Age and Roman pottery	162
by Jane Timby	
Iron Age pottery	162
Roman pottery	163
Other Iron Age and Roman finds.....	163
by Tora Hylton	
Bibliography	164

List of Figures

Figure 1.1: Site location.....	3
Figure 1.2: Results of geophysical survey, showing major structures (by Geophysical Surveys, Bradford, from Warwickshire Museum 1997).....	4
Figure 1.3: Aerial view of the northern half of the site, looking north, showing major Iron Age structures and the furrows of the medieval field system (original images by Andy Holland)	5
Figure 1.4: General site plan, showing the prehistoric features and the overlying furrows of the medieval field system.....	6
Figure 1.5: Looking north-east across enclosure E4 to the linear boundary ditch D1, showing the water-filled features following the flooding during March and April 1998	7
Figure 1.6: Excavation of enclosure E1, producing copper alloy casting debris; maintaining progress by use of barrow runs across the wet surface and bailing out features as necessary	7
Figure 1.7: Near the end of the excavation, looking towards the north-east corner of the site, with the machine stripped areas to the left, centre and top, and the box scraper stripped areas to the centre-right and foreground.....	8
Figure 2.1: Plans and sections of Bronze Age pits	9
Figure 2.2: The bronze dagger, SF1, from pit 100 (scale 10mm).....	11
Figure 3.1: General plan of Iron Age settlement, Phases 1-5.....	16
Figure 3.2: The development of the Middle Iron Age settlement, Phases 1-4.....	17
Figure 3.3: The Iron Age settlement, Phase 1: later Early Iron Age (c.450-400BC).....	18
Figure 3.4: The southern portal posthole, 195, and the narrow wall slot, 196, of the early roundhouse RD6, looking south	19
Figure 3.5: Aerial view of the principal roundhouse RD5, looking north (image by Andy Holland)	19
Figure 3.6: Principal roundhouse RD5, looking west across the late outer enclosure ditch	20
Figure 3.7: Aerial view of the copper alloy working area, Group1, looking north (image by Andy Holland)	20
Figure 3.8: Set of loomweights from a pit in RD18.....	21
Figure 3.9: The Iron Age settlement, Phase 2: earlier Middle Iron Age (c.400-350/300BC).....	21
Figure 3.10: The Iron Age settlement, Phase 3: earlier Middle Iron Age (c.350/200-250/200BC).....	22
Figure 3.11: The Iron Age settlement, Phase 4: later Middle Iron Age (c.250/200-150BC)	23
Figure 3.12: The Iron Age settlement, Phase 5: Late Iron Age to early Roman (c.0BC- AD75)	24
Figure 4.1: Later early Iron Age: Roundhouse RD14, ring ditch RD34 and enclosure E5	27
Figure 4.2: Later early Iron Age, ring ditch RD24 and enclosure E11.....	30
Figure 4.3: Group 1, structures RD2, RD3 and RD4 and enclosures E1-E2, copper alloy casting and bone working area.....	32
Figure 4.4: Group 1: ditch sections for RD2, RD3 and E1	33
Figure 4.5: The western (a: S21, 40 and 29) and eastern (b: S20, 27 and 34) ditch terminals of ring ditch RD3, and a section to the south-east (c: S25, 31 and 34).....	34
Figure 4.6: Group 2, roundhouses RD5, RD6, RD16, RD17 and RD33	38
Figure 4.7: Group 2, sections for roundhouse RD5.....	39
Figure 4.8: The northern ring ditch terminals of roundhouse RD5, the inner ditch, 166 (left) and outer ditch, 167 (right).....	40
Figure 4.9: The outer northern ring ditch terminal of RD5, 167, looking north, showing the dark fills containing burnt cobbles.....	40
Figure 4.10: Disturbed dog burial within the enclosure ditch, 182 on the south side of roundhouse RD5 (Scale 150mm).....	42
Figure 4.11: Group 3, ring ditches RD18, RD19, RD9, RD10 and RD11.....	46
Figure 4.12: Group 3, sections for ring ditches RD18, RD19, RD9 and RD11	47
Figure 4.13: Section of the main southern doorway post-pit, 260 (right), of RD12, and the shallow external plank settings, 261(left)	48
Figure 4.14: Group 4, ring ditches RD12, RD13, RD20 and RD26.....	49
Figure 4.15: The eastern ring ditches, RD1, RD21 and RD22.....	53
Figure 4.16: The northern enclosures, E6 and E7, and enclosures abutting boundary ditch D1, E8 and RD7	56

Figure 4.17: The northern enclosures, RD7, E4 and RD8, abutting boundary ditch D1.....	58
Figure 4.18: Section across the enclosure E4 and boundary ditch D1.....	59
Figure 4.19: The north-eastern area, showing boundary ditch D1 and structures within enclosure E3	62
Figure 4.20: Section across boundary ditch D1.....	63
Figure 5.1: Early (1-3) and Middle Iron Age pottery (4-6).....	68
Figure 5.2: Middle Iron Age pottery (7-11).....	69
Figure 5.3: Early Iron Age, 1-2, and Middle Iron Age pottery, 1-2, 4-5 and 11 (Scale 10mm)	70
Figure 5.4: Middle Iron Age pottery (12-15).....	71
Figure 5.5: Middle Iron Age scored ware pottery (16 -17 & 19)	72
Figure 5.6: Scored ware pottery, 17-19.....	73
Figure 5.7: Rim diameter occurrence by MNV, all fabrics	76
Figure 5.8: Rim diameter occurrence by MNV, sandy	77
Figure 5.9: Rim diameter occurrence by MNV, fine shell (red) and coarse shell (blue).....	77
Figure 6.1: The distribution of finds in the bronze and bone working complex	80
Figure 6.2: Copper alloy casting debris, 1: crucible, 2-3: sprue cups, 4: pouring gate and 5-6: mould fragments with impressions of cast objects	82
Figure 6.3: Crucibles: a) SF7 three views and b) SF28 profile (Scale 10mm)	83
Figure 6.4: Body of circular mould, plan and section, SF110 (Scale 10mm)	84
Figure 6.5: Sprue-cups, a) complete, plan and profile, SF49 and b) incomplete, plan, SF50 and SF16 (Scale 10mm)	84
Figure 6.6: The mould matrix: a) SF109, left and SF78 right and b) sprue-cup and mould matrix from Gussage All Saints, as displayed in the British Museum (Scale 10mm)	85
Figure 6.7: Reconstructed lost wax casting mould for a bridle bit side link, showing variations in the firing of the clay mould.....	85
Figure 6.8: Open bar mould, plan and section, SF102.....	86
Figure 6.9: Open bar mould, SF102 (Scale 10mm)	86
Figure 6.10: Micrograph of slag/crucible interface with silica grains alongside metal prills	87
Figure 6.11: Micrograph of crucible showing minute pieces of charcoal	87
Figure 6.12: Micrograph of crucible showing peculiarly-shaped bronze shavings and scrapings.....	87
Figure 6.13: Micrograph of crucible showing tin, copper and bronze prills	88
Figure 6.14: Micrograph of crucible showing rhomboidal crystalline Cassiterite.....	89
Figure 7.1: ‘Thurrock-type’ potin cast bronze coin, showing the head (left) and the stylised charging bull (right) (16.5mm diameter).....	90
Figure 7.2: Intact loomweight, SF69, from pit 284, RD18 (Scale 10mm)	92
Figure 7.3: Fired clay loomweights (1-5)	93
Figure 7.4: Saddle querns and rubbing stones (1-5) (Scales 10-20mm)	96
Figure 7.5: Rotary querns and a grinding stone (7-9) (Scales 20mm)	97
Figure 7.6: Worked bone: comb, teeth lost (1); handles (2-3) and point (4) (Scale 10mm).....	98
Figure 7.7: Sawn bone (1-3); sawn and cut horn (4-5) and sawn antler (6-7) (Scale 10mm)	100
Figure 8.1: Tooth wear for cattle; western roundhouses	104
Figure 8.2: Kill off pattern for pigs; western roundhouses.....	105
Figure 8.3: Comparison of cattle body parts to Binford’s (1978) meat utility index	106
Figure 8.4: Preservation of cattle bone compared to Brains’ (1981) modern index	106
Figure 8.5: Comparison of sheep/goat body parts with Binford’s (1978) meat utility index.....	107
Figure 8.6: Comparison of sheep/goat body parts to Brains’ (1981) modern data	108
Figure 10.1: The development of Coton Park, Phases 2-4, and comparative plan of DIRFT, the Lodge.....	119
Figure 10.2: Aerial view showing roundhouse RD5 and associated buildings, left, and the copper alloy casting and bone working area, right (image by Andy Holland).....	120
Figure 10.3: Distribution of pottery, left, and animal bone, right, within major ring ditches.....	123
Figure 10.4: Roundhouses RD5 and RD6, showing surviving elements: door posts, walls slots, outer ring of posts (RD6) and ring ditch systems	128
Figure 10.5: Comparative plans and sections of portal post-pits RD5, left, and RD12, right.....	129
Figure 10.6: Comparative plans and sections of northern slots at Coton Park, RD5, and DIRFT, Lodge, RD4	130

Figure 10.7: The Iron Age enclosure and roundhouse at Brigstock, surviving as an earthwork, with an enclosing ditch and internal bank, with a stone track leading to the door of the roundhouse, left centre	131
Figure 10.8: The Iron Age roundhouse at Brigstock, showing the encircling ring ditch, left, the narrow wall slot, left and right, and with a stone path approaching the doorway, which is defined by large post-pits at the ends of the wall slots	132
Figure 10.9: Plan of the Iron Age roundhouse at Brigstock (Jackson 1983, fig 4).....	133
Figure 10.10: Brigstock, sections (Jackson 1983, fig 5).....	134
Figure 10.11 Aldwinckle, Hut 2 showing the doorway post-pits, foreground and the wall trench with surviving post impressions	135
Figure 10.12 Aldwinckle, the wall trench of Hut 2 on the south side, showing the post impressions	135
Figure 10.13. Aldwinckle, plan of Hut 2 showing the ring of wall posts and the outer ring (OP) (Jackson 1977, fig 8) ...	136
Figure 10.14: Aldwinckle, sections of wall slots (Jackson 1977, fig 4)	137
Figure 10.15: Wakerley, Hut 2, showing wall slot and inner post ring (Jackson and Ambrose 1978, fig 10)	138
Figure 10.16: Wakerley, Hut 6, showing wall slot and inner square of support posts (Jackson and Ambrose 1978, fig 12)	139
Figure 10.17: A large Iron Age saddle quern, 470mm long, from Pineham Barns, Northampton, left, and the new technology, a beehive rotary quern in Millstone Grit from Doncaster Redhouse, South Yorkshire (Scales 50mm).....	142
Figure 10.18: Storage jars from DIRFT the Lodge, 1; Coton Park, 17; and Barton Seagrave, Northamptonshire, 2 and 4.....	145
Figure 11.1: General plan of Bronze Age and Iron Age/Roman features at Coton medieval village	150
Figure 11.2: Middle Bronze Age pits at Coton medieval village.....	152
Figure 11.3: Bronze Age pottery from pit 1493, Vessels 1-5	153
Figure 11.4: The middle Bronze Age cremation cemetery at Coton medieval village	154
Figure 11.5: The urn from cremation burial B7.....	156
Figure 11.6: Late Iron Age/early Roman ring ditch, building B1.....	159
Figure 11.7: Early Roman building, B2, within enclosure E4.....	160
Figure 11.8: Possible late Iron Age/early Roman circular shrine, building B3, within rectangular enclosure E7.....	161

List of Tables

Table 2.1: Quantification of finds from the Bronze Age pits	10
Table 2.2: Radiocarbon determinations for the Middle Bronze Age pits	10
Table 2.3: Charcoal from the Bronze Age pits.....	12
Table 3.1: Radiocarbon determinations for the Iron Age settlement	14
Table 3.2: Summary of Iron Age chronology	15
Table 4.1: Quantification of finds from E5, RD14 and RD34.....	26
Table 4.2: Quantification of finds from RD6.....	28
Table 4.3: Quantification of finds from pit cluster.....	29
Table 4.4: Quantification of finds from linear pit group/pit alignment.....	29
Table 4.5: Quantification of finds from RD24.....	31
Table 4.6: Quantification of finds from RD2.....	34
Table 4.7: Quantification of finds from ring ditch RD3	35
Table 4.8: Quantification of finds from RD4.....	36
Table 4.9: Quantification of finds from E1.....	36
Table 4.10: Quantification of finds from E2.....	37
Table 4.11: The development of Group 2, the principal roundhouse RD5	37
Table 4.12: Quantification of finds from roundhouse RD5	41
Table 4.13: Quantification of finds from RD17	42
Table 4.14: Quantification of finds from RD16.....	43
Table 4.15: Quantification of finds from RD15.....	43
Table 4.16: Quantification of finds from RD10.....	44
Table 4.17: Quantification of finds from RD18.....	44
Table 4.18: Quantification of finds from RD19.....	44
Table 4.19: Quantification of finds from enclosure RD9.....	45
Table 4.20: Quantification of finds from RD11	45
Table 4.21: Quantification of finds from RD12	48
Table 4.22: Quantification of finds from the linear ditch and RD13.....	50
Table 4.23: Quantification of finds from RD26.....	50
Table 4.24: Quantification of finds from RD26.....	51
Table 4.25: Quantification of finds from RD28.....	51
Table 4.26: Quantification of finds from RD1.....	52
Table 4.27: Quantification of finds from RD21	52
Table 4.28: Quantification of finds from RD22	53
Table 4.29: Quantification of finds from E10.....	54
Table 4.30: Quantification of finds from E6.....	55
Table 4.31: Quantification of finds from E7	55
Table 4.32: Quantification of finds from E8.....	57
Table 4.33: Quantification of finds from RD7.....	57
Table 4.34: Quantification of finds from E4.....	59
Table 4.35: Quantification of finds from RD8.....	60
Table 4.36: Quantification of finds from ditch D1	61
Table 4.37: Quantification of finds from D2	63
Table 4.38: Quantification of finds from D1/D4.....	64
Table 4.39: Quantification of finds from D5	65
Table 5.1: Quantification of the pottery by fabric type.....	67
Table 5.2: Quantification of vessel fragmentation	68
Table 5.3: Decorated wares; occurrence by structure by weight (g), ring ditches.....	74
Table 5.4: Decorated wares; occurrence by structure by weight (g), other ditch systems.....	74
Table 5.5: Quantification of rim diameters by fabric type.....	76
Table 5.6: Pottery occurrence by structural group, ring ditches	78
Table 5.7: Pottery occurrence by structural group, boundary ditches and enclosures	78

Table 6.1: Analyses of metal prills and droplet	88
Table 7.1: The loomweights	91
Table 7.2: Catalogue of querns, rubbing and grinding stones	95
Table 8.1: Summary of taxonomic distribution using Minimum Anatomical Unit (MAU).....	102
Table 8.2: Summary of taxonomic distribution by site area using Minimum Anatomical Unit (MAU), (percentage of total by site area)	102
Table 8.3: Quantification of bone fragmentation.....	103
Table 8.4: Definitions of tooth wear stages	103
Table 8.5: Tooth wear for cattle, western roundhouses.....	104
Table 8.6: Tooth wear for pig, western roundhouses	104
Table 8.7: Tooth wear for Ovicaprid (sheep); boundary ditches.....	105
Table 8.8: Bone elements by species, copper alloy and bone working area.....	109
Table 8.9: Bone elements by species, boundary ditches.....	110
Table 8.10: Bone elements by species, western roundhouses	111
Table 8.11: Bone elements by species, northern enclosures.....	112
Table 8.12: Bone elements by species, north-western enclosures.....	113
Table 8.13: Wood species represented by surviving charcoal.....	115
Table 8.14: Charcoal from Iron Age contexts.....	115
Table 10.1: The distribution of pottery by weight (g) within ring ditches	122
Table 10.2: The distribution of animal bone by weight (g) within ring ditches.....	122
Table 10.3: Lodge, Long Dole and Coton Park, Rugby, weight of recovered Iron Age pottery	123
Table 10.4: Tabulation of roundhouse diameters.....	124
Table 10.5: Roundhouse frequency by diameter at Coton Park, with floor areas and comparison to the modern average house size	125
Table 10.6: Floor areas for structural groups through time	125
Table 10.7: The volume of four storage jars	144
Table 11.1: Composition of the flint assemblage	150
Table 11.2: The cremation burials	155
Table 11.3: Charcoal from the Bronze Age cremation burials.....	156
Table 11.4: Radiocarbon dates for burials B3 and B6.....	157

Acknowledgements

Steve Parry was the project manager for Northamptonshire Archaeology, with Andy Josephs of Entec UK the consultant to the developers. The excavation was directed by Andy Chapman assisted by Joe Prentice with a project team including Tony Baker, Helen Finnigan, Tim Hallam, Steve Haywood, Andy Holland, Richard Jennings, M McLean, K McLellan, Deidre Prinsen and David Salt; my apologies to any others whose names have been lost in time. The team deserve particular thanks for battling through a very difficult excavation. Following the flooding that began early in the excavation, water did not drain away on the heavy clays and the morning bucket chain to bail out features under excavation became a daily ritual for much of the excavation. Andy Holland also provided and operated the balloon and camera setup used to obtain aerial views of the site towards the end of the excavation.

The original analysis of the pottery in 2001 was by Paul Blinkhorn and Dennis Jackson, although the discussion of the ceramic chronology was revised by Andy Chapman in 2017 to take more recent interpretations into account. The metallurgical analysis of the crucibles was carried out in 2002 by Matthew Ponting, then of the Department of Archaeology, University of Nottingham. The analysis of the animal bone is by Karen Deighton. The analysis of the wood charcoals by Rowena Gale was carried out in 2001. Pat Chapman wrote the first draft of the description of the structural evidence and the reporting of other finds. These have been revised and edited by Andy Chapman, and comment on the coin is by Steve Critchley and Andy Chapman. The slags were analysed by Gerry McDonnell and Ivan Mack in 2002, both then of the Archaeological, Geographical and Environmental Sciences at Bradford University. Any uncredited finds reports are by the principal author. Pat Chapman has proof read the final text, but any surviving errors are the responsibility of the author.

The photographic images in Chapter 10 from excavations at Brigstock and Aldwinckle by Dennis Jackson are from his photographic archive, held by Andy Chapman.

Acknowledgements for the excavation of Coton medieval village, which was directed by Anthony Maull, are included in Chapter 11, describing the prehistoric and Roman aspects of those excavations.

The final preparation of the report for publication was carried out in 2019-20, following the retirement of the principal author. Publication through Archaeopress Archaeology has been sponsored by MOLA (Museum of London Archaeology) Northampton.

List of Contributors

Andy Chapman

Retired, formerly Senior Project Manager, MOLA (Museum of London Archaeology) Northampton, and Senior Archaeologist, Northamptonshire Archaeology

Pat Chapman

Retired, formerly Post-Excavation Supervisor, MOLA Northampton and Northamptonshire Archaeology

Anthony Maull

Senior Project Manager, MOLA Northampton and Northamptonshire Archaeology

Trevor Anderson

Independent osteoarchaeologist (deceased)

Paul Blinkhorn

Independent pottery researcher

Steve Critchley

Independent metal detectorist

Karen Deighton

Formerly Project Officer Environmental Archaeology, Northamptonshire Archaeology

Tora Hylton

Finds Manager, MOLA Northampton and Northamptonshire Archaeology

Dennis Jackson

Independent archaeologist (deceased)

Ivan Mack

Former post-graduate research student at Archaeological, Geographical and Environmental Sciences, University of Bradford

Gerry McDonnell

Former Archaeometallurgist at Archaeological, Geographical and Environmental Sciences, University of Bradford, now Archaeometallurgy Consultant

Matthew Ponting

Formerly Department of Archaeology, University of Nottingham, now Senior Lecturer, University of Liverpool, Department of Archaeology, Classics and Egyptology

Mark Roughley

Former illustrator Northamptonshire Archaeology

Jane Timby

Independent pottery specialist

Pat Walsh

Former illustrator Northamptonshire Archaeology

Chapter 1

Introduction

Background

The Iron Age settlement at Field 13, Coton Park, Rugby, Warwickshire (SP 513 778, Fig 1.1) was one of two sites of archaeological interest identified by geophysical survey (Fig 1.2) and trial trench evaluation within an area of some 100ha on the northern outskirts of Rugby proposed for a mixed residential and commercial development (Warwickshire Museum 1997).

The Warwickshire County Planning Archaeologist, Douglas Moir, considered that the development would severely damage or destroy the archaeological remains present and he advised the planning authority, Rugby Borough Council, that an excavation should take place. A brief for an archaeological excavation was compiled by Andy Josephs, Principal Archaeologist for Entec UK (Entec 1997).

Northamptonshire Archaeology, now MOLA (Museum of London Archaeology), Northampton, was commissioned by Entec UK, acting for the developers, to carry out the excavation. Work commenced in March 1998 and all fieldwork was completed before the end of June 1998, a total of 16 weeks including a week lost to waterlogging during the widespread flooding that occurred across much of Midland England through March and April 1998 (Figs 1.3-1.6).

An assessment report was prepared (Chapman 1999) and a subsequent interim report (Chapman 2000), but a final report was not completed in the years following excavation, although much of the finds reporting included here was completed in the early to mid-2000s. The final preparation of the report for publication was carried out in 2019-20, following the retirement of the principal author, with publication through Archaeopress Archaeology sponsored by MOLA, Northampton.

The site archive has been deposited with Warwickshire Museums under accession number T/1031.

Part of the deserted medieval village of Coton, which lay 1.0km to the north (Fig 1.1: NGR SP 517 788), was also excavated by Northamptonshire Archaeology in 1998, from July onwards, in advance of further development works (Maull 2001). This site also produced Bronze Age pits, a small Bronze Age cremation cemetery and a small complex of late Iron Age and early Roman settlement. These are described in Chapter 11 of this volume.

Location, topography and geology

The site lies to the north of Rugby, immediately east of the A426 at its junction with Newton Manor Lane, and just over 1.0km south of the M6 motorway (Fig 1.1). At the time of excavation housing development had extended up to Newton Manor Lane to the south and up to the eastern field boundary. The field within which the settlement was situated lay partly within Rugby and partly in the parish of Churchover, although formerly it was fully within the parish of Brownsover.

The Iron Age settlement lay on high ground towards the top of an east facing slope on a north-south ridge, at between 127.0m aOD and 124.5m aOD. It lies on the eastern margins of the valley of the River Swift, with the river some 700m to the west and flowing southwards to join the River Avon some 1.4km to the south. To the immediate east of the settlement, a deep hollow associated with former ponds and a probable spring line, descended to 121.0m aOD (Fig 1.2). It appears to be the head of a former incised valley running eastward to the River Avon, where the valley floor is at just under 90.0m aOD.

The underlying geology is Boulder Clay over Lower Lias (British Geological Survey 1974).

Objectives

The broadly stated objective of the excavation was to 'gather information on the Middle Iron Age open settlement'. This was to be achieved within a framework of open area excavation and selective sampling of features as defined in the brief and further specified within the Project Proposal prepared by Northamptonshire Archaeology (1998).

The available information on the site gathered by previous archaeological field evaluation comprised a geophysical survey by Geophysical Surveys of Bradford (Survey No: 97/18) (Shiel and Stephens 1996) (Fig 1.2), and trial trench excavation comprising seven trenches, carried out by Warwickshire Museum in August 1997 (Warwickshire Museum 1997). This work had identified and confirmed the broad nature and date of the site and located the main areas of activity, although the open area excavation was to show that activity extended well beyond the limits of these earlier investigations.

Methodology

Machine excavation

Machine stripping of the topsoil commenced at the beginning of March 1998. As a result of the exceptionally wet weather, leading to floods in many places, including Northampton, it was not possible to run dumper trucks (Moxy articulated tipper trucks) across the field, and the planned strategy had to be revised. A 360° excavator was used to open individual areas centred on and encompassing the main groups of structures and enclosures identified through geophysical survey (Figs 1.2-1.4). Seven areas were opened; the four larger areas took in the known structures on the western and northern parts of the field, while three smaller areas took in parts of the boundary system and isolated structures to the north-east and south. The excavated topsoil was dumped adjacent to each area in temporary spoil heaps.

By the middle of May the ground was dry enough to permit the use of heavy machinery. A 360° excavator and two dumper trucks were used to remove the temporary spoil heaps to spoil dumps along the western margin of the field. The topsoil was then stripped from between the individual areas on the western and northern parts of the site using a 360° excavator operating to the same standard as for the initial areas, to create a single open area. At the south-western corner of the site the natural surface had been disturbed by deep wheel ruts resulting from the use of this area as the main dumper truck access to the western spoil heaps, resulting in a loss of detail in the area of ring ditches RD27 and RD28 (Fig 1.4).

Across the remainder of the eastern and southern parts of the site, where there were few known features, the topsoil was removed by box scraper working systematically either west-east or south-north to maintain the maximum area of cleanly scraped surface (Fig 1.7). This ensured that no major ditch systems would escape detection, although in the disturbance caused by the machine tracks any smaller features would have been missed. This work revealed a series of previously unknown enclosures and ring ditches to the east, all with clean fills that had not fully registered on the geophysical survey and which produced few finds.

Hand excavation and recording

With the ring ditches and enclosures, all intact terminals were excavated by hand along with all major ditch intersections and further sections spaced evenly around their circuits (Figs 1.5 and 1.6). A few terminals or major intersections were not excavated due to disturbance caused by either the furrows or field drains.

The overall aim was to achieve a relatively consistent level of feature sampling across the site. There were a few exceptions to this. Ring Ditch RD3 and part of Enclosure E1 were sampled more intensively to recover the majority of a localised assemblage of bronze working crucibles and mould fragments, as well as bone and antler working debris. The lowest level of sampling was on the 'empty' enclosures E9 and E12 and on ring ditch RD29, in the south-eastern group, where at the time of excavation the clean and compact fills were both intransigent and unproductive of finds, and subsequently the area was too waterlogged to excavate.

In general, excavation of the entire site was hampered by the exceptionally wet spring and early summer, which on clay natural resulted in frequent flooding, so that after any rainfall it was necessary to bail out all partially excavated features. The level of the local watertable also fluctuated with the weather. At best it fell to c.1.0m below ground level, so that only the deeper ditches were constantly wet. At its worst the site was waterlogged to the point of saturation, when the clay natural had the consistency of jelly and excavation became impossible. These conditions made it particularly difficult to obtain full sections of the deep boundary ditch at the northern end of the site.

The site was planned by hand at a scale of 1:50, and sections of excavated features were drawn at a scale of 1:10 or 1:20. The broader context of the excavations and their relationship to the surrounding landscape was recorded by field survey using a total station theodolite with automatic data logging.

In order to reduce the quantity of paperwork and to speed the recording process, a modified system of single context recording was employed. Each discrete feature and each feature within a single sectioned length of a linear or curvilinear ditch complex was given a unique context number in a single continuous sequence, and sometimes these single numbers also encompassed recuts not visible on the surface. Layers within these features were identified by a decimal suffix to the feature number (eg. ditch 120 would have fills 120.1, 120.2, etc), rather than by separate context numbers. As a result the entire context record fits in a single lever-arch file, and comprises 570 numbered features. During excavation context descriptions were written directly onto the section drawing sheets rather than the context sheets. Especially given the inclement weather during so much of this period, this recording methodology gave a considerable saving of time. All finds were recorded to context and layer suffix, when clearly identified during excavation. The intention was to transfer the context descriptions to the context sheets during post-excavation, but no assistants were made available to achieve this.

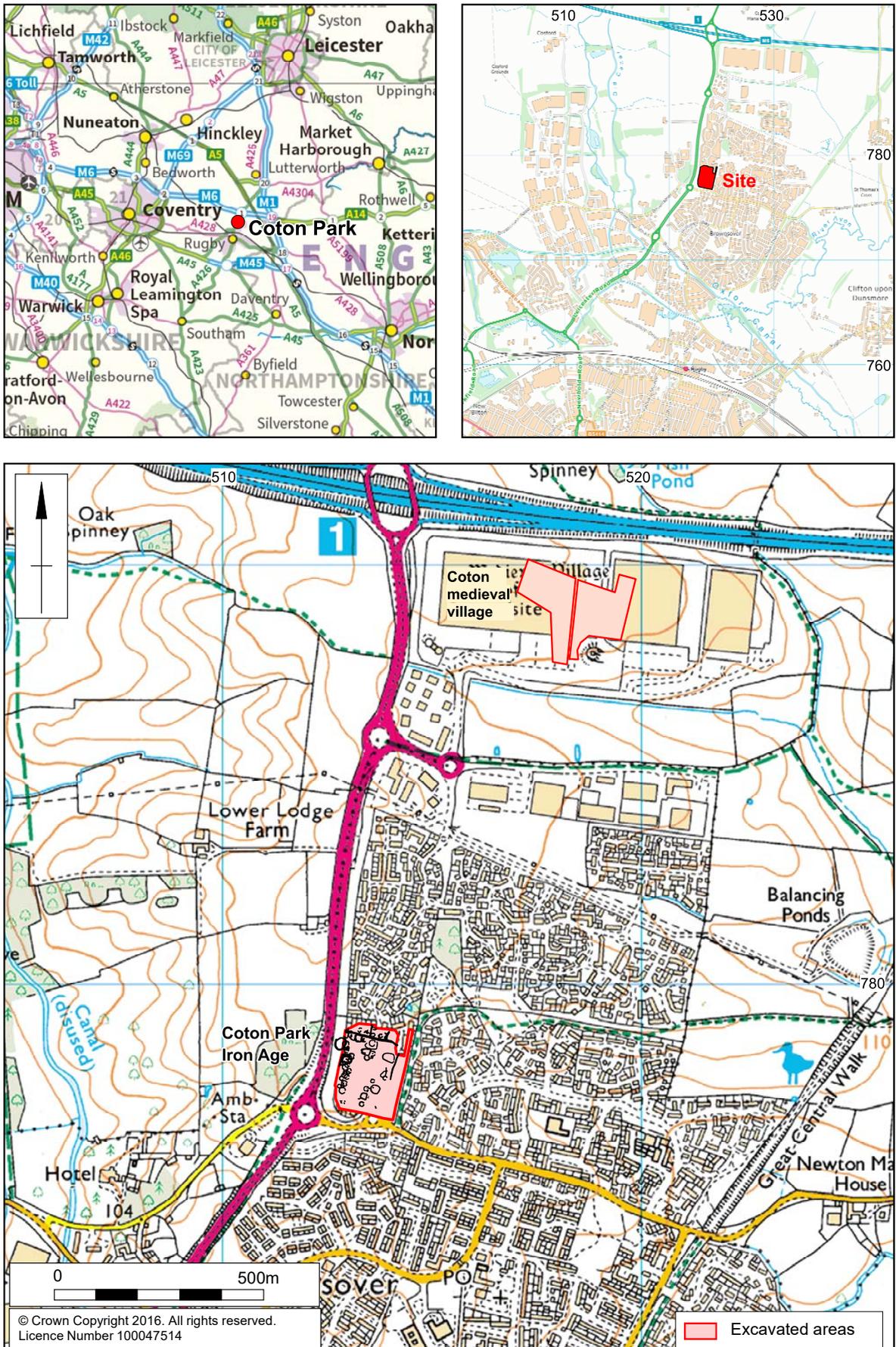


Figure 1.1: Site location

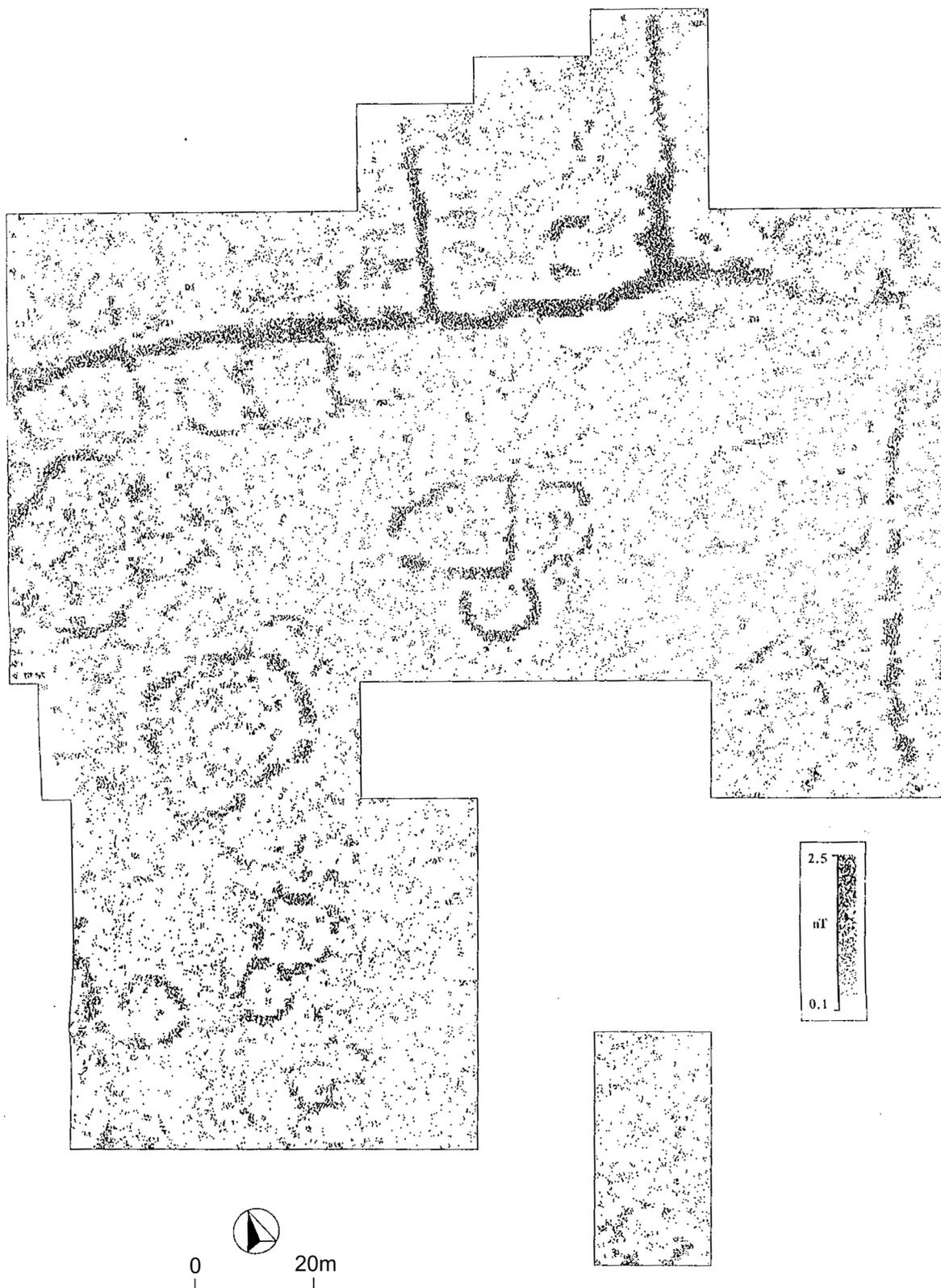


Figure 1.2: Results of geophysical survey, showing major structures (by Geophysical Surveys, Bradford, from Warwickshire Museum 1997)

Later disturbances

Across the entire site the Iron Age features were overlain by a regular system of furrows, the ploughed out remnant of the medieval field system (Fig 1.4). These both obscured and truncated the Iron Age features. In addition, the site was crossed by numerous ceramic field drains inserted over the past 150 years (see Chapter 9 for further details).

Excavation around the margins of the deep hollow to the north-east had shown that the upper alluvial clays within it overlay features of Iron Age date, and these features had been truncated prior to the deposition of these clays. The furrows of the

former field system ran across the alluvial deposits, indicating that they pre-dated the establishment of the medieval field system.

As the Iron Age features were evidently truncated, and presumably lost further down slope, the area of the hollow was not fully excavated. A test pit excavated at the centre of the deposits revealed tenacious blue grey alluvial clays beneath the upper clays, but no organic deposits were located. The alluvial clays were not bottomed due to the depth of the excavation and the incoming water, but they appear to denote the former presence of a pond in this area. These deposits lay below the depth of any likely disturbance from the proposed development.



Figure 1.3: Aerial view of the northern half of the site, looking north, showing major Iron Age structures and the furrows of the medieval field system (original images by Andy Holland)

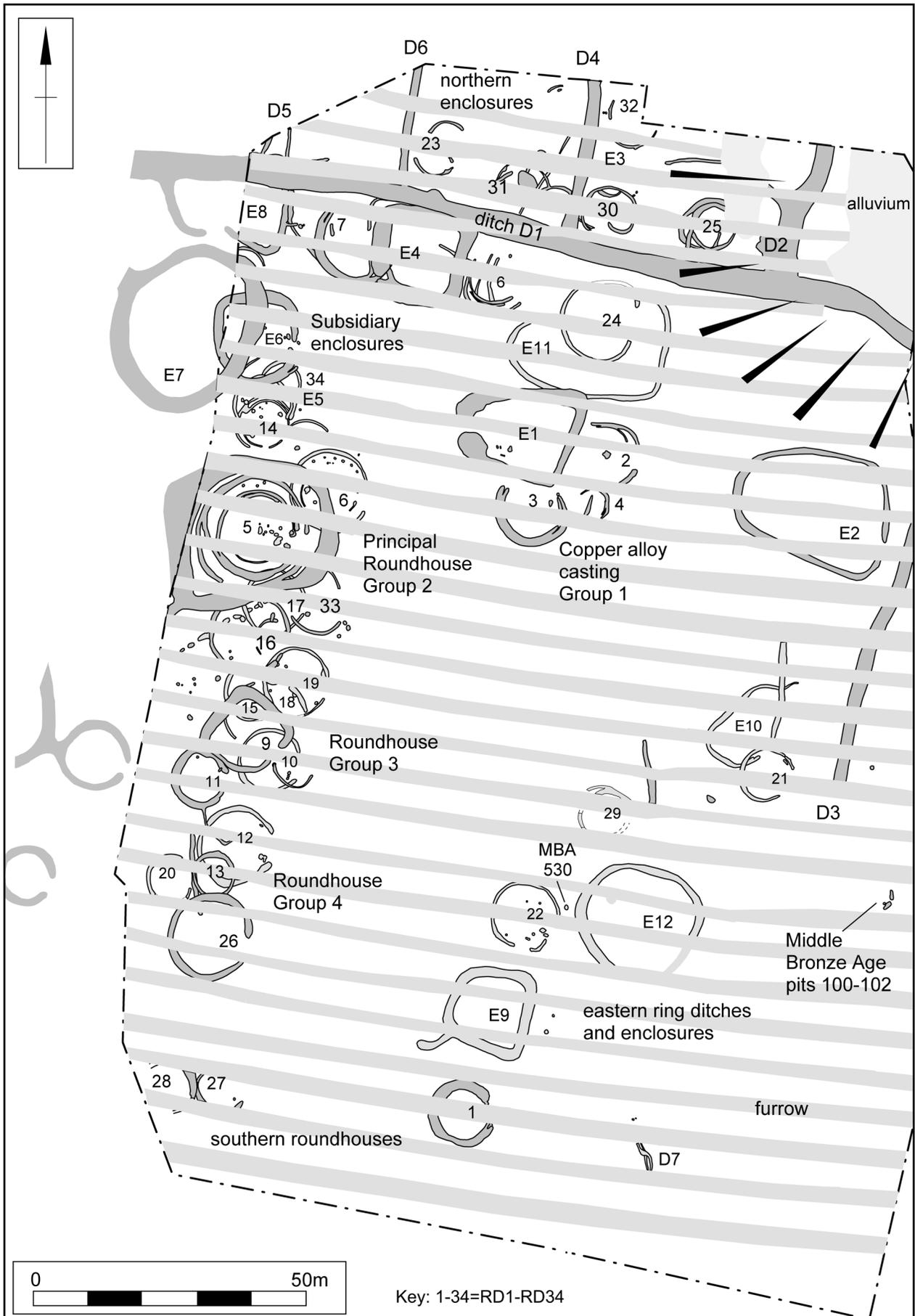


Figure 1.4: General site plan, showing the prehistoric features and the overlying furrows of the medieval field system



Figure 1.5: Looking north-east across enclosure E4 to the linear boundary ditch D1, showing the water-filled features following the flooding during March and April 1998



Figure 1.6: Excavation of enclosure E1, producing copper alloy casting debris; maintaining progress by use of barrow runs across the wet surface and bailing out features as necessary



Figure 1.7: Near the end of the excavation, looking towards the north-east corner of the site, with the machine stripped areas to the left, centre and top, and the box scraper stripped areas to the centre-right and foreground