The Iron Age and Roman landscape of Marston Vale, Bedfordshire

Investigations along the A421 Improvements, M1 Junction 13 to Bedford

by Andrew Simmonds and Ken Welsh

with contributions by

Enid Allison, Edward Biddulph, Paul Booth, Dana Challinor, Sharon Clough, Gordon Cook, Denise Druce, Damian Goodburn, Seren Griffiths, Leo Heatley, Kathryn Hunter, Lynne Keys, Hefin Meara, Daniel Miles, Quita Mould, David Mullin, Adrian G Parker, Mairead Rutherford, Ian Scott, Ruth Shaffrey, Elizabeth Stafford, Dan Stansbie, Lena Strid, Gerry Thacker and Helen Webb

Illustrations by

Julia Collins, Markus Dylewski, Magdalena Wachnik and Sarah Lucas

The publication of this volume was generously funded by the Highways Agency Published for Oxford Archaeology as part of the Oxford Archaeology Monograph series

Designed by Oxford Archaeology Graphics Office

Edited by Chris Hayden

This book is part of a series of monographs which can be bought from all good bookshops and internet bookshops. For more information visit www.oxfordarchaeology.com

© 2013 Oxford Archaeology Ltd

Figures 1.2, 2.1, 2.32, 2.54, 2.77, 2.86, 2.95, 2.98, 2.102, 2.130, 2.136, 2.137, 2.138, 2.139, 2.140, 7.1, 7.5 and 7.7 reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown Copyright 2013. All rights reserved. Ordnance Survey Licence number 100005569

Figure 1.3 derived from BGS 1:50,000 map, sheets 203 (2010) and 220 (1992), reproduced by permission of the British Geological Survey. © NERC 2012. All rights reserved. CP 12/129

Front cover: early Roman pits with dark fills rich in burnt chaff being excavated at Site 2, and the A421 at its opening (photograph courtesy of the Highways Agency)

Back cover: Reconstruction drawing of a samian Drag. 30 bowl from Site 7, decorated with mouldings of a group of warriors and made at Les Martes-de-Veyre. Dating from c AD 100–130, the vessel illustrates the interest of the site's occupants in such aspects of Roman culture, and may have been an antique by the time the sherds were deposited in waterhole 15735, probably during the 3rd century.

ISBN 978-0-904220-72-8

Typeset by Production Line, Oxford Printed in Great Britain by Berforts Information Press, Eynsham, Oxford

Contents

List of Figures	
List of Tables	xi
Summary	xiii
Acknowledgements	xv
Chapter 1: Introduction	1
Introduction	1
Location, topography and geology	1
Background to the project	
Field evaluation	
Excavation methodology	10
Research objectives	
Structure of the report	15
Archive	15
Chapter 2: The sites	17
Site 2 by Gerry Thacker	
Site 3	
Site 4 (Trench 54)	65
Site 4 (Trench 61)	
Site 5	
Site 6 (Trenches 97-99)	
Site 6 (Trench 105)	
Site 7	
Site 9	
Watching briefs	
Berry Farm Borrow Area evaluation by Hefin Meara	133
Chapter 3: Artefactual evidence	145
Pottery by Edward Biddulph, with a contribution by Dan Stansbie	145
Roman coins by Paul Booth	
Metalwork by Ian Scott	
Bone and antler artefacts by Ian Scott	
Glass by Ian Scott	
Fired clay and ceramic building material by Dan Stansbie	
Worked and utilised stone by Ruth Shaffrey	192
Worked wood by Damian Goodburn, Dana Challinor and David Miles	
Leather by Quita Mould	
Iron slag and other high-temperature debris by Lynne Keys	198
Worked flint by David Mullin	

Chapter 4: Human remains by Sharon Clough and Helen Webb	20 3
Chapter 5: Environmental evidence	207
Animal bones by Lena Strid	
Charred and waterlogged plant remains by Kathryn Hunter	
Wood charcoal by Denise Druce	
Pollen from late Roman waterhole 15185 by Mairead Rutherford	24 3
Insect remains from late Roman waterhole 15735 by Enid Allison	24 4
Phytoliths by Adrian G Parker	
Land and freshwater snails by Elizabeth Stafford	
Chapter 6: Radiocarbon dates by Seren Griffiths and Gordon Cook	259
Introduction	259
Methodology	259
Results	259
Chapter 7: Earthwork surveys by Leo Heatley	265
Lidlington/Marston Moretaine parish boundary	268
Ridge and furrow earthworks at Lower Shelton	270
Wootton/Kempston parish boundary	272
Chapter 8: Discussion	273
Introduction	27 3
Chronology	27 3
Settlement forms	27 5
Landscape	286
Agriculture and economy	288
Social practices	29 3
Historical trajectories	300
Bibliography	303
Index	313

List of Figures

1.1	Location of the A421 Improvements	2
1.2	The A421 Improvements and other sites within Marston Vale and its immediate environs	
4.0	in relation to the topography	3
1.3	The A421 Improvements in relation to the geology of Marston Vale and environs	4
1.4	The route of the A421 Improvements, showing Scheduled Ancient Monuments and	
	Archaeological Notification Areas identified in the Environmental Statement, the trenches	
	of the 2006 Albion Archaeology field evaluation and previous excavations by other	
	organisations	6
1.5	Route of the A421 Improvements, showing the area of the evaluation and the location	
	of evaluation trenches mentioned in the text	
1.6	Flooding in Evaluation Trench 58	
1.7	Location of excavation areas	11
1.8	Hand-excavation of archaeological features underway on Site 9, while stripping of	
	modern topsoil continues in the background	12
1.9	Location of sites mentioned in the text	14
1.10	Key to conventions used in plans and sections in this volume	15
2.1	Location of Site 2	17
2.2	Site 2, plan of all archaeological features	18
2.3	Site 2, north-eastern area and results of the geophysical survey	19
2.4	Site 2, plan of late Iron Age features in the north-western part of the site	
2.5	Site 2, plan and sections of late Iron Age pit complex and early Roman trackway ditches	
	and metalling	22
2.6	Site 2, late Iron Age pit 2045	
2.7	Site 2, sections through late Iron Age pits 2091 and 2093 and medieval ditches 2.083	
,	and 2.085, and late Iron Age pits 2240, 2239 and 2241.	24
2.8	Site 2, plan of early Roman features at the north-eastern end of the site	
2.9	Site 2, sections through selected early Roman boundary ditches	
2.10	Site 2, detailed plan and sections of pits and hollows within Enclosure 1 with fills rich	20
2.10	in charred plant remains.	27
2.11	Site 2, pits and hollows within Enclosure 1 with fills rich in charred plant remains	27
2.11	during excavation	28
2.12	Site 2, deliberate deposit of pottery in pit 2444: a carinated bowl stacked within a	20
2.12	lid-seated jar	28
2.13	Site 2, deposit of charcoal-rich soil in ditch 2477, possibly refuse from roundhouse	20
2.13	2708/2709	20
2 14	Site 2, detailed plan of early Roman occupation within Enclosure 2	
2.14		
2.15	Site 2, plan and sections of early Roman roundhouse 2708/2709	32
2.16	Site 2, the western side of early Roman roundhouse 2708/2709. The sandstone cobbles	22
0.17	seen in Fig. 2.15 can be seen at the right of the frame	
2.17	Site 2, early Roman pit 2604 and associated spread 2607	
2.18	Site 2, early 2nd-century activity in the north-eastern part of the site	
2.19	Site 2, south-western area and results of the geophysical survey	37
2.20	Site 2, plan of the complex of middle and late Roman features in the south-western	
	part of the site.	
2.21	Site 2, section through middle Roman hollow-way 20237	
2.22	Site 2, sections through middle Roman enclosure ditches	40
2.23	Site 2, detailed plan of features within Enclosures 4 and 5	40
2.24	Site 2, middle Roman corn driers 20139 (foreground) and 20143	41

The Iron Age and Roman landscape of Marston Vale

2.25	Site 2, plan and sections of middle Roman corn driers 20139 and 20143	
2.26	Site 2, partially paved hollow 20049	
2.27	Site 2, plan and section of hollow 20049	
2.28	Site 2, section through middle Roman pit/waterhole 20167	
2.29	Site 2, sections through late Roman enclosure ditches 20226 and 20233	44
2.30	Site 2, plan of Anglo-Saxon, medieval and undated features	
2.31	Site 2, section through Anglo-Saxon pit 2192	46
2.32	The location of Site 3	47
2.33	Site 3 and results of the geophysical survey	
2.34	General view of Site 3 from the south-west	
2.35	Site 3, plan of all archaeological features	
2.36	Site 3, plan of late Iron Age features	
2.37	Site 3, sections through late Iron Age boundary ditches	
2.38	Site 3, section through late Iron Age ditch 3352	52
2.39	Site 3, excavation of possible redeposited cremation vessels 3126 and 3127 in ditch 3351	
2.40	Site 3, possible redeposited cremation vessels 3126 and 3127 in ditch 3351	54
2.41	Site 3, ĥorse burial in ditch 3360	
2.42	Site 3, section through ditch 3358	55
2.43	Site 3, plan of early Roman features	56
2.44	Site 3, sections through early Roman boundary ditches	
2.45	Site 3, section through ditch 3346	57
2.46	Site 3, early Roman ditch 3365 cutting through late Iron Age ditch 3352	57
2.47	Site 3, plan of the cremation cemetery	58
2.48	Site 3, deposit of animal bone and pottery in ditch 3344	59
2.49	Site 3, cremation burial 3030	59
2.50	Site 3, cremation burial 3031	60
2.51	Site 3, cremation burial 3050	61
2.52	Site 3, cremation burial 104802	62
2.53	Features post-dating the enclosure complex	63
2.54	The location of Site 4 (Trench 54)	64
2.55	Site 4 (Trench 54), plan of all archaeological features	65
2.56	Site 4 (Trench 45), all middle Iron Age features	66
2.57	Site 4 (Trench 54), inner ditch circuit of the middle Iron Age enclosure	67
2.58	Site 4 (Trench 54), sections through the ditches of innermost circuit of the middle Iron	
	Age enclosure	68
2.59	Site 4 (Trench 54), pottery being exposed during excavation of ditch 17716	68
2.60	Site 4 (Trench 54), outer ditch circuits of the middle Iron Age enclosure	
2.61	Site 4 (Trench 54), sections through the ditches of the outer circuits of the middle Iron	
	Age enclosure	
2.62	Site 4 (Trench 54), outer ditch circuit of the middle Iron Age enclosure	73
2.63	Site 4 (Trench 54), sections through ditches 17496 and 17719	
2.64	Site 4 (Trench 54), section through ditch 17719	
2.65	Site 4 (Trench 54), section through ditch 17496, showing layer of sandstone cobbles 17427	75
2.66	Site 4 (Trench 54), horse skull on the base of ditch 17496	
2.67	Site 4 (Trench 54), cattle skull on the base of ditch 17496	
2.68	Site 4 (Trench 54), sections through middle Iron Age enclosure ditch 17343	76
2.69	Site 4 (Trench 54), burnt layers exposed in the central part of ditch 17343	
2.70	Site 4 (Trench 54), the eastern terminal of ditch 17343	
2.71	Site 4 (Trench 54), pit 17466, with layer of sandstone cobbles tipping in from the north side	
2.72	Site 4 (Trench 54), pits associated with the middle Iron Age enclosure	
2.73	Site 4 (Trench 54), sections through pits within the middle Iron Age enclosure	
2.74	Site 4 (Trench 54), pit 170317	
2.75	Site 4 (Trench 54), dump of charcoal-rich soil and middle Iron Age bowl exposed in	
	pit 17007	81
2.76	Site 4 (Trench 54), features that post-date the middle Iron Age enclosure	
2.77	Location of Site 4 (Trench 61)	
2.78	General view of Site 4 (Trench 61)	

List of Figures

2.79	Site 4 (Trench 61), plan of all archaeological features	85
2.80	Site 4 (Trench 61), plan of middle Iron Age features	86
2.81	Site 4 (Trench 61), plan and sections of middle Iron Age ring gully 5092	87
2.82	Site 4 (Trench 61), sections through middle Iron Age pits 5043 and 5044	87
2.83	Site 4 (Trench 61), middle Iron Age pit 5044	
2.84	Site 4 (Trench 61), plan of medieval/post-medieval features	
2.85	Site 4 (Trench 61), section through hollow-way 5099	
2.86	Location of Site 5	
2.87	Site 5, plan of all archaeological features	91
2.88	Site 5, location of early Iron Age cremation burial 6067/6070	
2.89	Site 5, late Iron Age features in the southern part of the site	
2.90	Site 5, sections through late Iron Age ring gullies 6021 and 6042	
2.91	Site 5, sections through late Iron Age pits	
2.92	Site 5, late Iron Age pit 6009	
2.93	Site 5, early Roman boundary ditches in the northern part of the site	
2.94	Site 5, section through early Roman ditch 6137	
2.95	Location of Site 6 (Trenches 97-99)	
2.96	Site 6 (Trenches 97-99), plan of all archaeological features	
2.97	Site 6 (Trenches 97-99), ditch 7205/7208	
2.98	Location of Site 6 (Trench 105).	
2.99	Site 6 (Trench 105), plan of all archaeological features	
2.100	Site 6 (Trench 105), sections through late Iron Age pits 7507/7510/7512 and 7525	
2.101	Site 6 (Trench 105), late Iron Age pit 7525	
2.102	Location of Site 7	
2.103	Site 7, plan of all archaeological features	
2.104	Site 7, view toward south-west across the southern part of the excavation	
2.105	Site 7, plan of mid-late 2nd-century features	
2.106 2.107	Site 7, view toward south-west along mid-late 2nd-century ditch 15986	
2.107	Site 7, sections through mid-late 2nd-century boundary ditches 15986 and 15750 Site 7, section through ditch 15362	106
2.108	Site 7, plan of mid-late 2nd-century Enclosures 7 and 8 and associated features	
2.109	Site 7, sections through the ditches of Enclosures 7 and 8	100
2.110	Site 7, the eastern corner of mid-late 2nd-century enclosure ditch 15753	
2.111	Site 7, plan and sections of structures 15742 and 15433	111
2.112	Site 7, the south-eastern part of quarry 15352	
2.114	Site 7, plan of late 2nd-early 3rd-century features	
2.115	Site 7, sections through late 2nd-early 3rd-century boundary ditches 15987, 15807	110
2.110	and 15985	114
2.116	Site 7, plan of 3rd-early 4th-century features	
2.117	Site 7, view toward south across the southern part of the excavation, with 3rd-early	
	4th-century waterhole 15735 in the centre of shot and ditch 15750 to the left	116
2.118	Site 7, sections through 3rd-early 4th-century waterholes	
2.119	Site 7, excavation of the lower part of 3rd-early 4th-century waterhole 15735 in progress	
	following machine excavation of the upper part of the feature	118
2.120	Site 7, excavation of the lower silts of 3rd-early 4th-century waterhole 15735	
2.121	Site 7, worked wood preserved by waterlogging within the lower silts of 3rd-early	
	4th-century waterhole 15735	119
2.122	Site 7, plan of worked wood in 3rd-early 4th-century waterhole 15735	
2.123	Site 7, antler rake SF 15016 exposed within the lower silts of 3rd-early 4th-century	
	waterhole 15735	120
2.124	Site 7, 3rd-early 4th-century waterhole 15185	120
2.125	Site 7, possible placed deposit of a cattle skull and mandible and beaker-sized necked	
	jar (SF 15008) on the base of waterhole 15185	121
2.126	Site 7, 3rd-early 4th-century burials 15061, 15230 and 15341	
2.127	Inhumation burial 15230.	
2.128	Inhumation burial 15061.	
2.129	Inhumation burial 15341	124

The Iron Age and Roman landscape of Marston Vale

2.130	Location of Site 9	125
2.131	Site 9, plan of all archaeological features	
2.132	Site 9, plan of Area 1	
2.133	Site 9, view along ditches 19107 and 19108 during excavation	
2.134	Site 9, section through ditches 19107 and 19108	
2.135	Site 9, plan of Area 2	
2.136	Construction Compound A watching brief, location plan	
2.137	Construction Compound B watching brief, location plan	
2.138	Wootton Pond Borrow Pit watching brief, location plan	
2.139	Cowbridge watching brief, location plan	
2.140	Berry Farm Borrow Area, site location	134
2.141	Berry Farm Borrow Area, geophysical survey results and evaluation trench locations	135
2.142	Berry Farm Borrow Area, plan of the northern feature complex (Trenches 141 and 142)	136
2.143	Berry Farm Borrow Area, sections through features in the northern feature complex	137
2.144	Berry Farm Borrow Area, plan and sections of features in the western part of the site	
	(Trench 143).	138
2.145	Berry Farm Borrow Area, plan and sections of features in the western part of the	
	southern complex (Trenches 146 and 147)	139
2.146	Berry Farm Borrow Area, plan of features in the eastern part of the southern complex	
	(Trenches 148 and 149)	
2.147	Berry Farm Borrow Area, sections through features in the southern feature complex	142
3.1	Pottery from Site 4 (Trench 54), catalogue nos 1-21	151
3.2	Site 2 north-eastern complex: regression analysis showing decrease of mean sherd	
	weight with increased distance from roundhouse 2708/9	
3.3	Pottery from Site 2 north-eastern complex, catalogue nos 22-45	
3.4	Pottery from Site 2 north-eastern complex, catalogue nos 46-70	159
3.5	Pottery from Site 3, catalogue nos 71-89	
3.6	Pottery from Site 2 south-western complex, catalogue nos 90-95	
3.7	Pottery from Site 7, decorated samian bowl (Drag. 37), catalogue no. 96	
3.8	Pottery from Site 7, catalogue nos 97-126	
3.9	Pottery from Site 7, catalogue nos 127-134	
3.10	Pottery from Site 7, decorated samian bowl (Drag. 30), catalogue no. 135	
3.11	Pottery from Site 7, catalogue nos 136-158	
3.12	Metalwork from Site 2	
3.13	Metalwork from Site 3	
3.14	Metalwork from Site 4 (Trench 54)	
3.15	Metalwork from Site 7	
3.16	Bone and antler objects from Site 7	
3.17	Kiln bars from Site 3	190
3.18	Reused cleft oak plank 15790 with broken bridle joints at each end, possibly once part	
	of a well lining	195
3.19	a) Radially cleft oak fence pale fragment 15789; b) Sawn plank off-cut with saw	
	marks from fill 15780.	196
3.20	a) Oak log 15791 with axe trimmed ends and branch stubs from the crown of a	
	young tree; b) Possible coppice stem 15796	
3.21	Worked flint	200
5.1	Site 2, north-eastern enclosure complex, location of environmental samples	
5.2	Site 2, south-western enclosure complex, location of environmental samples	
5.3	Site 4 (Trench 54), location of environmental samples.	
5.4	Site 7, location of environmental samples	236
5.5	Site 7, section through late Roman waterhole 15185 showing the locations of monoliths	
	taken for palynological analysis	241
5.6	Site 7, pollen diagram for late Roman waterhole 15185	242
5.7	Site 7, section through late Roman waterhole 15735 showing location of the deposits	
	from which insect samples were taken	245

List of Figures

5.8	Site 4 (Trench 54), location of phytolith samples	251
5.9	Site 4 (Trench 54), percentage phytolith diagram from terminal 17189, ditch 17343	
6.1	Site 3, probability distribution of the radiocarbon result	259
6.2	Site 5, the calibrated radiocarbon result	
6.3	Site 4 (Trench 54), location of samples submitted for radiocarbon dating	260
6.4	Site 4 (Trench 54), probability distributions of results	
7.1	Parish boundary between Lidlington and Marston Moretaine, location of survey area	265
7.2	Parish boundary between Lidlington and Marston Moretaine, general view	266
7.3	Parish boundary between Lidlington and Marston Moretaine, view of the eastern end of	
	the survey area	
7.4	Parish boundary between Lidlington and Marston Moretaine, hachure plan and profiles	267
7.5	Ridge and furrow at Lower Shelton, location of survey area	
7.6	Ridge and furrow at Lower Shelton, hachure plan	
7.7	Parish boundary between Wootton and Kempston, location of survey area	
7.8	Parish boundary between Wootton and Kempston, hachure plan	271
8.1	Summary of the main periods represented at each site	274
8.2	The development of the middle Iron Age enclosure at Site 4 (Trench 54)	276
8.3	Plan of the late Iron Age settlement at Site 2	279
8.4	Plans of the late Iron Age/early Roman enclosure complexes at Site 2, Site 3 and Berry	
	Farm	280
8.5	Plans of the middle-late Roman developed farm complexes at Site 2 and Site 7	

List of Tables

1.1	Summary of Scheduled Ancient Monuments and Archaeological Notification Areas	
	identified in the Environmental Statement	5
1.2	Archaeological mitigation areas at the A421 Improvements	12
3.1	Quantification of pottery by site	145
3.2	Quantification of pottery from the evaluation by sherd count and weight	
3.3	Site 4 (Trench 54), quantification of fabrics	
3.4	Site 4 (Trench 54), pottery from features phased to the middle Iron Age	1/10
3.5	Site 4 (Trench 54), pottery from contexts with associated radiocarbon dates	1/10
3.6	Site 4 (Trench 61), quantification of fabrics	
3.7	Site 6 (Trench 105), quantification of Iron Age and Roman pottery	
3.8	Site 5, quantification of fabrics	
3.9	Site 2, north-eastern complex, quantification of fabrics	153
3.10	Site 2, north-eastern complex, pottery from features phased to the late Iron Age or late	100
0.10	Iron Age/early Roman period	153
3.11	Site 2, north-eastern complex, pottery from features phased to the early Roman period	154
3.12	Site 2, north-eastern complex, pottery from features phased to the early roman period	
3.13	Site 2, north-eastern complex, percentages of vessel types from feature groups	
3.14	Site 3, quantification of fabrics	
3.15	Site 3, pottery from features phased to the late Iron Age	160
3.16	Site 3, pottery from features phased to the early Roman period (excluding funerary	
	pottery)	161
3.17	Site 3, pottery ancillary and cinerary vessels from cremation burials	161
3.18	Site 2, south-western complex, quantification of fabrics	
3.19	Site 2, south-western complex, pottery from features phased to the middle Roman period.	
3.20	Site 2, south-western complex, pottery from features phased to the late Roman period	
3.21	Site 7, quantification of fabrics	167
3.22	Site 7, pottery from features phased to the middle Roman period	168
3.23	Site 7, pottery from features phased to the late Roman period	
3.24	Comparison of the proportions of vessels in shelly ware (fabric R13) by surface colour	171
3.25	Comparative proportions of wave groups from 2nd/3rd-century assemblages from Site 2	
	south-western complex, Site 7 and Marsh Leys	181
3.26	Comparative proportions of samian ware from sites in Bedfordshire and Milton Keynes	181
3.27	Comparison of ancillary vessels from Bedfordshire cemeteries by percentage of vessel	
	count	
3.28	Quantification of coins	
3.29	Summary of fired clay	
3.30	Summary of Roman ceramic building material	191
4.1	Site 2 cummany of gramation busicle	202
4.2	Site 3, summary of cremation burials	
4.2	Summary of Cremation burial 6067/6070	204
5.1	Site 2, Number of identified bones (NISP)/taxon by phase	208
5.2	Dental ageing of sheep/goat	
5.3	Dental ageing of cattle	209
5.4	Site 2, epiphyseal closure of cattle, sheep/goat, pig and horse by phase	209
5.5	Site 3, Number of identified bones (NISP)/taxon by phase	
5.6	Epiphyseal closure of cattle, sheep/goat, pig and horse	
5.7	Site 4 (Trench 54), Number of identified bones (NISP)/taxon by feature type	
5.8	Site 7, Number of identified bones (NISP)/taxon by phase	214

The Iron Age and Roman landscape of Marston Vale

5.9	Number of identified bones (NISP)/taxon from the A421 Improvements by phase	217
5.10	Samples analysed for charred plant remains	220
5.11	Intact cereal grain, wheat and wheat glume base fragments per litre of soil processed	221
5.12	Site 2, summary of charred plant remains from early Roman contexts	
5.13	Site 2, summary of charred plant remains from middle Roman contexts	
5.14	Site 4 (Trench 54), summary of charred plant remains	
5.15	Site 7, summary of charred plant remains	
5.16	Site 7, summary of waterlogged plant remains from waterhole 15735	
5.17	Summary of the A421 charcoal analysis. Numbers given are actual counts	
5.18	Summary of monoliths and subsamples taken for palynological analysis from	
	waterhole 15185	243
5.19	Details of samples from waterhole 15735 examined for insect remains	
5.20	Insects and other invertebrates recorded from late Roman waterhole 15735	249-50
5.21	Results of snail assessment, Site 2, Site 3 and Site 4 (Trench 54)	
5.22	Results of snail assessment, Site 7	
6.1	Summary of radiocarbon dates	260-1

Summary

Between November 2008 and July 2009 Oxford Archaeology (OA) carried out a programme of archaeological fieldwork in advance of improvements to the A421 between Junction 13 of the M1 and its junction with the A6 on the southern outskirts of Bedford. Following a programme of field evaluation, excavations were undertaken at nine locations, comprising one area of open area excavation complemented by strip, map and sample excavation and a further eight areas of strip, map and sample excavation. Watching briefs were maintained during stripping of topsoil in advance of surfacing at two construction compounds and in advance of carriageway widening at Cowbridge Junction, as well as during the stripping of topsoil and subsoil at a borrow pit. Earthwork surveys were carried out at three locations in order to create a record of historic earthworks that would be unavoidably destroyed by the Improvements. Geophysical survey and field evaluation were also carried out at the site of a proposed borrow pit that was ultimately not required and so was not taken to full excavation.

The remains uncovered by this project were almost exclusively Iron Age and Roman in date. They shared similar geological and topographical settings within Marston Vale, and so formed a particularly coherent group, providing an opportunity to study the exploitation and evolution of the local landscape during this period. The area appears to have been little used before the middle Iron Age, earlier evidence comprising a sparse distribution of worked flint, among which a small but distinct late Mesolithic/early Neolithic element was identified, and a single cremation burial dated by radiocarbon

to the early Iron Age. Colonisation during the middle Iron Age was represented by two open settlements and an enclosed settlement defined by multiple ditch circuits. The subsequent history of settlement in the Vale was punctuated by two major episodes of settlement dislocation. The first of these occurred during the later Iron Age, when the settlements that had been established during the middle Iron Age were abandoned and replaced at new locations by four settlements composed of complexes of conjoined enclosures. The late Iron Age settlements all continued to be occupied into the Roman period, apparently unaffected by the conquest, until they were in turn abandoned during the late 1st-early 2nd century and two new farm complexes were established. The latter dislocation may have been associated with a wider reorganisation of the landscape during which ownership was consolidated in a smaller number of hands. The level of activity at both sites declined during the late Roman period and they were abandoned during the early part of the 4th century. Throughout the late Iron Age and Roman period the settlements were all modest rural farmsteads. No evidence for more nucleated or higher status settlement forms was found. The only evidence for activity during the Anglo-Saxon period was a single spur dating from the 10th-11th century. The medieval settlement pattern was consolidated around the historic villages that are scattered around the Vale, many of which are still inhabited, leaving the route of the A421 Improvements as agricultural land, as was demonstrated by the ubiquitous evidence for ridge and furrow cultivation that was recorded during the investigations.

Acknowledgements

The fieldwork and subsequent programme of postexcavation analysis and publication were commissioned by Balfour Beatty Civil Engineering Ltd on behalf of the Highways Agency, who funded the work. Thanks are owed to Phil Clifton, Liam McGirl and many other staff of Balfour Beatty who were supportive throughout the archaeological project. Many thanks are also owed to Nick Finch of URS (formerly Scott Wilson Limited), archaeological consultant to Balfour Beatty, who prepared the archaeological strategy and provided much advice and assistance, and to Kevin Beachus, Pete Fasham and Adam Brossler of Jacobs, who monitored the project for the Highways Agency. The project was monitored throughout for Bedfordshire County Council by Martin Oake (County Archaeological Officer) and Hannah Firth (Archaeological Officer).

The fieldwork programme was managed by Ken Welsh and the on-site work was directed by Paul Murray. Gerry Thacker was site supervisor at Brogborough Hill, Site 7 and Site 9, Kate Woodley at Site 3 and Site 4 (Trench 54), Robert Tannahill at Site 4 (Trench 61), Laura King at Site 5, Brian Dean at Site 6, and Hefin Meara supervised the evaluations at Berry Farm and the Whitbred Borrow Areas. The post-excavation analysis was managed by Ken Welsh and Andrew Simmonds. Support was provided by Leigh Allen (finds management), Rebecca Nicholson (environmental management), Louise Loe (osteology management) and Nichola Scott (archive management). Project support, oversight and monitoring was undertaken by Nick Shepherd (Regional Manager), Anne Dodd (Head of Post-excavation), Bob Williams (Chief Operating Officer) and David Jennings ((Chief Executive Officer). The work of the many other OA staff who worked on the project, both in the field and at the post-excavation stage, is also gratefully acknowledged. These included Natalie Anderson, Ben Attfield, Gary Baddeley, Simon Birnie, Thomas Black, Andrew Brown, Sergio

Carvalho, Nathan Chichen, Will Clarke, Ian Cook, Geraldine Crann, Artur Fedorowicz, Peter Gane, Mark Gibson, Steven Graham, Michael Green, Rebecca Griffin, Anna Komar, Sarah Lane, Alex Latham, Paul Leader, Peter Lovett, Thomas Lyons, Robin Maggs, Roberta Marziani, Rowan McAlley, Alex McAuley, Janice McLeish, Patrick Moan, Kevin Moon, Matthew Morgan, Sophie Nias-Cooper, James O'Brien, Caoimhín O'Coileáin, Chris Pickard, Ruth Rolfe, Jennifer Ryder, Phillip Stastney, Gemma Stewart, Jennifer Thurstan, Robert Tutt, Jacon Warrender, Victoria Wilkinson, Rachelle Wood and Mark Woodley. The site surveyors were Anna Komar, who also digitised the site plans, Tori Wilkinson and Rebecca Griffin. In addition to this, Anna Komar carried out the earthwork surveys of the boundary between the parishes of Lidlington and Marston Moretaine and the ridge and furrow earthworks at Lower Shelton, assisted at the former by Roberta Marziani. Tori Wilkinson carried out the survey of the boundary between the parishes of Wootton and Kempston.

Denise Druce would like to thank Elizabeth Huckerby of OA North for commenting on her report. Kathryn Hunter would like to thank Wendy Carruthers, Leigh Allen and Cynthia Poole for their input, as well as Rebecca Nicholson, Julia Meen, Laura Strafford and Sharon Cook for their sterling work sorting flots. Seren Griffiths would like to thank Peter Marshall for discussion of the radiocarbon results.

Julia Collins and Markus Dylewski were the senior illustrators for the project and also drew the site plans and sections. Julia designed the cover and also drew the worked wood, based on draft illustrations supplied by Damian Goodburn. Magdalena Wachnik drew the pottery and metal and bone/antler artefacts. Sarah Lucas drew the worked flint.

Many thanks are due to Leo Webley and Martin Oake for reading and commenting on the text.