

WINCHESTER STUDIES 4.i
THE ANGLO-SAXON MINSTERS



THE ANGLO-SAXON MINSTERS
OF WINCHESTER

by

BIRTHE KJØLBYE-BIDDLE and MARTIN BIDDLE

With contributions by

Diana K. Coldicott, John Crook, Alexandra Makin, Francis Morris,
Michael N. Morris, Kenneth E. Qualmann, Barbara Yorke, *and others*

and illustrations by

Simon Hayfield, Nicholas Griffiths, *and others*

VOLUME 4.i.1: TEXT

ARCHAEOPRESS PUBLISHING • OXFORD

2026

ARCHAEOPRESS PUBLISHING LTD

First and Second Floors
13-14 Market Square
Bicester
OX26 6AD

© Winchester Excavations Committee 2026

ISBN 978-1-80583-040-5
ISBN 978-1-80583-041-2 (ePdf)

Kjølbye-Biddle, B. and Biddle, M., 2026 *The Anglo-Saxon Minsters of Winchester*,
Winchester Studies 4.i, Oxford, Archaeopress

In memoriam

ROGER NATHANIEL QUIRK

(1909–64)

necnon

OSWIN HARVARD GIBBS-SMITH

(1901–69, ecclesiae Wintoniensis decani 1962–9)

huius operis
alterius instigatoris alterius fautoris

PRINCIPAL CONTRIBUTORS

Martin Biddle, Director of the Winchester Research Unit of the Winchester Excavations Committee

Diana K. Coldicott, Historian

John Crook, Independent Architectural Historian, Archaeological Consultant, and Photographer

Simon Hayfield, Illustrator; formerly of the Winchester Research Unit

Birthe Kjølbye-Biddle, formerly Research Fellow at the Winchester Research Unit.

Alexandra Makin, Independent Textile Research Archaeologist

Francis M. Morris, Consultant Research Associate

Michael N. Morris, formerly Winchester Assistant City Archaeologist

Margaret Petersen, former volunteer, Winchester Research Unit

Kenneth E. Qualmann, formerly Winchester City Archaeologist and Head of Winchester Museums, Winchester

Barbara Yorke, Professor Emeritus, University of Winchester

STAFF AND VOLUNTEERS
OF THE WINCHESTER EXCAVATIONS COMMITTEE
AND THE WINCHESTER RESEARCH UNIT

who worked on the excavations north of Winchester Cathedral

1961–70

Excavation supervisors

Helen Bamford (1965–9), Alan Butterworth (1963–4), Brenda Capstick (1961), Giles Clarke (1969–70), Timothy Clough (1966–7), John Collis (1961), David Dawson (1968), Ann Hamlin (1963), Edward Harris (1969), Finn Johansen (1966), Louise Millard (1961), Christopher Morris (1965, 1967), Helen Mulholland (1966), Jan Roberts (1968), Ole Schiørring (1969–70), Robert Soper (1961), Elizabeth Stone (1967), Bjørn Wandall (1965).

Planners and surveyors

Fred Aldsworth (1967–70), Sam Daniel (1969–70), Judith Dobie (1970), Louise Hall (1964), David Hill (1965–70), Barbara Pough (1965–8), Helena Quirk (1966–7), John Russell (1966–7).

Finds supervisors and finds staff

Lynda Beigel (1961–3, 1965), Rachel Cullen (1966), Danny Bell (1967–8), Philippa Fox-Robinson (1961–4), Mary Karshner (1969–70), Tye Ryll (1969–70), Miranda Till (1965–8), Cedric Yardley (1964).

Plant supervisors

A. I. S. ('Tub') Macmillan (1966–8), James Muchmore (1966–7).

Photographers

Richard C. Anderson (1966–9), Martin Biddle (1961–3), Edward Cloutman (1969–70), Joseph Cloutman (1968–70), John Crook, James W. Fletcher (1966), Joseph W. Hopkins III (1965), Tom Slade (1964), Arthur Smith (1966–7), Silvio Tavernise (1964), and WMS Staff (Nunnaminster/St Mary's Abbey, 1973, 1981–3).

Guided tours, sales, and on-site fundraising

F. C. ('Deric') Mallett (1964–9).

STAFF AND VOLUNTEERS OF
THE WINCHESTER RESEARCH UNIT

who worked on the preparation of this volume

1972–2026

Phasing

Birthe Kjølbye-Biddle

Drawing

Simon Hayfield, Lesley Collett, Deborah Cunliffe, Gerald Dunning, Nicholas Griffiths

Indexing

Victoria Leitch with Katherine Barclay, Signe Biddle, Susanne Haselgrove, Lynne Keeble,
Pru Kemball, Sarah Price-Sinclair, Vivien Vibert

Photography

R. C. Anderson, Martin Biddle, E. W. Cloutman, J. S. Cloutman, John Crook, J. W. Fletcher, J. W.
Hopkins III, T. Slade, A. R. Smith.

Text preparation

June Lloyd (1975–2005), Francis Morris (2012–23), Clare Chapman (2015–23), Susanne
Haslegrove (2024–5), Pru Kemball (2020–25), Caroline Raison (1964–1981), Sarah Price-Sinclair
(2024–5), Vivien Vibert (2024–5)

AUTHORS' PREFACE

I am honoured to have been asked to write this preface on behalf of my parents, Martin Biddle and Birthe Kjølbye-Biddle, co-authors of this Winchester Studies series 4.i, *The Minsters*. My mother died on the 16th January 2010 and did not live to see the full publication of her work on the interpretations of excavations of the Anglo-Saxon Minsters undertaken in the years 1962–9 and it is thrilling that this is now coming to pass.

Through their excavations at Cathedral Green, this volume is particularly the story of Old Minster – ‘identified as the church built by Cenwalh in around 648 AD’ (Part 2) later to become the site of the tomb (Part 6) and subsequently shrine of St. Swithun (Part 9). As part of the excavations of the minsters New (Part 3) and Old, it is arguably demonstrated that ‘there was in Anglo-Saxon Winchester an architectural expression of Church and Kingship on a monumental scale that may well allow the use of the word ‘capital’ at the very ‘heart of the Old English Kingdom’ (*IX Interim*, p. 125).

As acknowledged in the *VIII Interim* (1969 season), at the conclusion of the archaeological excavation of Old Minster, the consequent research and analysis would likely continue for decades, through further investigations elsewhere, through re-interpretations, comparisons, and study of the documentary evidence. So it has proved, culminating with the publication of this 3-volume, 1700 page comprehensive work, on the archaeology and interpretation of the cruciform Old Minster and the other minsters of Winchester. Through their extensive travels and visits to cruciform churches and analysis of more no longer visible today, but studied by others, across Europe and elsewhere, my mother’s comparative studies, her ‘beautiful ratios’ as she called them, came about. With this, she demonstrated a uniformity of architectural interpretation of the Cross in the buildings in which Christ has been worshipped over millennia.

Some five-and-a-half decades later, since the last trowel at the site of Old Minster, this volume, in the series of Winchester Studies, does justice to the lifelong dedication of the authors to establishing the archaeology of Winchester and its minsters as an outstanding urban archaeological investigation of the evolution of a single city in Great Britain. It also cements the place of Winchester as the Old English Royal and religious Capital of Old England.

Born while the excavations were ongoing, studying archaeology myself, and as witness to and later as part of discussions on the future of the Winchester Series, marked by milestones as volumes were published, I can lay testament to the dedication of heart and soul that both my parents gave and have given and indeed in my father’s case, are giving, to this, their lifelong work.

Particular thanks are due to members of the Winchester Excavations Committee for their continuing support, and to Simon Hayfield for his exceptional illustrations, to Clare Chapman, and Francis Morris for unstinting help in preparing the manuscript, to the copy-editor, Bonnie Blackburn the reader, Leofranc Holford-Strevens, the typesetter, Rajka Makjanic, and to the unwavering dedication to this and to the series of Katherine Barclay and to Pru Kemball, for seeing it through to publication.

I am so proud to be writing this preface to a volume cementing my mother’s position as an outstanding field archaeologist of her day with a formidable interpretative mind, and for my father, whose vision in 1962 to establish the Winchester Excavations Committee, set the hares running to study the development of Winchester from its earliest origins to the formation of the modern city we see today. A study of the city itself, not just of any one period in it. The minsters were the beating heart of this capital city of Old England.

Signe Biddle, Winchester, Jan 2026

FOREWORD

by

GILES CLARKE

I am writing this Foreword on behalf of the Chairman and other members of the Winchester Excavations Committee and the preparation of it is both a pleasure and an honour. It has brought back memories of the many happy and stimulating summer days in the 1960s on which I worked on the Cathedral Green site under Birthe's supervision. My involvement started in 1965 when as a diffident school boy I volunteered my time on free afternoons and it finished with the final season of work on the New Minster domestic buildings in 1970.

What made the Cathedral Green dig so remarkable was partly the large gathering of motivated young people from many parts of the world, but more the enthusiasm and high academic seriousness with which Birthe and Martin approached the task in hand. The late 1960s were perhaps the highpoint of volunteer archaeology and Birthe and Martin combined academic rigour with lucid explanation which motivated everybody to contribute their best.

This book, however is much more than an excavation report. At its heart is a description by two scholars of their lifelong combined project – an investigation of Old Minster in its local Winchester setting and more importantly in the context of the history of the Anglo-Saxon state and the development of European church architecture.

This book also embraces a wide range of related topics, including a comprehensive survey of burial in and around Old Minster, and a description of what is currently known of New Minster. The treatment of burial draws on both archaeological and written evidence and thus reflects the multi-disciplinary approach that is a hallmark of Winchester Studies. That multi-disciplinary approach extended also to full osteological study, published not here but in 2017 in *The People of Early Winchester*.¹

A further theme is the physical evidence for the cult of St Swithun, the literary sources for which were published in the eponymous volume by Michael Lapidge in 2003.² That physical evidence includes not merely the Anglo Saxon martyrium and other material from Old Minster but also the excavation of the medieval St Swithun's chapel and John Crook's analysis of relevant features in the present Cathedral.

In an important sense the conclusion of the excavation in 1970 was not the end of the project but merely the end of the beginning. Thereafter Birthe's researches continued, including the thoroughgoing analysis of burial and grave sequences, the geometric and numerical analyses of the Old Minster plans, and her comparative researches with Martin into churches on three continents. The post-excavation work is described on pp. 23–31. The coins were published in 2012 in *The Winchester Mint*³ and many of the other small finds in 1990 in *Object and Economy in Medieval Winchester*.⁴ The finds are now in the care of Hampshire Cultural Trust and a selection are on display in Winchester City Museum. Some are important works of art in their own right.

By the time of Birthe's final illness the text and illustrations were all but finished. The principal illustrator, Simon Hayfield, had worked in close collaboration with Birthe. The text was spread between digital and hard copy versions, some of the latter being amended in manuscript.

The task of collating this material fell to Francis Morris who started in October 2012 and resumed in 2020 once he had finished work on *Venta Belgarum*.⁵ Francis's task included checking the text and cross-references and for much of the time he worked closely with Martin. After 2020 he also worked with

¹ WS 9.i.

² WS 4.ii. Other documentary evidence relating to the Minsters is published in WS 4.iii.

³ WS 8.

⁴ WS 7.ii

⁵ WS 3.i.

Simon Hayfield in finalising the drawings, their work reflecting both Martin's wishes and the lessons learnt from the preparation of *Venta Belgarum*.

That phase of the project concluded in 2023. Since then the preparation of the text for publication and the seeing of it through the press has been undertaken by Katherine Barclay, assisted by Pru Kemball and Susanne Haselgrove. A great debt is owed both to Francis, to Martin's assistant Clare Chapman, and to Katherine and her team for all their work at these final stages. Without their dedication and commitment the untimely circumstances which now obtain would have delayed and might even have prevented publication.

Inevitably as these final stages progressed the shape and balance of the book as a whole has come much more into focus. It may well be the authors would have concluded some passages could be shorter and some omitted as duplication or consolidated into one place. So too, they may well have concluded certain points require more explanation and that some updating would have been appropriate to reflect publications and other developments since Birthe last worked on the text. The decision which had to be taken was whether to attempt any of this or whether to let the book stand as the authors last left it. Without hesitation the latter course has been taken.

I hope all readers will endorse this approach. This book represents the joint lifetime project of two outstanding scholars. Any substantive editing would have risked losing critical insights and meaning. Future researchers can then make their own judgements on what is written and as to what needs further investigation or challenge.

In making those judgements a key feature of this work will prove invaluable, namely the extent to which primary evidence is published in the drawn plans and sections and in the photographs. This material is in the third bound volume, a division which is intended to facilitate usage with the text. Many of the drawings were originally designed to be on foldouts, but now have to be reproduced in segments on separate pages. This is an inevitable economy if this volume is to be kept to manageable size and cost, but it should be kept in mind that unsegmented versions of all these drawings may be seen by accessing the QR code given with the drawing. Even if that route is not taken, those drawings whose detail is difficult to read on the printed page can be enlarged in the digital version.

Behind everything, both verbal and visual, lie the site records. These are described on pp. 10–11 and 27–8 and where necessary referred to in the text. At the time of writing the records, which are part of the Winchester Excavations Committee archive, are in the care of Hampshire Cultural Trust.

The results of the Old Minster excavation that lie at the heart of this book have been known to scholars since the 1960s on account of the interim reports published annually by Martin in the *Antiquaries Journal*, the last on Old Minster covering the 1969 season and appearing in 1970.⁶ It is fascinating reading the reports again to see how the thinking of Martin and Birthe changed and evolved as the excavation developed. Their final conclusions, as set out in the 1969 interim, essentially still stand.

For many readers the interims are well in the past. For them and for all those coming fresh to the Minsters a useful introductory study is represented by a short book published in 2018, *The Search for Winchester's Anglo-Saxon Minsters*.⁷ This was a tribute to Birthe prepared by Martin in collaboration with Simon Hayfield.

When I first read this present publication in its completed form my overall impression was how much it illustrates and encapsulates a key period of English history, while at the same time emphasising the essential continuity of that history. Thus the present massive Cathedral is in direct descent from the seventh-century church whose plan was so clearly outlined by its pink rubble filled foundation trenches as seen on Colour plate 2. The continuity is represented not just by proximity but by the relics from Old Minster which still lie in the Cathedral, most notably the bones in the mortuary chests identified with Saxon kings and bishops originally buried in Old Minster. Some of this material may at the time

⁶ *Interims* 1 to IX.

⁷ Biddle 2018.

of writing be seen in the Kings and Scribes Exhibition in the south transept of the Cathedral. That exhibition also includes one or two of the key art works found in Martin and Birthe's excavations, notably the Sigmund stone,⁸ and the New Minster painted stone.⁹

A last word must acknowledge again Birthe and Martin. They first met when she came to supervise the 1964 Cathedral Green excavation and as described in *The Search for Winchester's Anglo-Saxon Minsters* she brought Danish archaeological techniques to mix with Martin's experience in the Wheeler tradition of British archaeology. It was Martin's superb ability to motivate and organise which made possible such a vast operation as was represented by the Winchester excavations in the 1960s. Without their joint skills and commitment the work represented by this volume could not have been achieved and our knowledge of Winchester's past and wider medieval history would be immeasurably the poorer.

Giles Clarke

20 January 2026

⁸ See below pp. 830–9, Illus. 7.13–16.

⁹ See below pp. 909–10, CG WS 435, Colour pl. 18.

CONTENTS

Volume 4.i.1

List of illustrations	xii
List of tables	xviii
List of colour plates	xxiii
List of black-and-white plates	xx
List of figures	xxxiii
List of charts	xli
Acknowledgements	xlii
List of abbreviations	xliii
List of references	xlix

PART 1: INTRODUCTION AND BACKGROUND

I. INTRODUCTION	I
1. The three Anglo-Saxon minsters of Winchester	I
2. Circumstances of the excavations of the Old and New Minsters	I
3. Evidence and interpretation	6
II. METHOD: ARCHAEOLOGICAL EVIDENCE	9
1. General	9
2. Recording	10
3. Supervision	12
4. Records	12
5. Principles and methods of the excavation of robbed structures	12
6. Principles and methods of the excavation of the Paradise cemetery	18
III. PREPARATION FOR PUBLICATION	23
1. Phasing	23
2. Graves: excavation and analysis	24
3. Post-excavation records	27
4. Subdivisions of the area excavated at Cathedral Green in 1962–9	29
5. Finds	30
IV. GEOLOGICAL AND PHYSICAL SETTING	32
V. THE AREA OF THE MINSTERS IN ROMAN AND SUB-ROMAN TIMES	37
1. Below the Old and New Minster churches	37
2. Below the southern domestic buildings of New Minster	39
3. Below the northern domestic buildings of New Minster	39

4. Below Nunnaminster (St Mary's Abbey)	40
5. The sites of the minsters at the end of the Roman period: a summary	41
VI. THE CONTEXT FOR THE FOUNDATION OF OLD MINSTER	42
PART 2: OLD MINSTER	
I. THE FIRST CHURCH (Final phase 20)	45
1. Written evidence	45
2. Archaeological evidence	62
3. Architectural interpretation	76
4. Three-dimensional reconstruction	96
5. Altars in the first church	96
6. The date of the first church	100
7. The limits of the original precinct	102
II. ALTERATIONS, ADDITIONS, AND THE USE OF THE FIRST CHURCH (Final phases 21–32)	105
1. Written evidence	105
2. Archaeological evidence and interpretation	118
3. Comparison with other churches	125
4. The cemetery: Generations 1–10 (<i>c.</i> 675 to <i>c.</i> 890)	130
III. SUMMARY: OLD MINSTER FROM <i>c.</i> 648 to <i>c.</i> 900	148
1. Architectural development	148
2. Cemetery topography	148
3. The burials: generations 1–10	149
4. Dating	150
5. Finds	150
IV. THE ADDITION OF THE WESTERN FAÇADE (Final phases 33–6)	152
1. Written evidence	152
2. The construction of New Minster and the development of Old Minster: introductory analysis	155
3. Archaeological evidence	156
4. Architectural interpretation	158
5. Three-dimensional reconstruction	159
6. Comparison with other churches	159
7. The development of the cemetery	161
V. THE ADDITION OF CHAPELS TO THE EAST SIDE OF THE WESTERN FAÇADE (Final Phases 37–40)	166
1. Written evidence, tenth century to <i>c.</i> 970	166
2. Archaeological evidence	168
3. Architectural interpretation	169
4. Three-dimensional reconstruction	171

5. Comparison with other churches	171
6. The development of the cemetery: Generations 13–16 (c.917–c.970)	172
VI. SUMMARY: OLD MINSTER FROM c.900 to c.970	183
1. Architectural development and cemetery topography	183
2. Burials: Generations 11–16	184
3. Dating	186
4. The finds and their implications	186
VII. <i>MARTYRIUM</i> : THE CONSTRUCTION OF THE DOUBLE-APSED LINK BUILDING (Final phases 41–5)	189
1. Written evidence	189
2. Archaeological evidence	191
3. Architectural interpretation	197
4. Three-dimensional reconstruction	201
5. Comparison with other churches	202
6. The development of the cemetery	217
7. Dating	224
8. Finds	224
VIII. THE CONSTRUCTION OF THE WESTWORK (Final phases 44–5)	225
1. Written evidence	225
2. Archaeological evidence	247
3. Dating	250
4. Finds	250
5. Architectural interpretation	251
6. Three-dimensional reconstruction	258
7. Comparison with other churches	259
IX. THE MONUMENT OF ST SWITHUN IN THE WESTWORK (Final phase 45)	261
1. Written evidence	261
2. Archaeological evidence	262
3. Architectural interpretation	263
4. Three-dimensional reconstruction	264
5. The monument and the westwork	264
X. THE EXTENSION AND REBUILDING OF THE EAST END (Final phases 46–8)	265
1. Written and pictorial evidence	265
2. Archaeological evidence	298
3. Dating	306
4. Finds	307
5. Architectural interpretation	310
6. Three-dimensional reconstruction and comparison with the written and pictorial evidence	330
7. Comparison with other churches	338

XI. THE LAST CENTURY OF OLD MINSTER (Final phases 45–56)	376
1. Written evidence	376
2. External areas in final phases 45–8	393
3. Developments inside Old Minster in final phases 45–8	400
4. The cemetery in final phases 46–51	401
5. Areas outside Old Minster without burials in final phases 50 and 51	405
6. Developments inside Old Minster in final phases 50 and 51	406
7. The cemetery in final phase 52	407
8. Areas outside Old Minster without burials in final phase 52	408
9. The cemetery in final phases 53 and 54	409
10. Areas outside Old Minster without burials in final phases 53 and 54	411
11. Final developments inside Old Minster in final phases 52–5 (c.1030 to c.1090)	412

PART 3: NEW MINSTER

I. THE FOUNDATION AND SITE OF NEW MINSTER	413
1. Written evidence	413
2. Archeological evidence: the site of New Minster and the creation of its precinct	431
3. Archeological evidence: the site of New Minster before building began	436
II. THE NEW MINSTER CHURCH	442
1. Written evidence	442
2. Archeological evidence	450
3. The appearance of the New Minster church	452
4. Architectural interpretation	453
5. Comparison with other churches	458
6. Dating: a summary	461
7. Additions to the New Minster church	462
8. The demolition and robbing of New Minster	464
III. THE DOMESTIC BUILDINGS OF NEW MINSTER	466
1. Written evidence	466
2. Archeological evidence: the northern domestic buildings (Buildings A–D, CACP 1961)	469
3. Archeological evidence: the southern domestic buildings (Building E, CG 1970)	503

Volume 4.i.2

PART 4: BURIAL AT THE OLD AND NEW MINSTERS

I. INTRODUCTION	547
II. WRITTEN EVIDENCE	548
1. General comment	548
2. Burials recorded at Winchester from <i>c.</i> 648 to the death of Alfred in 899	549
III. BURIAL INSIDE OLD MINSTER	558
1. General comment	558
2. Graves in the nave of the seventh-century church	558
3. Graves in the chapels behind the north wing of the west façade	564
4. Graves of Generation 17 in the <i>martyrium</i>	565
5. Graves of Generations 18 and 19 in the nave	565
6. Graves of Generations 18 and 19 in the westwork and in the north chapel of the south wing of the west façade	566
7. Graves of Generations 20–2 in the westwork	567
8. Child:adult and male:female ratios of burials within the church	567
9. Missing graves	568
IV. THE OLD MINSTER CEMETERY	569
1. Topography	569
2. The beginnings of burial and the growth of the cemetery	572
3. The Old Minster burials in general	577
4. Child:adult and male:female ratios in The Old Minster cemetery	587
5. Orientation and body position in the Old Minster cemetery	592
6. Grave pits in the Old Minster cemetery	595
V. BURIAL AT NEW MINSTER	599
1. The New Minster burials in general	599
2. Burial inside New Minster	603
3. Burial in the cemetery north of New Minster	604
4. Numbers, age, and sex of the New Minster burials	604
5. Charnel	607
6. Body position in the New Minster burials	607
7. Grave pits: absolute (OD) levels and depths of the New Minster burials	607
VI. GRAVE TYPES AT THE OLD AND NEW MINSTERS	609
1. Introduction and variation 1: burials in earth without coffins	609
2. Variation 2: burials in coffins without iron nails or fittings	614
3. Variation 3: burials in nailed coffins	615
4. Variation 4: burials with flints or tiles outside the coffin	629
5. Variation 5: burials with tile pillows	630

6.Variation 6: burials with flint or stone pillows	632
7.Variation 7: burials with head supports	632
8.Variation 8: burials with charcoal	636
9.Variation 9: burials with yellow sand	653
10.Variation 10: burials in ironbound coffins	654
11.Variation 11: burials in coffins with iron rings	696
12.Variation 12: burials with iron spikes	703
13.Variation 13: burials in built graves	704
14.Variation 14: burials in monolithic coffins	705
15.Variation 15: burials below stone covers	711
16.Variation 16: burials in mortared cists	714

PART 5: THE DEMOLITION OF THE OLD AND NEW MINSTER CHURCHES,
THE BUILDING OF THE NORMAN CATHEDRAL, AND THE CREATION OF THE
MEMORIAL COURT

I. THE DEMOLITION OF THE OLD AND NEW MINSTER CHURCHES AND THE BUILDING OF THE NORMAN CATHEDRAL	715
1. Written evidence	715
2. Archaeological evidence	726
3. Interpretation	738
II. ST SWITHUN'S TOMB AND THE MEMORIAL COURT	743
1. Written evidence	743
2. Archaeological evidence	743
3. Finds	748
4. Interpretation	751

PART 6: PARADISE AND ST SWITHUN'S CHAPEL

I. THE CREATION OF THE PARADISE CEMETERY	753
1. Written evidence	753
2. Archaeological evidence	753
3. Finds	757
4. Interpretation	758
II. ST SWITHUN'S CHAPEL	760
1. Written evidence	760
2. Archaeological evidence	760
3. The date of the chapels	766
4. Architectural reconstruction	767
III. THE PARADISE CEMETERY	768
1. Written evidence	768

2. Archaeological evidence	768
3. Medieval grave generation 1 (c.1200–c.1240)	773
4. Medieval grave generation 2 (c.1240–c.1280)	774
5. Medieval grave generation 3 (c.1280–c.1320)	777
6. Medieval grave generation 4 (c.1320–c.1360)	779
7. Medieval grave generation 5 (c.1360–c.1400)	782
8. Medieval grave generation 6 (c.1400–c.1440)	785
9. Medieval grave generations 7 and 8 (c.1440–c.1520)	787
10. Conclusions	790
IV. THE NORTH CLOSE SINCE THE REFORMATION	797
1. Written evidence	797
2. Archaeological evidence	797
PART 7: ARCHITECTURAL DECORATION AT THE OLD AND NEW MINSTERS	
I. STONE SCULPTURE	805
1. Anglo-Saxon architectural elements	807
2. Post-Conquest architectural elements	855
II. RELIEF-DECORATED AND PLAIN ANGLO-SAXON GLAZED TILES	858
1. Introduction	858
2. Relief-decorated glazed tile types	869
3. Plain glazed tiles	877
4. Interpretation of the tiles	878
5. Anglo-Saxon glazed tiles from other sites in England	889
6. The inspiration for the Anglo-Saxon glazed tiles from Old Minster	892
III. GLASS TILE	898
IV. WINDOW GLASS	899
1. Introduction	899
2. Group 1, durable window glass of ‘early’ type	900
3. Group 2, durable window glass of ‘later’ type	901
4. Group 3, durable blue window glass	901
5. Group 4, non-durable window glass	903
6. Lead window comes	905
V. WALL PLASTER	906
VI. THE NEW MINSTER WALL-PAINTING	909
VII. BELLS	911
1. Introduction	911
2. The late tenth-century bell-casting pit, Feature 33	911
3. The early twelfth-century bell-casting pits, Features 98A and 98B	914
4. The mid to late thirteenth-century bell-casting pit, Feature 226	916

PART 8: ECCLESIASTICAL AND OTHER ARTEFACTS FROM
THE OLD AND NEW MINSTERS

I. FINDS FROM THE OLD AND NEW MINSTERS	919
II. ECCLESIASTICAL OBJECTS	920
1. Ivory crucifix	920
2. Silver gilt head	920
3. The Winchester decorated panel	921
4. Fittings from reliquaries and other fine caskets	921
5. Chalices, patens, and a possible <i>capsa</i>	926
6. Pilgrims' badges	926
III. POSSIBLE ECCLESIASTICAL OBJECTS	928
1. Spoons	928
2. Jar of Egyptian alabaster (calcite)	928
3. Long tacks of silver and copper alloy	929
IV. PERSONAL POSSESSIONS	931
1. Textiles, with a contribution <i>by</i> Alexandra Makin	931
2. Strap-ends, buckles, and other strap fittings	941
3. Hooked tags	944
4. Pins	945
5. Jewellery	947
6. Bone combs	950
V. EQUIPMENT AND WEAPONS	953
1. Inlaid knife	953
2. Arrowhead	953
VI. COINS	955
VII. POTTERY	961

PART 9: THE ARCHITECTURAL SETTING OF THE CULT OF ST SWITHUN IN
WINCHESTER CATHEDRAL, 1093–1538

by John Crook

I. INTRODUCTION	963
II. MEDIEVAL AND POST-MEDIEVAL DOCUMENTARY EVIDENCE	964
1. Introduction	964
2. St Swithun's relics and the Romanesque cathedral	965
3. St Swithun's relics in the thirteenth century	972
4. St Swithun's relics in the fourteenth century	974
5. Annual celebration of the cult of St Swithun	974
6. St Swithun's relics in the fifteenth century	974
7. St Swithun's shrine at the Reformation	979

8. Memory of the shrine in the seventeenth century	980
III. THE PHYSICAL EVIDENCE	981
1. Introduction	981
2. The eleventh- and twelfth-century architectural context	981
3. Later medieval modifications to the Feretory platform	991
4. The architectural setting of the shrine of 1476	997
5. The Feretory between 1476 and 1541	998
6. The Feretory platform after the Reformation	999
7. Survival of fragments from the shrines of St Swithun	1000
8. Reassembling the shrine-base	1003
IV. DISCUSSION AND CONCLUSIONS	1005
1. Introduction	1005
2. The nature of the cult	1005
3. St Swithun's relics in the late eleventh century	1006
4. The reorganization of the 1150s	1007
5. St Swithun's relics in the thirteenth century	1008
6. The 'Chapel of St Swithun'	1009
7. The Holy Hole in the fourteenth century	1010
8. The fifteenth-century translation	1011
9. The Great Screen	1011
10. Conclusions	1011

PART 10: NUNNAMINSTER/ST MARY'S ABBEY

I. WRITTEN EVIDENCE	1013
1. Nunnaminster/St Mary's Abbey in the early Middle Ages <i>by</i> Barbara Yorke	1013
2. St Mary's Abbey in the later Middle Ages <i>by</i> Diana K. Coldicott	1020
II. ARCHAEOLOGICAL EVIDENCE	1028
1. Nunnaminster/St Mary's Abbey: observations and finds <i>by</i> Michael N. Morris <i>and</i> Kenneth E. Qualmann	1028
2. City Offices Extension (COE) 1973 <i>by</i> Kenneth E. Qualmann	1033
3. Abbey View Gardens (AVG) 1981–3 <i>by</i> Kenneth E. Qualmann	1040

PART 11: KING AND CHURCH IN AN EARLY CAPITAL

1. WINCHESTER IN THE FIFTH TO MID-NINTH CENTURIES: KING, CHURCH, AND PEOPLE IN THE TOPOGRAPHY OF AN EARLY CAPITAL	1051
2. THE LATE ANGLO-SAXON STREET-PLAN OF WINCHESTER	1052
3. THE SOUTH-EASTERN QUARTER FROM THE MID-NINTH CENTURY TO 1066	1052
4. THE SOUTH-EASTERN QUARTER FROM 1065 ONWARDS	1053

APPENDIX: THE CROSS-PLAN OF OLD MINSTER IN ITS EUROPEAN
AND ENGLISH CONTEXT

I. COMPARISON WITH OTHER CHURCHES: BYZANTIUM	1055
1. Introduction	1055
2. Constantine's Church of the Holy Apostles	1058
3. Justinian's Church of the Holy Apostles	1061
4. The Fatih Camii	1063
5. The Church of St John at Ephesus	1064
6. The Church of the Holy Apostles and Old Minster	1065
II. COMPARISON WITH OTHER CHURCHES: CONTINENTAL EUROPE	1067
1. General principles, arrangement, and conventions	1067
2. Rome and Sardinia (Churches 1–2)	1069
3. Milan (Churches 3–4)	1088
4. Northern Italy and the Eastern Alpine area (Churches 5–27)	1091
5. Ravenna (Churches 28–31)	1100
6. South-eastern Europe (Churches 32–40)	1103
7. The Iberian Peninsula (Churches 41–8)	1110
8. The Western Alpine area (Churches 49–67)	1117
9. France (Churches 68–75)	1124
10. The Rhineland and Flanders (Churches 76–83)	1126
11. The spread of the cross-planned church in continental Europe: a summary	1131
III. COMPARISON WITH OTHER CHURCHES: ENGLAND	1137
1. Introduction	1137
2. The seventh to early eighth centuries (Churches 85–90)	1137
3. The late eighth to late ninth centuries (Churches 91–6)	1150
4. The tenth to early eleventh centuries (Churches 97–115)	1155

Volume 4.i.3

LIST OF COLOUR PLATES	iii
LIST OF BLACK-AND-WHITE PLATES	v
LIST OF FIGURES	xiii
LIST OF CHARTS	xxi
LIST OF REFERENCES	xxi
LIST OF ABBREVIATIONS	xxii
STAFF AND VOLUNTEERS OF THE WINCHESTER EXCAVATIONS COMMITTEE AND THE WINCHESTER RESEARCH UNIT	xxiii
INTRODUCTION	1171
COLOUR PLATES	1173
BLACK-AND-WHITE PLATES	1207
FIGURES	1346
PHASING CHARTS	1695
INDEX	1725

LIST OF ILLUSTRATIONS

Volume 4.i.1

Frontispiece

	Old Minster: reconstruction of the church as completed 992–4, looking north-west.	
1.1	The location of Winchester in Britain.	2
1.2	Late Anglo-Saxon Winchester.	3
1.3	Sites in this book, excavated by the Winchester Excavations Committee 1961–71, including Cathedral Car Park 1961 (CACP) and Cathedral Green 1962–70 (CG).	4
1.4	Key to the conventions used on the archaeological plans and sections published with this book	7
1.5	Construction and robbing of stone buildings.	15
1.6	The sequence of robbing of the square seventh-century east end, converted into an apsidal chancel in the eighth century, and into a crypt below the raised high altar by 992–4.	16
1.7	Examples of the sheets used in phasing the excavated remains, for Indices, Provisional phases, Phase summaries, and Structural context descriptions.	25
1.8	The development of Winchester from the mid- to late 2nd century B.C. to 1870.	34
1.9	Winchester in the fifth to ninth centuries.	35
1.10	Winchester and the Itchen Valley in the fifth to seventh centuries (excluding sites and finds from within the walled area of Winchester).	36
2.1	Old Minster: the earliest Anglo-Saxon church as it may have looked about 650.	97
2.2	Old Minster: composite sections of the construction of the <i>martyrium</i> showing the ground level, the level of the new floor, and the underlying Roman east–west street.	192
2.3	Comparative churches: Basilica of the Nativity, Bethlehem; Germigny-des-Prés, Loiret; St. Georg, Reichenau–Oberzell, Baden–Württemberg; the <i>martyrium</i> of St Swithun, Winchester, built between 971 and c.975).	204
2.4	Comparative churches: the Rotunda of the Anastasis, Church of the Holy Sepulchre, Jerusalem; St Sergius and St Bacchus, Constantinople; San Vitale, Ravenna; Charlemagne’s palace chapel, Aachen; the <i>martyrium</i> of St Swithun, Winchester, built between 971 and c.975.	208
2.5	Old Minster: three-dimensional reconstruction of the church after the completion of the westwork in 980.	258
2.6	Comparative churches: the addition of westworks to Corvey, Nordrhein–Westfalen; B: Werden, Nordrhein–Westfalen; Old Minster, Winchester, built between c.975 and 980).	259
2.7	Comparative westworks: Corvey, Nordrhein–Westfalen; Werden, Nordrhein–Westfalen; Old Minster, Winchester, built between c.975 and 980.	260
2.8	Old Minster: dimensions and ratios after the final additions completed 992–4 showing the position of the seventh-century altar.	312
2.9	Old Minster: three-dimensional reconstruction of the church in its final form as completed 992–4.	331
2.10	Old Minster: three-dimensional reconstruction of the church in its final form as completed 992–4, with the west front of New Minster, built 901–3, and its tower built in the 980s in the background.	331
2.11	Old Minster: three-dimensional reconstruction of the interior of the nave in its final form as completed 992–4.	332
2.12	Old Minster: three-dimensional reconstruction of the church as completed 992–4.	333
2.13	Comparative churches: Old Minster, with the east end as completed 992–4; Sint Servas, Maastricht; St. Maria im Kapitol, Cologne; Corbie, Somme.	344
2.14	Old Minster, the ‘Æthelwold master-plan’: the <i>martyrium</i> of c.971–5 and tri-lobed east end of c.980 to 992–4 combined.	348
2.15	Old Minster, dendrochronology: the relative and absolute positions of dated samples taken from the timbers of F 265, a latrine on the north side of the church.	397
3.1	Comparative churches in France and Germany and New Minster, Winchester illustrated for comparison.	459
3.2	Comparative plans: the late Anglo-Saxon double-apsed chapels at New Minster and at Wolvesey, Winchester.	470
3.3	Comparative plans, late eleventh- and earlier twelfth-century residences of English bishops and abbots.	497
3.4	New Minster, southern domestic buildings, Building E, the first cloister: controlling dimensions.	507
3.5	New Minster, southern domestic buildings, Building E, the enlarged cloister: setting out and controlling dimensions of the south range).	525

3.6	New Minster, southern domestic buildings, Building E, the enlarged cloister, Room 5: modular analysis.	531
3.7	Comparative cloisters: Kloster auf der Kreuzwiese, Lorsch, Hessen, Germany; St. Nazarius, Lorsch, Hessen, Germany; St. Johann, Müstair, Switzerland; St. Petersinsel, Switzerland; New Minster, Winchester; Cluny II, S�one-et-Loire, France.	537

Volume 4.i.2

4.1	Burial of adults and children inside and outside the Old and New Minsters, all grave generations.	559
4.2	Burial of adults and children inside and outside the Old and New Minsters, in chronological groups.	563
4.3	Old Minster cemetery: density and frequency of burial.	573
4.4	Old Minster burials: number of excavated burials per year by generation with an estimate of the original total number of burials per year.	575
4.5	Old Minster: the total area of the church in successive structural periods with an estimate of the total area of the cemetery around it.	577
4.6	Old Minster burials: the proportions of child, adult unsexed, adult male, and adult female bodies.	588
4.7	Old and New Minster burials: proportions of child, adult female, adult male, and adult unsexed graves inside and outside the Old and New Minster churches.	590
4.8	Old Minster cemetery: the OD levels of the bottom of the graves averaged in generation groups and plotted in relation to the OD levels of the seventh-century church, St Martin's Tower, and the latest surface of the Roman W–E street.	596
4.9	Old and New Minster external burials: coffin types found in graves outside the Old and New Minster churches: child and adult compared.	616
4.10	Old and New Minster external burials: coffin types found in graves outside the Old and New Minster churches: adult males and females compared.	617
4.11	Old and New Minster internal burials: coffin types found in graves inside the Old and New Minster churches: all, child, adult, male, and female compared.	618
4.12	Old Minster burials with iron coffin nails: proportions of children, unsexed adults, adult males, and adult females.	620
4.13	Old Minster burials: number of iron coffin nails by date.	622
4.14	Old Minster burials: lengths of complete Type A iron coffin nails. by date and by diameter of head.	623
4.15	Old Minster burials: diameter of Type A nail heads by date.	625
4.16	Old Minster burials with pillow stones and head supports.	630
4.17	Old Minster burials with charcoal packing (Variation 8): proportions of children, unsexed adults, adult males, and adult females.	637
4.18	North-west Europe in the fourth to twelfth centuries (not including Germany): charcoal graves and graves with the deliberate inclusion of charcoal in the fill.	639
4.19	Coffin fittings of Type A from Old Minster G. 68 and G. 821.	657
4.20	Coffin fittings of Type A from Old Minster G. 68 and G. 74.	658
4.21	Coffin fittings of Type A from New Minster G. 33 and Old Minster G. 68	659
4.22	Coffin fittings of Types B, D, and E from New Minster G. 73	660
4.23	Coffin fittings of Type B from New Minster G. 73 and Type C from Old Minster G. 203, G. 624, and G. 714.	661
4.24	Coffin fittings of Type F1 from Old Minster G. 624 and Type F2 from Old Minster G. 717 and G. 730, nos. 1 and 2.	662
4.25	Coffin fittings: hinge from Old Minster G. 821.	663
4.26	Coffin fittings: hinges from Old Minster G. 74 and G. 867.	664
4.27	Coffin fittings: hasps and staples from Old Minster G. 68, G. 664, and G. 87.	665
4.28	Coffin fittings from the Old and New Minsters: Measurements taken on each fitting type and the occurrence of the types on coffins.	666
4.29	Coffin fittings: variation in size of the types of coffin fittings in date order by grave.	667
4.30	Coffin fittings: occurrence of coffin fittings and their combination on individual coffins by date.	669
4.31	Coffin reconstructions: key to Types I, II, and III.	672
4.32	Coffin reconstructions of Variation 10: all coffins with fittings other than rings or spikes of Variations 11 and 12.	673

4.33	Ironbound coffins (Variation 10) in Old and New Minster burials: location, packing, sex and age of the twenty-two examples compared.	674
4.34	Old Minster burials with iron coffin fittings (Variation 10), including those with iron rings (Variation 11), and iron spikes (Variation 12): proportions of children, unsexed adults, adult males, and adult females.	675
4.35	Coffin fitting: plate lock from the coffin in Old Minster G. 74.	676
4.36	Coffin fitting: Diagrams a–c of the working of the plate lock from the coffin in Old Minster G. 74.	677
4.37	Coffin fittings: rings and staples (Variation 11) from Old Minster G. 16 and G. 201, and New Minster G. 31.	697
4.38	Coffin fittings: rings and staples (Variation 11) from New Minster G. 32 and Old Minster G. 203.	699
4.39	Coffin reconstructions: coffins with rings (Variation 11) or spikes (Variation 12).	700
4.40	Coffin fittings: spikes (Variation 12) from Old Minster G. 422 and G. 127.	704
4.41	Old Minster burials with stone detail: coffin, grave cover, or built of slabs: proportions of children, unsexed adults, adult males, and adult females.	706
5.1	The Norman cathedral: reconstructed plan of the original west end of the nave and the western massif, with extant and archaeologically observed walls and dates of observations marked.	721
5.2	Comparative churches: some of the greater churches in eleventh-century Europe with which the Norman cathedral at Winchester has been compared: St Peter's, Rome, Speyer, Westminster Abbey, Canterbury Cathedral, St Albans Abbey, Winchester Cathedral, St Paul's Cathedral, London, Cluny III.	723
5.3	Old Minster and the Norman cathedral compared, plans and elevations (with reconstructions). Old Minster as completed by 992–4 and the Norman cathedral as completed by ?c.1127.	724
5.4	Old Minster: the robber-trenches. This drawing by Simon Hayfield shows the whole of the robbed site of Old Minster (with the south part of the robbed site of New Minster immediately to the north) as it might have looked after the Norman builders of the new cathedral had taken away all the stone they could reuse.	727
6.1	Monuments over the grave of St Swithun.	763
6.2	Paradise cemetery: density of burial around St Swithun.	769
6.3	Paradise cemetery: graves with chalice and paten or chalice alone.	784
6.4	Post-medieval pit, F. 291, used for copper-alloy metal-casting and dug in 'Paradise' to the north of the north door of the nave of the cathedral, c.1690.	799
7.1	Distribution of worked stone in the robber-trenches of the Old and Minsters.	806
7.2	Circular windows: 1 , Old Minster; 2 , St Mary in Tanner Street.	808
7.3	Small columns and lathe-turned column drums or column bases: 3–17 , Old Minster.	809
7.4	Bases, capitals, and engaged colonnettes: 18, 21, 22 , Old Minster; 19, 20 , New Minster.	811
7.5	Lathe-turned column drums: 23, 24 , Old Minster.	812
7.6	String-courses, imposts, and? capitals: 25–35 , Old Minster.	813
7.7	Friezes with dentil patterns and colonnettes: 36–43 , Old Minster.	815
7.8	Friezes or string-courses with dentil patterns and running scrolls: 44–9 , Old Minster.	818
7.9	Fragments with twisted columns or cables and related motifs: 50–3, 55–9 , Old Minster; 54 , New Minster.	821
7.10	Fragments with pelleted and other interlace: 60–1, 63–4, 67 , Old Minster; 62, 65–6 , New Minster.	823
7.11	Fragments with foliate patterns: 68–74 , Old Minster.	826
7.12	Fragments with parts of human and animal figures: 75–85, 87–8 , Old Minster; 86 , New Minster.	829
7.13	'The Sigmund Stone': 89 , Old Minster, section of the block.	832
7.14	'The Sigmund Stone': 89 , Old Minster, block from a narrative frieze.	833
7.15	'The Sigmund Stone': reconstruction of part of the narrative frieze represented by 89 .	834
7.16	'The Sigmund Stone': reconstruction of the setting out of the carving on 89 .	835
7.17	Fragments with complex twists: 90, 92–3 , Old Minster; 91 , New Minster.	841
7.18	Grave-markers with the blessing hand of God holding a cross (94–5, 97), with a possible Golgotha (98), and an unidentified motif (96): 94, 96 , Old Minster; 95, 98 , New Minster; 97 , St Pancras Church.	843
7.19	Foot-stone with a representation of the Tomb of Christ: 99 , Old Minster.	846
7.20	Reconstruction of the setting out of the carving on 99 .	848
7.21	Grave-markers with crosses: 100–5 , from the Old Minster cemetery.	849
7.22	Inscribed grave-cover of Gunni: 106 , from the Old Minster cemetery.	851
7.23	Inscriptions: 107 , New Minster; 108 , Lower Brook Street, House XII,? from St Mary in Tanner Street; 109 , from the tower of St Maurice's church on the S side of High Street.	854
7.24	Architectural fragments (110–15) found on the site of Old Minster but prepared for or derived from the Norman cathedral.	856

7.25	Purbeck marble trefoil base (116) and ribs (117–18), found on the site of Old Minster, but derived from a major late thirteenth- or early fourteenth-century screen or other monument in the cathedral.	857
7.26	Anglo-Saxon glazed tiles from Old Minster and Victoria Road (VR): examples of relief Types A–D, all in Fabric 1.	859
7.27	Anglo-Saxon glazed tiles from Old Minster: examples of relief Types E and G–O, all in Fabric 1. E 9.	861
7.28	Anglo-Saxon glazed tiles from Old Minster: examples of relief Types B, C, and P; relief type, and plain tiles, in Fabric 3, and relief Type D in Fabric 2, with examples of Key types 12–15.	862
7.29	Anglo-Saxon glazed tiles from Old Minster: diagram of key types 1–11.	864
7.30	Anglo-Saxon glazed tiles from Old Minster: Keys 1–4.	865
7.31	Anglo-Saxon glazed tiles from Old Minster and Lower Brook Street (BSSC): Keys 5–15.	866
7.32	Anglo-Saxon glazed tiles from Old Minster: fragments of decorated and plain tiles.	869
7.33	Anglo-Saxon glazed tiles from Old Minster: relief Type A, reconstructed 16-tile panel.	870
7.34	Anglo-Saxon glazed tiles from Old Minster: relief Type B, reconstructed 16-tile panel.	871
7.35	Anglo-Saxon glazed tiles from Old Minster: relief Type Ca large, reconstructed 16-tile panel.	871
7.36	Anglo-Saxon glazed tiles from Old Minster: relief Type Ca small, reconstructed 16-tile panel.	872
7.37	Anglo-Saxon glazed tiles from Old Minster: relief Type Cb, reconstructed 16-tile panel.	872
7.38	Anglo-Saxon glazed tiles from Old Minster: relief Type D, reconstructed 16-tile panel.	872
7.39	Anglo-Saxon glazed tiles from Old Minster: relief Type E large, reconstructed 16-tile panel.	874
7.40	Anglo-Saxon glazed tiles from Old Minster: relief Type G small, reconstructed 16-tile panel.	874
7.41	Anglo-Saxon glazed tiles from Old Minster: relief Type H, reconstructed 16-tile panel.	875
7.42	Anglo-Saxon glazed tiles from Old Minster: relief Type J, reconstructed 16-tile panel.	876
7.43	Anglo-Saxon glazed tiles from Old Minster: finds in the area of the seventh-century nave, Anglo-Saxon and Norman deposits compared.	883
7.44	Anglo-Saxon glazed tiles from Old Minster: finds from the areas of the seventh-century nave and westwork compared.	884
7.45	Anglo-Saxon glazed tiles from Old Minster: wear on tiles from the seventh-century nave and westwork compared.	885
7.46	Anglo-Saxon glazed tiles: reconstruction of the primary glazed-tile pavement around the high altar of Old Minster at the E end of the seventh-century nave.	886
7.47	Anglo-Saxon glazed tiles: distribution in England.	890
7.48	A Roman parallel to the Winchester relief-decorated glazed tiles: <i>opus sectile</i> pavements from Hadrian's Villa at Tivoli.	892
7.49	Roman revival, a parallel to the Winchester relief-decorated glazed tiles: a comparison of the sixth-century floor of S. Maria Antiqua in Rome to the tenth-century floor in Old Minster.	893
7.50	Byzantine parallels (1). Inlaid column from St Polyeuktos, Constantinople (524–7)	894
7.51	Byzantine parallels (2). 1: tile from a church in Maaret-el-Namaan, south of Aleppo, ninth–twelfth century; 2: from a basilican church below the second court of the Topkapi ray, Istanbul, second half of the fifth century, Preslav, Bulgaria, tenth century.	895
7.52	Glass tiles or plaques from the site of Old Minster.	898
7.53	Distribution of window glass in the robber-trenches of the Old and New Minsters.	899
7.54	Window glass, Groups 1, 2, and 3: from Old Minster (700–56 , except 705), New Minster (705 , 757–60), and Nunnaminster (COE: 761–9 ; AVG: 769.1–17).	902
7.55	Window glass, Group 4: from Old Minster (789–814) and New Minster (815–16).	904
7.56	Window comes, lead, from the Old and New Minsters.	905
7.57	Distribution of wall plaster in the robber-trenches of the Old and New Minsters.	906
7.58	Bell-casting pit, F. 33, dug in the nave of the seventh-century Old Minster during the works of c.980 to 992–4	912
7.59	Inscribed fired-clay bell moulds, selected fragments from bell-casting pit, F. 33, dug in the nave of the seventh-century Old Minster during the works of c.980 to 992–4.	914
7.60	Early Norman bell-casting pits, F. 98A and F. 98B, dug immediately north of the medieval cathedral, into the site of the demolished E end of Old Minster, in the early twelfth century.	915
7.61	Late medieval bell-casting pit, F. 226, dug north of the cathedral, against the north wall of the 'Paradise' cemetery (W. 128), in the mid- to late thirteenth century.	916
8.1	Ivory corpus from a cross of the late tenth century, from a late eighteenth- to mid-nineteenth-century deposit over the later domestic buildings of New Minster.	920

8.2	Silver-gilt head probably of the late tenth or early eleventh century, from a mid to late nineteenth-century deposit over Old Minster.	921
8.3	Copper-alloy casket-fitting of the early to mid-eleventh century, found 1910 in excavations at the south-east angle of the south transept of the cathedral.	922
8.4	Fittings from medieval reliquaries and other fine caskets, from the sites of the Old and New Minsters.	923
8.5	Copper-alloy ?hasp and chain, from the domestic buildings of New Minster, early to mid eleventh century	924
8.6	Chalices from the graves of priests in the medieval 'Paradise' cemetery.	925
8.7	Copper-alloy pilgrim's badge with the face of Christ, dating to the late fifteenth or early sixteenth century, from Paradise, use of Path 5.	926
8.8	Spoon bowl, ivory, of the late tenth century, from an Old Minster demolition deposit of c.1093-4.	928
8.9	Fatimid jar of Egyptian alabaster (calcite) from a New Minster deposit of c.1065-6 to c.1085.	929
8.10	Long tacks of silver (4184 , 4185 ; 4190 and 4192 with gilt heads) and copper alloy (4198 , 4201 , with gilt head, 4204 , 4216) of medieval date from the sites of the Old and New Minsters.	930
8.11	A diagram of the pattern woven into band 1013 .	933
8.12	Medieval relief-decorated strap-ends (1057-9), split-end strap-ends (1063 and 1064), buckle (1101), and other strap fittings (1348 and 1365) from the sites of the Old and New Minsters and Nunnaminster.	942
8.13	Medieval hooked tags from the sites of the Old and New Minsters.	944
8.14	Medieval pins.	946
8.15	Medieval brooches from Paradise.	948
8.16	Silver ?pendant (2042) from the fill of Old Minster, Anglo-Saxon grave 74, late ninth century, and jet pendants (2044 and 2046) from Paradise.	948
8.17	Medieval finger-rings in copper alloy (2059 and 2063) and gold with turquoise setting (2085) and a copper-alloy 'plaited' arm-ring, of Scandinavian or Anglo-Scandinavian type (2098A) from the sites of the Old and New Minsters and Nunnaminster	950
8.18	Glass bead, fifth to seventh century, from a post-medieval context in Paradise.	950
8.19	Mid fifth-century triangular antler comb from a pit beneath the seventh-century Old Minster.	951
8.20	Bone comb, ?seventh to eighth century, from a fourteenth-century cathedral works deposit in Paradise.	951
8.21	Iron blade inlaid with copper and silver wire (2648) from a pivoting knife of the ninth to eleventh centuries, from churchyard works of c.1885-6 on the site of Old Minster (with reconstructed outline and iron arrowhead (4010), found in the vertebrae of the young adult male in Old Minster, Anglo-Saxon grave 124, mid to late eleventh century.	954
9.1	Cathedral: plan of E end.	982
9.2	Cathedral: plan of the crypt.	983
9.3	Cathedral: plan of the Feretory.	984
9.4	Cathedral: 11th-cent. apse piers abutted by 1150 steps.	985
9.5	Cathedral: levels of floor surfaces in the Feretory and relation to plinth, etc.	986
9.6	Section through the cathedral, showing the Feretory and high altar area.	988
9.7	Cathedral: reconstruction of inscriptions on surviving stones probably derived from a retaining wall that was built around the Romanesque apse when it was remodelled in the mid-12th cent.	990
9.8	Cathedral: Robert Willis's plan of the Feretory, 1850.	993
9.9	Cathedral: W face of Feretory screen.	994
9.10	Cathedral: plan by William Garbett of the high altar sanctuary and Feretory.	994
9.11	Cathedral: conjectural elevation of side of the 13th-cent. <i>foramina</i> tomb-shrine of St Swithun.	1001
9.12	Cathedral: reconstruction of the final shrine of St Swithun.	1004
10.1	St Mary's Abbey precinct in the medieval period, showing the main structural elements of the abbey church recorded at Abbey View Gardens, the SW corner of the cloister found at City Offices Extension, and other findspots of foundations, tiles, and burials.	1031
10.2	Nunnaminster I: reconstructed plan of a suggested built tomb (F. 185) in the south apse of the western structure..	1041
10.3	Nunnaminster II: reconstructed plan of a suggested built double grave (F. 177) axially sited within the W end of the nave.	1044
10.4	Comparative plans: Hyde and three early Norman nunnery churches for comparison with St Mary's: Shaftesbury (Wilts.), Romsey (Hants), Barking (Essex)	1046

10.5	Nunnaminster III (St Mary's Abbey): G. 35, the 13th-cent. burial of an abbess(?) in a monolithic stone coffin in the S aisle of the nave.	1047
10.6	Nunnaminster III (St Mary's Abbey): ivory staff of office from G. 35	1048
A.1	Comparative churches, Constantinople and Ephesus: Church of the Holy Apostles in Constantinople and Justinian's Church of St John at Ephesus; Old Minster in Winchester imposed in red.	1056
A.2	Cross-plan churches in Europe in Bulgaria, and Greece	1059
A.3	Cross-plan churches in Italy, southern France, Switzerland, Austria, Croatia, and Slovenia.	1068
A.4	Cross-plan churches in Spain and south-west France.	1113
A.5	Cross-plan churches in France, Germany, Belgium, Holland, and England.	1127
A.6	Comparative churches, Italy and Austria with Old Minster in Winchester illustrated for comparison.	1132
A.7	Comparative churches, Italy, the Balkans, Portugal, and Spain with the 7th-cent Old Minster in Winchester illustrated for comparison.	1133
A.8	Comparative churches, Switzerland, France, Germany, and the Low with the seventh-century Old Minster in Winchester illustrated for comparison.	1135
A.9	Comparative churches, England with Old Minster in Winchester, in the seventh and eighth centuries illustrated for comparison.	1152
A.10	St Mary-in-Castro, Dover (Kent).	1162

LIST OF TABLES

Volume 4.i.1

1.1	Cathedral Green 1962–9: time spent in excavation and post-excavation.	8
2.1	Old Minster: estimated work involved in laying the foundation of the seventh-century church.	64
2.2	Old Minster: possible allotment to trades of work involved in laying the foundation of the seventh-century church.	64
2.3	Old Minster: the dimensions of the seventh-century church in various units based on measurements in metres from the ‘ideal plan’.	87
2.4	Old Minster: the dimensions of the seventh-century church in the Short Roman foot (0.295 m) or in ell of that foot.	89
2.5	Old Minster: the dimensions of the seventh-century church in the English foot and in ell of that foot.	90
2.6	Old Minster: the dimensions of the seventh-century church in the Long Roman and in ell of that foot.	91
2.7	Old Minster: the possible controlling dimensions of the seventh-century church in terms of the 110 module	93
2.8	Old Minster: the possible controlling dimensions of the seventh-century church in terms of the 16½ module.	93
2.9	Old Minster: the possible controlling dimensions of the seventh-century church in terms of the 18 module.	93
2.10	Old Minster: ratios observable in the layout of the seventh-century church.	94
2.11	Old Minster: ratios observable in the layout of the seventh-century church on the supposition that the individual lengths in Long Roman feet were derived from the number 110.	94
2.12	‘Special’ graves in or before the west end of major churches in Europe, eighth and ninth centuries.	115
2.13	The Old Minster cemetery, Grave generations 1–4, archaeological dates and radiocarbon dates (from human bone) compared.	131
2.14	Old Minster cemetery, Grave generations 6–10: archaeological dates and radiocarbon dates (from human bone).	137
2.15	The top and bottom levels of the construction spreads of New Minster and of the west façade of Old Minster.	157
2.16	Old Minster cemetery, Grave generations 12–15: archaeological dates and radiocarbon dates (from human bone except one charcoal).	163
2.17	The Old Minster <i>martyrium</i> : the slope from N to S of the surface of the chalk foundation of the double-apsed link-building.	193
2.18	The Old Minster <i>martyrium</i> : the slope from W to E of the surface of the chalk foundation of the double-apsed link-building.	193
2.19	The Old Minster <i>martyrium</i> : reconstructed dimensions of the double-apsed link-building in Carolingian (Long Roman) and English feet.	200
2.20	The Old Minster <i>martyrium</i> : reconstructed distances between the faces of the ‘crosses’ and adjacent points on the chalk foundation of the double-apsed link-building.	218
2.21	Old Minster cemetery, Grave generation 17, archaeologically dated c.971–c.980: radiocarbon dates (from human bone unless otherwise stated).	218
2.22	Latin terms used by Lantfred and Wulfstan to describe the tomb of St Swithun, the standing monument over the tomb, and the coffin, as they were prior to the completion of the translation on 15 July 971.	229
2.23	Latin terms used by Lantfred and Wulfstan to describe the original tomb of St Swithun between the translation of 15 July 971 and the second translation of 8 October [971?], and the location of the saint’s relics during that period.	231
2.24	Latin terms used by Lantfred and Wulfstan to describe the original tomb of St Swithun following the second translation on 8 October [971?] and the then location of the saint’s relics.	232
2.25	Indications of date in the accounts by Lantfred and Wulfstan of the miracles and translations of St Swithun.	237
2.26	Dating the sequence of deposits between the construction of New Minster and the construction of the new E end of Old Minster.	306
2.27	Old Minster, the new E end of 992–4: reconstructed external measurements	319

2.28	Old Minster, the new E end of 992–4: reconstructed internal measurements.	320
2.29	Old Minster: reconstructed possible heights of towers.	337
2.30	Staged timber bell-towers in France and England written and pictorial evidence, ninth to eleventh centuries.	349
2.31	Old Minster, latrine-pit F. 265, constructed 1050/51; radiocarbon and tree-ring dates compared.	397
2.32	The Old Minster cemetery, Grave generations 19–20: archaeological dates and radiocarbon dates.	405
3.1	New Minster 1030/1–1110, the later abbots: admissions as recorded in the <i>Liber vitae</i> , and vacancies.	427
3.2	New Minster and its Continental analogies.	460
3.3	Winchester: the late Anglo-Saxon double-apsed chapels at New Minster and Wolvesey compared.	486
3.4	New Minster: the northern domestic buildings, Building A, W range: the posts of the E walk for which evidence was recorded.	489
3.5	‘Great halls’ in medieval Winchester: internal dimensions, ratio W:L, and area.	498
3.6	New Minster: the southern domestic buildings, Building E: walls, sequence, co-ordinates, and thickness.	509
3.7	New Minster: the southern domestic buildings, Building E, the first cloister (Final phase 229): the Long Roman (Carolingian) and English foot, the A and B modules, and the beginning of the claustral complex.	512
3.8	New Minster: the southern domestic buildings, Building E, the first cloister (Final phase 229): levels in m OD of the contemporary ground surface, the top of the chalk foundations, and the floors.	517
3.9	New Minster: the southern domestic buildings, Building E, the enlarged cloister (Final phases 230 and 233): A and B modules in the English foot.	526

Volume 4.i.2

4.1	The known burial-places of the rulers of Wessex, 642–899.	550
4.2	The burial-places of the rulers of Wessex and England, 899–1100	551
4.3	The burial-places of the bishops of the West Saxons at Dorchester and Winchester, c.650–908.	554
4.4	The burial-places of the bishops of Winchester, 908–1098.	555
4.5	Known lay or priestly burials other than kings and bishops in or at Old Minster and New Minster eighth century to 1100.	556
4.6	Winchester as a royal burial city, 642–1100: the early evidence.	557
4.7	Winchester as a royal burial city, 642–1100: the growth of the claims.	557
4.8	Named individuals whose burial in/at Old or New Minster is recorded in early sources.	557
4.9	The Old Minster cemetery: all graves by generation and area.	560
4.10	The Old Minster cemetery: burial inside and outside the church and rates of burial, by grouped grave generations.	568
4.11	The Old Minster cemetery: density and frequency of burial.	572
4.12	The Old Minster cemetery: areas in use outside the church, the number of graves found and estimated, and the estimated number of graves dug per year.	574
4.13	The Anglo-Saxon and later cemeteries of Old Minster, New Minster, and the Paradise of the Norman and later cathedral: numbers of bodies in graves, double graves, and charnels.	578
4.14	The Old Minster cemetery: 755 bodies from 743 graves, by grave generation, sex, and age.	580
4.15	The Old and New Minster cemeteries compared: percentage of bodies whose approximate age at death could be determined.	580
4.16	The Old Minster (OM) and New Minster (NM) cemeteries: proportions of child/adult and male/female bodies from Cathedral Green on the evidence of archaeology (WS4.i; this volume) and physical anthropology (BMNH).	580
4.17	Double graves in the Old Minster cemetery.	582
4.18	Concentrations of double graves in the Old Minster cemetery.	583
4.19	Double graves in the Old Minster cemetery: percentages of adults unsexed (A), adult male (M), adult female (F), and children’s (C) bodies in Groups 1 and 2.	583
4.20	The Old and New Minster cemeteries: the nine small charnels.	585
4.21	Numbers of Children and adults compared: numbers, row percentages, and ratios in the Old and New Minster cemeteries at Winchester and in some other contemporary English and North European cemeteries.	589

4.22	Males and females compared: numbers, percentages, and ratios in the Old and New Minster cemeteries at Winchester and in some other contemporary English and North European cemeteries	589
4.23	The Old Minster burials: the total number of 'undamaged' bodies in 491 graves available for analysis of body position.	593
4.24	The Old and New Minster burials compared: arm positions.	593
4.25	The Old and New Minster burials compared: head positions.	594
4.26	The Old Minster burials: the greatest surviving depth of grave pits in grouped generations.	598
4.27	The New Minster burials: all graves by generation and area.	600
4.28	The New Minster burials: 108 bodies from 108 graves, by location, age, and sex.	605
4.29	The New Minster burials: proportions of male/female and child/adult bodies inside the church and outside in its adjacent cemeteries.	605
4.30	The New Minster burials: grave types by age and sex.	606
4.31	The New Minster burials: the density and frequency of burials inside the church and outside in the cemetery to the north of the nave.	606
4.32	Old and New Minster burials compared: variations in grave type.	610
4.33	The Old Minster cemetery: number of graves of the major burial variations inside and outside the church, by generation.	611
4.34	The New Minster burials: number of graves with the major burial variations inside and outside the church, by generation.	612
4.35	Old and New Minster burials: translated graves.	613
4.36	Old Minster burials: Variation 1, earth-graves without elaboration or surviving coffin traces, by grouped generations.	614
4.37	New Minster burials: Variation 1, earth-graves without elaboration or surviving coffin traces, by grouped generations.	614
4.38	Old Minster burials: Variation 3, nails from graves, including graves with iron-fitted coffins.	619
4.39	New Minster burials: Variation 3, nails from graves.	621
4.40	Old Minster burials: Variation 3, nail types, <i>in situ</i> and residual.	622
4.42	Old Minster burials: Variation 3, chronological variation in the length of structural coffin nails.	624
4.41	Old Minster burials: Variation 3, dimensions of structural coffin nails.	624
4.43	Old Minster burials: Variation 3, iron nails from three sites compared.	627
4.44	Old Minster burials: Variation 3, chronological change in the number of nails used per coffin at Lankhills and Old Minster.	628
4.45	Old Minster burials: Variations 5–7, graves with pillows of tile and/or of stone and graves with stone head supports.	631
4.46	Old Minster burials: Variation 8, analysis of charcoal from charcoal burials.	636
4.47	Old and New Minster burials: Variation 8, the use of charcoal packing in internal graves.	638
4.48	Old and New Minster burials: Variation 8, the use of charcoal packing in external graves.	638
4.49	Old and New Minsters: Variation 8, the sex of those buried in graves with charcoal packing.	641
4.50	Charcoal graves from England, Ireland, and Scandinavia.	643
4.51	Graves with the deliberate inclusion of charcoal in the fill: post-Roman and later examples from England, Scotland, and Greenland, and some late Roman and Merovingian examples from Belgium and France.	648
4.52	Old and New Minster burials: Variation 10, burials in iron-fitted coffins; Variation 11, iron-ring graves (R); and Variation 12, iron-spike graves.	656
4.53	Old Minster burials: Variation 10, residual iron fittings.	671
4.54	Old and New Minster burials: Variations 10 (coffin types I–III), 11 (coffin type IV), 12 (coffin type V), iron-bound coffin types and fittings by date.	671
4.55	Old Minster burials: monolithic coffins.	707
4.56	Old Minster burials: Variation 14, size of monolithic coffins.	707
4.57	Old Minster: burials below stone covers, (Variation 15).	712
5.1	Total internal lengths of some of the longest known churches in eleventh-century Europe.	722
5.2	Finds from deposits associated with early Norman activity on the site of the demolished. Old Minster (Deposits 1–5) and over the site of the southern domestic buildings of New Minster, Building E (Deposit 6).	749
6.1	St Swithun's chapel: the predicted dimensions of the chapels around the saint's tomb.	764
6.2	Paradise medieval cemetery: numbers of burials in each area by grave generation, date, and sex.	770
6.3	Paradise medieval cemetery: numbers of cist and earth burials by grave generation, date, and sex.	771

6.4	Paradise medieval cemetery: percentages of cist- or earth-burials, or all burials, by grave generation and sex.	772
6.5	Paradise medieval cemetery: percentage of cist- and earth-burials in each area by grave generation and date.	772
6.6	Paradise medieval cemetery: analysis of burials with objects or unusual elaborations.	773
6.7	Paradise medieval cemetery: list of burials with chalices and other grave goods.	775
6.8	Paradise medieval cemetery: list of burials with textile.	778
6.9	Adults and children in Paradise, Winchester and other near contemporary medieval cemeteries.	791
6.10	Males and females buried in Paradise, Winchester and other near contemporary medieval cemeteries.	791
6.11	Paradise medieval cemetery: age group and sex of burials in the charnels.	792
7.1	The stone type of worked stones derived from Old Minster (c.648–c.1100), New Minster and its domestic buildings (c.901–c.1110), and from Norman and later deposits on the site of Old Minster associated with the construction and use of the cathedral (c.1100 to 20th cent.).	806
7.2	Anglo-Saxon glazed tiles: number of fragments from Winchester.	858
7.3	Anglo-Saxon glazed tiles: list of fragments in Fabrics 2 and 3.	863
7.4	Anglo-Saxon glazed tiles: incidence of the keying types.	864
7.5	Anglo-Saxon glazed tiles: the plain tiles in Fabric 1, grouped by colour and key.	877
7.6	Anglo-Saxon glazed tiles: the twelve tiles which are the sole examples of their relief type, fabric, and/or key combination.	878
7.7	Anglo-Saxon glazed tiles: the number of tiles of each type found and the number of 16-tile panels predicted to have been used in the primary tiled floor.	879
7.8	Anglo-Saxon glazed tiles: distribution by area of Old Minster and by trench on the Cathedral Green site.	881
7.9	Anglo-Saxon glazed tiles: distribution of 444 fragments from Old Minster and its site, by find place and final phase.	883
7.10	Anglo-Saxon glazed tiles: distribution by area of Old Minster.	883
7.11	Anglo-Saxon glazed tiles: relief patterns at sites in England.	889
7.12	Window glass from the Old and New Minsters: a quantitative assessment by area (cm ²) recovered.	900
7.13	Wall plaster from the Old and New Minsters: quantities recovered and individually recorded: column percentages by area.	907
7.13	Wall plaster from the Old and New Minsters: quantities recovered and individually recorded: column percentages by area.	907
7.14	Wall plaster from the Old and New Minsters: relative frequency by counts and weights of 'special' pieces from Anglo-Saxon deposits.	907
7.15	Wall plaster from the Old and New Minsters: estimates of the amounts of plaster from the Norman demolition deposits.	907
7.16	Painted wall plaster from the Old and New Minsters.	908
7.17	The dimensions (in metres) and orientation of the Winchester bell-casting pits.	913
8.1	Finds from the Old and New Minsters.	919
8.2	The 31 post-Roman coins from the Old and New Minsters issued before c.1100.	956
8.3	Coins from the Old and New Minsters issued before c.1100: find context types.	957
8.4	Coins from the Old and New Minsters issued before c.1100: Group A, coins probably lost within c.25 years of the suggested date of issue.	957
8.5	Coins from the Old and New Minsters issued before c.1100: Group B, coins possibly lost between 25 and 50 years after the suggested date of issue.	958
8.6	Coins from the Old and New Minsters issued before c.1100: Group C, coins possibly lost between 50 and 100 years after the suggested date of issue.	958
8.7	Coins from the Old and New Minsters issued before c.1100: Group D, coins possibly lost or redeposited between 100 and 200 years after the suggested date of issue.	958
8.8	Coins from the Old and New Minsters issued before c.1100: Group E, coins redeposited over 200 years after the suggested date of issue.	959
8.9	Coins from the Old and New Minsters issued before c.1100: summary of residuality.	959
8.10	Coins from the Old and New Minsters issued before c.1100: dates of issue.	959
8.11	The earliest occurrences of Winchester ware at Old Minster.	962
8.12	Pottery from the Old and New Minsters a. The Bell-pit group b. The Well group c. Occurrences in Final phases 20 to 56 by fabric and Final phase.	
A.1	Justinian's (Constantine's) Church of the Holy Apostles, Constantinople: the main dimensions.	1057

A.2	Justinian's (Constantine's) Church of the Holy Apostles, Constantinople, and the seventh-century Old Minster, Winchester: selected main dimensions compared in the foot of 0.315 m used in the Church of the Holy Apostles and in the foot of 0.333 m used in Old Minster.	1057
A.3	Justinian's (Constantine's) Church of the Holy Apostles, Constantinople, and the seventh-century Old Minster, Winchester: selected main dimensions of both in the foot of 0.333 m.	1058
A.4	Continental churches with a cross-shaped plan: possible parallels to the seventh-century Old Minster, Winchester.	1070
A.5	Continental churches with a cross-shaped plan: the ratios compared to the seventh-century Old Minster, Winchester.	1082
A.6	English churches with a cross-shaped or near cross-shaped plan: possible parallels to the seventh-century Old Minster, Winchester.	1140
A.7	English churches with a cross-shaped plan: their ratios compared to the seventh-century Old Minster, Winchester.	1146
A.8	Dover, St Mary in Castro (Church 105): recorded dimensions.	1163
A.9	Dover, St Mary in Castro (Church 105): dimensions in English feet.	1164

LIST OF COLOUR PLATES

Frontispiece

- Winchester: the former royal and ecclesiastical quarter of the walled city from the air, showing the site of the Norman royal palace, Old Minster under excavation, and the line of the city wall around the ruins at Wolvesey.
1. The plan of Old Minster marked out in brickwork on the ground. 1173
 2. Old Minster looking north: (a) the foundation of the W end of the 7th-cent. nave, (b) the foundations of the 7th-cent. E porticus. 1174
 3. Old Minster: the 7th-cent. R porticus: (a) The foundations of the S wall of the E porticus, (b) The flagstone floor of the E porticus. 1175
 4. Old Minster: the double-apsed 10th-cent. *martyrium* and the chalk foundation of the N apse of the westwork around the supposed grave of Swithun. (a) the robbed remains of the tomb-shrine of St Swithun, (b) the massive robber-trench of the N wall of the westwork which replaced the double-apsed *martyrium*. 1176
 5. Old Minster: the supposed original burial place and tomb-shrine of St Swithun in the central space defined by the chalk foundations of the *martyrium* built in c.971–5. 1177
 6. Old Minster: the reordering of the 7th-cent. church and its extension to the east between 980 and 992–4: (a) the raising of the floor over the E end of the 7th-cent. nave, (b) the robber-trenches of the N and E apses of the trilobe E end dedicated in 992–4. 1178
 7. The Norman memorial court and the monuments over the site of the tomb-shrine of St Swithun: (a) the pink plaster surface of the memorial court, looking south-east towards St Swithun's monument, (b) the bases of the tomb-shaped monuments erected over the robbed Anglo-Saxon tomb-shrine marking the supposed site of St Swithun's original burial. 1179
 8. 'The Three Women at the Tomb' from 'The Benedictional of St Æthelwold'. 1180
 9. 'The Three Women at the Tomb' from 'The Tiberius Psalter'. 1181
 10. A bishop pronouncing a blessing, possibly Ælfheah II. 1182
 11. Towers and bell ringing (a) staged tower, bells, bell-rope, and weathercock, (b) ringing the bells from the floor of the crossing beneath the late 11th-cent. tower of St Albans Abbey. 1183
 12. Anglo-Saxon relief-decorated polychrome-glazed tiles (1:3): the decorated surface and plain backs of tiles of relief Types A and Cb (Fabric 1), D (Fabrics 1 and 2), J and O (Fabric 1), and P (Fabric 3). 1184
 13. Anglo-Saxon plain glazed tiles, Fabric 1 (1:3): the plain surface and keyed backs of tiles showing the use of Keys 1, 2, 3, 6, 9, and 11. 1185
 14. Anglo-Saxon relief-decorated glazed tiles and reconstructed pavement (a) relief-decorated polychrome-glazed tile of Type G, Fabric 1; (b) Relief-decorated polychrome-glazed tile of Type I, Fabric 1, and (c) hypothetical reconstruction of the pavement of relief-decorated and plain glazed tiles laid around the principal altar of Old Minster. 1186
 15. Anglo-Saxon decorated window glass from Old Minster, New Minster, and Nunnaminster: Group 3, painted durable blue glass in (a) direct light and (b) transmitted light; (c) Group 4, unpainted non-durable glass in direct light. 1187
 16. Anglo-Saxon wall plasters: (a) painted 'White Old Minster Plaster' (WOMP) used on Old Minster before the 8th cent., (b) painted 'Yellow Old Minster Plaster' (YOMP) used on New Minster, built 901–3. 1188
 17. Anglo-Saxon wall plaster: (a) 'Saxon [Pink] Old Minster Plaster' (SOMP) used on Old Minster from the early 10th cent.; (b) painted SOMP from the area of the westwork. 1189
 18. The New Minster painted stone: (a) in August 1966, after partial cleaning, (b) present state (in 2000). 1190
 19. Chests/coffins with iron fittings: (a) an ironbound chest drawn by Matthew Paris, (b) Grave 821, the most elaborate and earliest ironbound coffin from the Old Minster cemetery. 1191
 20. Gold and silver from Old Minster Grave 67, mid- to late 9th cent.: (a) gold braid in position on the skull, (b) nielloed silver hooked tags. 1192
 21. Gold, silver, and Egyptian alabaster: (a) Silver-gilt head, late 10th cent. (b) Gold mount with floral filigree, mid-10th to mid-11th cent. (c) Jar of veined marble in the courtyard of the Coptic Museum, Cairo; (d) Jar of Egyptian alabaster, fragments from the rim, neck, and shoulder of a Fatimid jar of the 10th or first half of the 11th cent. 1193

- | | | |
|------|---|------|
| 22. | Pottery from Old Minster: (a) The group from F 33, the bell-pit sealed beneath the raised floor of the nave laid by 992–4. (b) The group from F 154, the well in the E apse filled during the demolition of 1093–4. | 1194 |
| 23. | Winchester Ware and glazed floor-tile fragments from Old Minster and other sites in Winchester: (a) Winchester Ware from sites in Winchester; (b) Winchester Ware costrel from Assize Courts South; (c) Anglo-Saxon relief-decorated polychrome-glazed floor-tile fragments of Type A from Old Minster (cf. Colour plate 12). | 1195 |
| 24. | The second coronation of William the Conqueror in Old Minster. | 1196 |
| 25. | King Cnut and Queen Emma (Ælfgifu) placing a great gold cross on the altar of New Minster, perhaps at Easter 19. | 1197 |
| 26a. | Cathedral: south-west view in the retrochoir showing the modern ‘shrine’ of St Swithun. | 1198 |
| 26b. | Cathedral: Morley Library, early 13th-cent. wall-painting showing a view of the cathedral, with a reliquary on an altar in the apse. | 1198 |
| 27a. | Cathedral: the Feretory, plan view from the Great Screen. | 1199 |
| 27b. | Cathedral: NE view in the Feretory. | 1199 |
| 28. | Cathedral: (a) the Feretory screen, and 14th-cent. entrance to the 12th-cent; (b) ‘Holy Hole’. | 1200 |
| 29. | Cathedral: remains of 12th-cent. steps flanking the Feretory platform. | 1201 |
| 30. | Cathedral: of pulley for the cover to St Swithun’s shrine. | 1202 |
| 31. | A length of the braid 1012 hanging down the side of the skull of G. 67. | 1203 |
| 32. | Detail of confused threads from braids 1012 and 1013 | 1204 |
| 33. | Detail of the confused threads from braids 1012 and 1013, highlighting the radial layout of braid 104 . | 1205 |
| 34. | Microscopic image showing sections of braid 1013 . | 1206 |

LIST OF BLACK- AND-WHITE PLATES

- | | | |
|-----|---|------|
| 1. | The excavation of Old Minster from the air, looking east, the trenches laid out on the Anglo-Saxon alignment, August 1966. | 1207 |
| 2. | The plan of Old Minster marked out in brickwork on the ground, looking west from the N transept roof of the cathedral, 1993. | 120 |
| 3. | Old Minster: the 7th-cent. church robbed to the top of the foundations, showing the foundation-trenches, four blocks of the footing wall which once stood on the foundations, the setting for a column supporting the altar, surrounded by post-holes for the later baldachino, some stones of the original flagged floor, the site of the baptistery, and the S wall of the New Minster church. | 1209 |
| 4. | Old Minster: the 7th-cent. church, the E end of the nave, and the E porticus (cf. Colour plate 2b): (a) The E porticus and the eastern part of the nave (b) The E porticus showing the surface of the 7th-cent. foundation. | 1210 |
| 5. | Old Minster, 7th-cent. construction techniques: (a) The backfill of the foundation-trench to show the survival of the original backfill between Roman deposits behind and the emptied Norman RT. BN; (b) The flagged floor of the E porticus sealing construction post-holes. | 1211 |
| 6. | Old Minster: evidence for the 7th-cent. footing walls: (a) Robber-trench S of the E wall of the N porticus, showing imprints of the blocks of the footing wall at the base of the E side of the robber-trench (b) Robber-trench C of the S wall of the E porticus, showing blocks of footing Wall 25. with imprints showing where other blocks have been removed. | 1212 |
| 7. | Old Minster: the robber-trenches and their fills: (a) The robber-trenches of the N and E apses of the trilobe E end showing the characteristic fill of the robber-trenches resulting from the demolition of 1093-4. cf. the matching Colour Pl. 6b. For an explanatory diagram, see Pl. 7b; (b) Diagram to explain Pl. 7a. | 1213 |
| 8. | Old Minster: the foundation of the 7th-cent. altar: (a) The oolite base for the altar of the first church as first exposed, showing the circular setting cut to take a column supporting the altar; (b) As Pl. 8a, with the foundation-trench excavated to reveal the lower stones of the base | 1214 |
| 9. | Old Minster: the four circular foundations from E to W down the axis of the 7th-cent. nave: (a) F. 5, the lower stones and packing for the base of the first altar; (b) F. 40, as robbed in the late 10th cent., showing the bottom flint courses still in position; (c) F. 58, oolite stones and packing, looking down E; (d) F. 171, the empty robber-trench from which the foundation was removed in the late 10th cent. | 1215 |
| 10. | Old Minster: the axis of the 7th-cent. nave after removal of the late 10th-cent. raised floor and the excavation of the bell-pit. The axial foundation F. 40 is robbed down to the bottom flint courses. | 1216 |
| 11. | Old Minster: the 7th-cent. floor of the E porticus: (a) as first exposed, showing the steps cut into the flagstones; (b) the floor under excavation, showing small surviving parts of the central floor. | 1217 |
| 12. | Old Minster: the 7th-cent. N porticus and baptistery, looking S. The sunken area encloses a deeper square pit dating from the original construction of the church in the 7th cent. | 1218 |
| 13. | Old Minster: the 7th-cent. N porticus and baptistery: (a) Looking S-E across the porticus. The well is thought to be the original baptistery basin. (b) As above, but looking down to the W onto the tile-lined well. | 1219 |
| 14. | Old Minster: The remains of the early 8th-cent. St Martin's Tower appear in the base of the NW corner of the westwork of c.971-5 (Fig. 8). | 1220 |
| 15. | Old Minster: the early 10th-cent. N wing of the W façade, showing the wide foundation of the N wing of the W façade (cf. Fig. 13), built against the N face of the nave of the 7th-cent. church. The dividing walls of the three chapels built against the E face of the façade, the robber-trenches of the 7th-cent. N porticus, and the circular surround of the baptistery well appear to the right. | 1221 |

16. Old Minster: the early 10th-cent. chapels added to the E face of the N wing of the W façade, and their site, looking W: (a) After emptying the robber-trenches (cf. Fig. 13). The S wall of the nave of New Minster lies to the N, early to mid-10th cent.; (b) Burials from the Old Minster cemetery pre-dating the construction of the N wing and chapels (Figs 20-4), 7th-9th cent.; (c) The walls and tessellated floor of Roman Room 11 attached to the S side of the S range of the forum (cf. Colour plate 2a and Fig. 7). 1222
17. Old Minster: the early 10th-cent. chapels added to the E face of the N wing of the W façade: (a) The areas occupied by the chapels survived as peaks of burial earth from the preceding cemetery; (b) The upper floor in the northern chapel. 1223
18. Old Minster: the N apse and northern half of the central space of the double-apsed link-building or *martyrium* built c.971-5 around the grave of Swithun (d. 863). Cf. Colour plate 4a. 1224
19. Old Minster: the N apse and northern half of the central space of the double-apsed link-building or *martyrium* built c.971-5 around the grave of Swithun (d. 863). As Pl. 18, but at an earlier stage in the excavation when the monolithic coffins were still in place and the beam-slots and other features in the surface of the chalk foundation had not been emptied. 1225
20. Old Minster: the N apse of the double-apsed link-building of c.971-5 (cf. Fig. 14). 1226
21. Old Minster: details of the beam-slots and other features on the chalk foundation of the N apse and N wall of the central space of the double-apsed link-building of c.971-5 (cf. Fig. 14). 1227
22. Old Minster: the site of the westwork dedicated in 980. The N wall of the westwork and its southward return reflect the foundations of mortared flint built to transform the double-apsed *martyrium* into a westwork. 1228
23. Old Minster: the robber-trench of the NW tower of the westwork dedicated in 980, formed by the complete removal of the solid mortared flint foundation of the NW tower of the westwork in 1093-4. 1229
24. Old Minster: the central space of the westwork dedicated in 980 (cf. Figs 15 and 16): (a) showing the slight survival of pier-bases, with the site of St Swithun's shrine /cenotaph/tomb-monument; (b) Detail of the western pier-base, with a surviving isolated fragment of the mortared flint footing wall of the *martyrium*. 1230
25. Old Minster: the reconstruction of the nave dedicated in 992-4, as first excavated in 1964 (Fig. 17). 1231
26. Old Minster: the eastern half of the nave, as first excavated in 1964 (Fig. 17; cf. Colour plate 6a) after the removal of most of the late 10th-cent. mortar bedding shown in Pl. 25, but at the same stage as that shown in Pl. 27. 1232
27. Old Minster: the eastern half of the nave, as first excavated in 1964, at the same stage as in Pl. 26. The uneven horizontal surface which here and in Pl. 26 forms the bottom of the excavation represents the builders' working floor in the 7th-cent. nave during the later 10th-cent. reconstruction. 1233
28. Old Minster: the E end dedicated in 992-4 (Fig. 17). A single block of the flagstone floor survives in position at the site of the northern stair passage down into the crypt. The axial well in the apse has been partly excavated. The Norman bell-casting pits lie at an angle across the site of the demolished E end. 1234
29. Old Minster: the N apse of the E end dedicated in 992-4 (Fig. 17): (a) Masonry blocks discarded in the fill of RT.AA of the N apse; (b) RT.AA of the N apse by which the flint foundation had been entirely removed. 1235
30. Old Minster: the 7th-cent. E porticus converted into a crypt beneath the high altar dedicated in 992-4: (a) The late 10th-cent. crypt constructed within the 7th-cent. E porticus. The stone-flagged floor of the porticus has been reduced by the construction of N-S walls; (b) RT. D and RT. M of the late 10th-cent. crypt walls, cutting into the stone-flagged floor of the 7th-cent. E porticus. 1236
31. Old Minster: details of the 10th-cent. rebuilding: (a) The surviving bottom course of flints of Wall 32 forming the N curve of the apse dedicated in 992-4; (b) The surviving W side of an axial 10th-cent. tomb-structure, on the site of the 7th-cent. W door of the nave, with the

- setting for an axial standing feature, possibly a cross, to the W; (c) The S face of a boundary wall built in the early 10th cent. running E from the NE corner of the W wing of the N façade; (d) The stone-lined well in the E apse dedicated in 992–4. 1237
32. Old Minster: The timber-lined latrine-pit dated by tree-rings to the winter of 1051/2: (a) The surviving sides as found; (b) The bottom frame. 1238
33. Old Minster: The flint-lined well : (a) The flint-lining as found, sitting on a wooden frame; (b) The bottom frame. 1239
34. Old Minster: the external crypt with sculpture lying in position as found: to right, frieze block (89); to left, displaced foot-stone (99). 1240
35. Stonework reused in later foundations: (a) the painted stone (*WS* ; Colour plate 18), as found built into the S wall of the nave of the New Minster church, built 901–3; (b) Carved stone (93) as found built upside-down in the W face of the E wall of the medieval chapel of St Swithun. 1241
36. Old Minster: G. 821 (Grave gen. 8, mid-9th cent.), a burial in an oak coffin with elaborate iron fittings and large nails with tinned heads (Fig. 49; Illus. 4.19, 4.25, and 4.32): (a) Looking E along the lower half of the burial, showing the angle brackets standing in position; (b) The bottom fittings after removal of the body; (c) The burial as found, looking S. 1242
37. Old Minster: graves in coffins: (a) G. 16 (Grave gen. 8, mid-9th cent.), in the cemetery N of the N porticus: a burial in a wooden coffin with iron rings at the foot end; (b) G. 230 (Grave gen. 14/15, early to mid-10th cent.) in the cemetery pre-dating the westwork: a burial in a well-nailed wooden coffin; (c) G. 201 (Grave gen. 20–2, mid-11th cent.), in the westwork: the central section of the burial with a single surviving iron ring. 1243
38. Old and New Minsters: charcoal graves: (a) Old Minster: G. 203 (Grave gen. 17, late 10th cent.), in front of the N wing of the W façade, the upper part of the body. The wooden coffin was placed on a bed of charcoal, with iron rings at the upper corners of the coffin and nails along the sides. The head rests on a ‘pillow’ of large flints laid inside the coffin; (b) New Minster: G. 38 (New Minster grave gen. 7/8, mid-11th to early 12th cent.), in the cemetery N of the nave, the lower part of the body. The unnailed wooden coffin was placed on a bed of charcoal filling the bottom of the grave pit. 1244
39. Old Minster: stages in the excavation of the cemetery in Trench XXIX from latest to earliest. (a) Grave gens 14–17, 21–2 (mid-10th to late 11th cent.) have been excavated; (b) Grave gens 11–13 (early 10th cent.) under excavation; (c) Grave gens 4–10 (mid-8th to late 9th cent.) under excavation; (d) Grave gens 1–3 (mid-7th to early 8th cent.) under excavation. 1245
40. Old Minster: monolithic coffins found inside Old Minster, looking N: (a) G. 154 (Grave gen. 17, late 10th cent.), with the coffin lid and skull removed; (b) G. 155 (Grave gen. 17, late 10th cent.), empty as found; (c) G. 159 (Grave gen. 20–2, mid- to late 11th cent.), with the lower leg bones removed. 1246
41. Old Minster: monolithic coffins found inside Old Minster: (a) G. 156 (Grave gen. 20, mid-11th cent.), damaged by later medieval reuse; (b) G. 71 (Grave gen. 18, late 10th cent.), after removal of the lid and emptying; (c) G. 71, as last, with the lid in position over the lower half of the coffin, as found. 1247
42. Old Minster: monolithic coffins and built cist found outside Old Minster: (a) and (b) found beside the outer face of the curve of the late 10th-cent. E apse; (a) G. 124 (Grave gen. 21, mid-11th cent.), monolithic coffin with secondary body with an arrowhead in the spine, (b) G. 125 (Grave gen. 21, mid-11th cent.), monolithic coffin with secondary body; (c) G. 966 (Grave gen. 21, mid-11th cent.), cist of mortared chalk blocks, with body in position, found W of the westwork. 1248
43. Old and New Minsters: graves with stone covers: (a) Old Minster: the gravestone of Gunni, G. 119 (Grave gen. 19, early 11th cent.), outside the E apse; (b) New Minster: G. 75 (New Minster grave gen. 3, mid- to late 10th cent.), in the S aisle of the nave, showing the tapered coped cover, and a broken carved stone; (c) Old Minster: G. 430, (Grave gen. 20, mid-11th cent.), in the westwork, with the lower part of the slab lifted. 1249
44. Old Minster: the upper deposits in RT. DB of the NW tower of the westwork dedicated in 980: (a) Removing the upper fill; (b) The bones of the charnel filling the bottom of RT. DB, with the foundation of the N wall of the Norman western massif. 1250

45. Old Minster: the lower deposits in RT. DB of the NW tower of the westwork dedicated in 980; (a) The batters formed to create the square pit into which the chanel was placed ; (b) RT. DB fully excavated showing fragments of the foundation of the westwork, the NW corner of the foundations of St Martin's Tower, and the bottoms of graves of Grave gen. 4 (mid-8th cent.). 1251
46. Old Minster: the excavation of robber-trenches of the eastern part of the church: (a) Trench XIX: RT. B, cut by RT. A and RT. C; (b) Trenches XIII and XIV with Trenches XVIII and XIX in the background: RT. M cutting RT. L₁, RT. L, RT. C, and RT. P; (c) Trench XXII: the one surviving flagstone of the floor of the E arm dedicated 992-4 hanging in position over the rubble fills of RT. AF; (d) Trench XXII, showing blocks discarded in the fill of RT. AD. 1252
47. Old Minster: sections N-S across the robbed westwork dedicated in 980: (a) Trench XXXVIII, E section: RT. BT, the W end of the stone cover of G. 430 ; RT. DB with part of the chanel in position at the base, and the batter against the N face of the foundation of the N wall of the Norman western massif; (b) Trench XXXVI, W section, through Compartment 2 of the westwork dedicated in 980: RT. BU, G. 728, 691, 668, 690, and 430, Wall 176, RT. BT, and the make-up for the Norman memorial court. 1253
48. Old Minster: Trenches XXVI and XXVII, E section, excavated to the top of the Roman deposits, from the S wall of the New Minster nave, through the chapels of the N wing of the Old Minster W façade; and the N wall of the 7th-cent. nave. 1254
49. Old Minster: showing the undulating plaster surface of the Norman memorial court cut by burials, the foundation trenches of St Swithun's Chapel, and other later features. The robber-trenches of the W end of the 7th-cent. nave and of the N wing of the Old Minster W façade, from the E side of the memorial court can also be seen. 1255
50. The Norman cathedral: the foundations of the N tower of the western massif in relation to the 14th-cent. W front. 1256
51. The Norman cathedral: the N tower of the western massif: (a) The NE corner, showing the plinth courses uncovered by O.B. Carter in 1845 and the 14th-cent. RT. BC which removed the rest of the Norman plinth along the N face; (b) The N wall of the tower, showing the inner angle and the placing of the 14th-cent. Buttress 1 directly on top of the cut-down E wall of the Norman tower. 1257
52. The Norman memorial court: photomontage showing the full extent of the plaster surface as uncovered in 1967 and 1969. with the foundation of the N wall of the Norman western massif, and wall-trenches of various stages of the medieval chapel of St Swithun at the site of the saint's original grave. 1258
53. The Norman memorial court: details of the plaster surface (a) lapping up against and around the stone coffin of G. 156; (b) sealing the rubble fill of the robbed tomb-shrine of St Swithun. 1259
54. The monument over the site of St Swithun's grave, Stage 1, details: (a) The plaster surface lapping up against the E face of the foundation of Stage 1 and cut by the foundations of the E wall of St Swithun's Chapel; (b) The imprint in the mortar bed of the diagonal tooling of a block of the second ashlar course. 1260
55. St Swithun's Chapel, photomontage showing the full extent of the chapel in its robbed state. The remains of the monument within the reduced chapel are at Stage 5. The deeper trenches across the chapel and chasing the walls of the reduced chapel were dug by Dean Kitchin in 1886. Cf Pl. 56 1261
56. St Swithun's Chapel, photomontage showing the full extent of the chapel in photographs taken at the same time as those in Pl. 55. 1262
57. The Norman memorial court: the extent of the surviving plaster surface as in Pl. 56. The walls of St Swithun's Chapel, medieval graves, a post-medieval metal-casting pit and Dean Kitchin's trenches of 1886 have been excavated; Stages 1-4 of Swithun's monument remain in position over the robbed tomb-shrine. 1263
58. The monument over the site of St Swithun's grave, the later stages: (a) Stages 5 and 4: the S part of Stage 5 remains in position, the N part is of Stage 4; (b) Stage 4; (c) Stage 3. 1264

59. The monument over the site of St Swithun's grave, the earlier stages: (a) Stage 1, with mortar bed for the second ashlar course; (b) Stage 1, the ashlar setting; (c) Stage 1 and the rubble fill below it removed to reveal the hollow over the robbed tomb-shrine as left in 1093. 1265
60. The robbed tomb-shrine on the site of St Swithun's grave: (a) surrounding the remains of the mortar base perhaps for a stone coffin and surrounded by the chalk foundations of the central space of the double-apsed *martyrium* of c.971-5; (b) with the mortar base removed to reveal the rectangular cut for the base. Traces of what may be the original grave of Swithun can be seen beside G. 440 (Gen. 14/15) which appears to have been dug alongside it, and was the first grave to have approached so close. 1266
61. The monument over the site of St Swithun's grave, selected stages: (a) Stages 5 and 4: the S part of Stage 5 remains in position, the N part is Stage 4; (b) Stage 3; (c) Stage 1, with mortar bed for the second ashlar course; (d) Stage 1 and the hollow over the robbed tomb-shrine as left in 1093. 1267
62. The monument over the site of St Swithun's grave as first examined in 1966: (a) Stage 5, the N part of the monument; (b) Stage 4, showing the E extension of the monument (Stages 3 and 4) and the rough ashlar frame of Stage 2 below. 1268
63. The monument over the site of St Swithun's grave, Stages 3 and 4, at successive stages: (a) Stage 4, fully uncovered (cf. Pl. 62b), with the ashlars of the Stage 2 frame; (b) Stage 3, after the removal of Stage 4, showing the ashlar frame of Stage 2 and the eastern extension. 1269
64. The monument over the site of St Swithun's grave, Stages 2 and 3, with the E and S walls of St Swithun's Chapel in the background: (a) Stage 3, with the ashlar frame of Stage 2 filled with stone chips, the eastern extension removed; (b) Stage 2, the ashlar frame with the stone chips removed. 1270
65. The monument over the site of St Swithun's grave, Stage 1, with the E and S walls of St Swithun's Chapel in the background: (a) Stage 1, with the mortar base of the second course and the plaster surface of the memorial court lapping the edges of the monument; (b) Stage 1, the ashlar foundation marking the site of St Swithun's original grave after removal of the plaster surface of the memorial court. 1271
66. The monument over the site of St Swithun's grave, Stage 1 (as Pl. 65, but looking N-E): (a) the diagonal tooling of some of the ashlars of the second course is preserved in the mortar bedding; (b) the 'hard lines' used by the mason to set out the second course can be seen on the ashlars of the foundation 1272
67. The sunken tomb-shrine around the site of St Swithun's grave at the focus of the *martyrium* and westwork: (a) The robbed walls of the tomb-shrine as found after the removal of rubble fill, with the mortared base for the supposed coffin; (b) As Pl. 67a, but the mortar base has been removed to reveal the depression which may be site of Swithun's original grave. G. 440, the earliest burial to approach so close to Swithun's, is earlier than the construction of the *martyrium* in c.971-5. 1273
68. St Swithun's Chapel and Bishop Edington's rebuilding of the cathedral nave c.1360: (a) The angle between the N face of the N aisle and the W face of Buttress 3, the eastern of Edington's three new buttresses; (b) The gap where the footing of Buttress 3 comes close to but ignores the foundation of the SE corner of the first chapel. 1274
69. St Swithun's Chapel: the foundations of the first chapel: (a) The SW corner of the first chapel built up against the plinth of the E face of the N tower of the Norman western massif; (b) Packing between the flint foundations of the S wall of the first chapel and the footing of Buttress 2; (c) The lowest foundation course at the NE corner of the first chapel, showing chalk slabs reused from disturbed cist-graves. 1275
70. Paradise: walls and paths, cist-graves, and the two chapels of St Swithun. 1276
71. Paradise: medieval graves: (a) MG. 255 (Gen. 1, c.1200-40), in a cist of chalk slabs, reusing the Anglo-Saxon monolithic coffin of G. 156; MG. 256 (Gen. 2, c.1240-80) reused part of the S side of the same Anglo-Saxon coffin; (b) MG. 155 (Gen. 4, c.1320-60), with chalk blocks supporting the head: a priest with chalice and paten, a buckle, small hook, and gold braid.. 1277
72. Paradise: the western limits of the medieval cemetery: (a) showing the NE corner of the Norman western massif and the foundations of the W wall of the second Chapel of St Swithun; (b) The medieval cemetery outside Paradise. 1278

73. Medieval paths in the area W of the cathedral: (a) The cambered surface of the 12th-cent. path leading from the N-W towards the monument over the grave of Swithun, and the N door of the nave; (b) The path leading from the N-E past the NW corner of the Norman massif to the W door of the cathedral. 1279
74. Late 10th-cent. bell-casting pit (F. 33) in the nave of Old Minster, looking west 1280
75. Early 12th-cent. bell-casting pits (F. 98A and F. 98B) on the site of the demolished E end of Old Minster. 1281
76. Late 13th-cent. bell-casting pit (F. 226) against the inside of the N wall of Paradise and cut into the earlier S wall of New Minster. 1282
77. New Minster, the foundation of the S wall (W.128) of the nave: (a) Looking down E along W. 128 with the robbed foundations of the N wing of the W façade of Old Minster and the chapels of the N wing; (b) Looking N at the exposed face of W. 128. Earlier deposits have been excavated down to the tessellated pavement of a building attached to the S side of the Roman forum. The painted ashlar *WS* (Pl. 35a) lay in the gap in the second course. 1283
78. New Minster, robber-trenches and foundations: (a) in the inner corner of the S transept, W. 128 (here the S wall of the transept) joins Wall 27, the W wall of the transept; (b) The robbing of the N wall of the nave. 1284
79. New Minster, the northern domestic buildings: (a) the W range of Building A with latrine-pits 15 and 16 in flint-walled sunken 'rooms'; (b) the W side of the W range of Building A, the flint-walled rectangular latrine-pit, and the flint-walled cellar of Building B; (c) G. 9, G. 1, and G. 6 cut into the rough cobbling over the Roman N-S street and sealed by the chalk foundation of the central N-S wall of the W range of Building A; (d) Pit 17, the construction pit for the stone-lined Well 3 in the courtyard of Building A. 1285
80. New Minster, the northern domestic buildings: the later 10th-cent. oval building (?St Michael's chapel), and its conversion into the S range of Building A; (a) after the full excavation of the oval building; (b) the conversion of the oval building into the S range of Building A. 1286
81. New Minster, the northern domestic buildings: the later 10th-cent. oval building (?St Michael's chapel) and its conversion into the S range of Building A. (a) The oval building fully excavated; (b) The foundation of the N wall of the S range of Building A cut down into and overlying the chalk foundation of the NW curve of the oval building; (c) The junction between the foundation of the oval building and the dog-leg in the foundation of the N wall of the S range of Building A. 1287
82. New Minster, the northern domestic buildings: the W range of Building A: (a) The flint-walled latrine-pit attached to the W side of Building A; (b) The flint-walled latrine block at the S end of the W range, with Pits 15 and 16. 1288
83. New Minster, the northern domestic buildings: the W range of Building A and Building B; (a) Building A, E walk, Footing XIII and post-hole; (b) Building A, E walk, Footing XI and post-hole, cutting G. 29; (c) Building B, the flint-walled cellar. 1289
84. New Minster, the southern domestic buildings: the NW corner of the rectangular building respects the chalk foundation of the curvilinear building. 1290
85. New Minster, the southern domestic buildings: the rectangular building with the chalk foundation of the curvilinear building. 1291
86. New Minster, the southern domestic buildings: photo-montage of the S range of the first cloister built on chalk foundations in c.964-6. 1292
87. New Minster, the southern domestic buildings: photo-montage of the S range of the enlarged cloister built on flint and mortar foundations, in c.1065-70. 1293
88. New Minster, the southern domestic buildings: looking S down the W wall of the rectangular building towards the added SW corner of the enlarged cloister. 1294
89. New Minster, the southern domestic buildings: the E ends of the first and enlarged cloisters: The enlarged cloister has been altered by the addition of a N-S corridor; by the partitioning of the S range; and by the addition of a boundary wall. 1295
90. New Minster, the southern domestic buildings: the complex of walls running from E to W at about the middle of the S range of the first and enlarged cloisters. 1296
91. New Minster, medieval features on the site of the southern domestic buildings (cf. Fig. 117): (a) Limekiln (?), F. 416, looking SW; (b) Walled charnel pit, F. 499, 14th cent; (c) The SW corner of the extended cloister. 1297

92. New Minster, general view of the excavation of the southern domestic buildings. 1298
93. New Minster, general view of the excavation of the site of the southern domestic buildings, showing the medieval hollow way running along the N side of Paradise Wall and worn down into the remains of the cloister. 1299
94. Worked stone: colonette (3), moulding with frieze (35), arcade with columns (36), arcade with twisted column (42), arcades with guilloche (44, 47, 49). 1300
95. Worked stone: interlace (60, 61, 63, 65–6), knot (67). 1301
96. Worked stone: acanthus (68–73). 1302
97. Worked stone: bird-head (75), bird-head (Cluny), Purbeck ‘marble’ drapery (85). 1303
98. Worked stone: hair (76), hand (80), leg (84), armour? (83, 87). 1304
99. Worked stone: the ‘Sigmund Stone’ (89). 1305
100. Worked stone: the ‘Sigmund Stone’ (89), details. 1306
101. Worked stone: twisted braids (90–2), beast with braids (93). 1307
102. Worked stone: grave-markers with the Hand of Christ holding the Cross (94 detail, 95, 97). 1308
103. Worked stone: slab or panel from Bristol, showing the Harrowing of Hell (nts). 1309
104. Worked stone: grave-markers, unidentified scene (96, Golgotha (98). 1310
105. Worked stone: grave-marker, the Tomb of Christ with the Lamp lit by the Holy Fire (99) 1311
106. Worked stone: grave slab (106) and marker (94) over G. 119, the grave of Gunni, as found. 1312
107. Worked stone: inscriptions (107–9). VIVAT IN EVVM, from the Old Minster cemetery; HIC, from Lower Brook Street; runes, from St Maurice’s Church. 1313
108. Ivories of the late 10th cent.: (a) Body of Christ from a cross, walrus ivory, from New Minster; (b) Liturgical spoon, elephant ivory, from Old Minster. 1314
109. Decorative metalwork from Old Minster: (a) Strap-end, copper-alloy, first half 10th cent.; (b) Belt mount, silver-gilt, early 11th cent.; (c) Strap-end, silver-gilt, early 11th cent.; (d) Copper-alloy ?casket mount, formerly gilded, late 10th cent. or later. 1315
110. The Winchester ‘weather vane’: a copper-alloy panel, formerly gilded, probably a casket mount, early to mid-11th cent., and probably from Old Minster: (a) The whole panel, engraved in the Ringerike style with a great beast and floral interlace; (b) Drawing of the whole panel with the great beast picked out; (c) The head of the great beast. 1316
111. Cathedral: the Feretory, taken during the underpinning works of 1905–12, showing the reliquary *armoire*. 1317
112. Cathedral: four of the inscribed stones, probably derived from a retaining wall that was built around the Romanesque apse when it was remodelled in the mid-12th cent. 1318
113. Cathedral: geometry of the 13th-cent. panel from the tomb-shrine of St Swithun 1319
114. Cathedral: elements from the final shrine of St Swithun dedicated in 1476. 1320
- 115–7. [Not used].
118. Nunnaminster/St Mary’s Abbey, the SW corner of the claustral complex, general view of the late 15th- and early 16th-cent. deposits. 1321
119. Nunnaminster/St Mary’s Abbey, the SW corner of the claustral complex, general view of the late 11th- and early 12th-cent. deposits. 1322
120. Nunnaminster/St Mary’s Abbey, the SW corner of the claustral complex, the undercroft of the S range: (a) Demolition rubble on the latest floor of the undercroft, showing the robber-trench of the westernmost central pier, the tiled hearth, and the N wall of the Norman undercroft; (b) the N wall showing the wide opening leading into the W range. 1323
121. Nunnaminster/St Mary’s Abbey, the SW corner of the claustral complex, details of chalk-lined water-channels: (a) The E–W water-channel, incorporated in Wall 16, and running below the latest, tiled, floor of the W range; (b) The three stages of the N–S water-channel. 1324
122. Nunnaminster/St Mary’s Abbey, the abbey church, looking S across the W front of Nunnaminster II, revealed by the removal of the primary floor of the nave of Nunnaminster III/St Mary’s Abbey. 1325
123. Nunnaminster/St Mary’s Abbey, the abbey church, details of pre-Norman features: (a) The base and part of the N wall of the early tomb-structure; (b) Detail of the E section showing black iron-working deposits, and a tomb-structure cut by a chalk foundation for the N arcade of the Norman nave. 1326

124. Nunnaminster/St Mary's Abbey, the abbey church, looking S across the Romanesque nave excavated to the surviving surface of the primary floor. 1327
125. (a) Istanbul, the Fatih Camii, and (b) Ephesus, the Church of St John. 1328
126. Cross-plan churches of Ambrosius in Milan: (top) Basilica Apostolorum (S. Nazaro), begun 382 (Church 3); (bottom) Basilica Virginum (S. Simpliciano), begun 397 (Church 4). 1329
127. Early cross-plan churches in England: (top) Reculver (Kent), St Mary, built c.669 in the Roman Saxon Shore fort of *Regulbium* (Church 87); (bottom) Bradwell-on-Sea (Essex), St Peter-on-the-Wall, built after c.653 over the W gate of the Roman Saxon Shore fort of Othona (Church 88). 1330
128. Later cross-plan churches in England: (top) Repton (Derbyshire,) St Wystan, built c.840–73, heightened in the 10th cent. (Church 94); (bottom) Breamore (Hampshire), St Mary, built c.1000, looking N-W (Church 103). 1331
129. Later cross-plan churches in England: (top) Worth (Sussex), St Nicholas, built c.1000 or later, (Church 104); (bottom) Dover (Kent), St Mary in Castro, built c.1000 (Church 105). 1332
130. Jerusalem, the 4th-cent. rotunda of the Anastasis (the Resurrection). Reconstruction drawing by W.T. Ball. 1333
131. Aachen (Nordrhein-Westfalen), the octagon of Charlemagne's Pfalzkapelle, completed by c.800: the interior before restoration (pre-1913). 1334
132. Corvey, Nordrhein-Westfalen, the exterior of the westwork built 873–85. 1335
133. Corvey (Nordrhein-Westfalen), the interior of the westwork built 873–85: (top) Ground floor looking N-W towards the W door; (bottom) Upper floor looking N-W towards the W gallery. 1336
134. Werden (Nordrhein-Westfalen), the exterior of the westwork, dedicated 943. 1337
135. Werden (Nordrhein-Westfalen), the interior of the westwork, dedicated 943. 1338
136. Saint-Riquier (Centula) (Somme): (top) The abbey in its 11th-cent. State; (bottom) The abbey as it was before 1694. 1339
137. Corbie, (Somme): (above) The abbey of SS Peter and Paul as it was by 1677; A, the abbey church; B, the church of Sainte-Marie and Saint-Étienne; C, the church of Saint-Jean; (below) Plan of the abbey. 1340
138. Chartres (Eure-et-Loire), and Bourges (Cher): (left) Chartres, Notre-Dame, the cathedral church in the early 11th cent.; (right) Bourges, Notre-Dame-de-Sales, as (re-)built in 1060–80? 1341
139. Staged towers in drawings: (left) Sketch ?designs for buildings, Fleury, Saint-Benoît-sur-Loire, c.1000. The tower on the left is identified as the Tomb of Christ by the soldiers with their shields; (right) The Women at the Tomb, Winchester, mid-11th cent.: the tomb appears to be of ultimately Late Antique type, with three storeys, the uppermost perhaps round. 1342
140. Idealized images of the Tomb of Christ in ivory: (a) plaque carved in Rome or upper Italy c.400; (b) plaque from the cover of the Bamberg *Perikopenbuch*, 9th cent. 1343
141. Idealized images of the Tomb of Christ in ivory: (a) plaque, c.870–80; (b) plaque, northern France (school of Corbie?), late 10th cent. (or earlier) 1344
142. Lorsch, Hessen, Torhalle, built c.800 or c.880 (roof post-medieval), looking past the free-standing gatehouse towards the surviving remains of the westwork of St Nazarius of c.800. 1345

LIST OF FIGURES

1.	Winchester: the walled city c.994–1066 in relation to the modern setting. Anglo-Saxon features, including Old Minster, New Minster, and Nunnaminster, in red; watercourses in blue.	1346
2.	Cathedral Green (CG) 1962–70: trench layout and sequence of excavation, showing the site grids of 1962–9 and 1970, with the National Grid superimposed.	1348
3a.	Cathedral Green (CG) 1962–9, the excavation of Old Minster: index plan showing all published sections (in red), superimposed on a schematic reconstruction of the plan.	1350
3b.	Cathedral Green (CG) 1962–9, the excavation of Old Minster: index plan showing the angle of view of most of the published black-and-white photographs (in blue), superimposed on a schematic reconstruction of the plan.	1352
3c.	Cathedral Green (CG) 1962–9, index to the structural periods of Old Minster in its final form, showing the dates of the different parts of the building in the century before the demolition of 1093–4.	1354
4.	Cathedral Car Park (CACP) 1961, the excavation of the northern domestic buildings of New Minster: index plan showing trench layout, excavation grid, and the National Grid, superimposed on an outline plan of Buildings A–D, with published sections and the outline of the Wessex Hotel as built 1962–4.	1356
5.	Cathedral Green (CG) 1970: the excavation of the S range of the cloister of New Minster, index plan showing trench layout and excavation grid superimposed on an outline plan of the buildings, with published sections.	1358
6a.	City Offices Extension (COE) 1973: the excavation of the SW corner of the claustral buildings of Nunnaminster/St Mary’s Abbey, index plan showing trench layout, excavation grid, and the National Grid superimposed on an outline plan of the buildings, with published sections.	1360
6b.	Abbey View Gardens (AVG) 1981–3: the excavation of the nave of Nunnaminster/St Mary’s Abbey, index plan showing trench layout, excavation grid, and the National Grid superimposed on an outline plan of the buildings, with published sections.	1361
7.	Old Minster: the 7th-cent. church superimposed upon the S range of the Roman forum and the adjacent Roman street.	1362
8.	Old Minster: the robber-trenches associated with the alterations of 971–92/4, and the sequence and date of the robber-trenches resulting from the final demolitions of 1093–4 and later.	1364
9.	Old Minster: the 7th-cent. church; reconstructed walls in beige-brown.	1366
10.	Old Minster: the square E end of the 7th-cent. church converted into an apse (cf. Fig. 11).	1368
11.	Old Minster: three-dimensional view of the robbing of the area of the 7th-cent. E end (cf. Fig. 10).	1372
12.	Old Minster: the surviving north wall of St Martin’s Tower.	1372
13.	Old Minster: the excavated N half of the W façade added to 7th-cent. nave.	1373
14.	Old Minster: the <i>martyrium</i> (the double-apsed link-building) around St Swithun’s original grave (cf. Figs 15 and 16).	1374
15.	Old Minster: the deposits lying immediately below the obvious Norman demolition spreads in the area N and W of St Swithun’s grave (cf. Fig. 16), with St Swithun’s grave and the S wall of St Swithun’s Chapel.	1376
16.	Old Minster; the westwork (cf. Fig. 15).	1378
17.	Old Minster: the rebuilding of the nave and E end between c.980 and 992–4; for the reconstruction of the steps into the baptistery, see also Fig. 60.	1380
18.	The development of Old Minster in plan from c.648 to 992–4.	1382
19.	The development of Old Minster in three dimensions from c.648 to 992–4, each phase set in the context of the full final plan.	1384
20.	Old Minster: Grave generations 1–3 (c.675–c.750).	1387
21.	Old Minster: Grave generation 4 (c.750–c.770).	1388
22.	Old Minster: Grave generations 5–7 (c.770–c.830).	1390
23.	Old Minster: Grave generations 8 and 9. (c.830–c.870).	1392
24.	Old Minster: Grave generation 10 (c.870–c.890).	1394

25. Old Minster: Grave generations 11–13 (c.890–c.930). G. 73 is New Minster Grave generation I–II. 1396
26. Old Minster: Grave generations 14–16 (c.930–c.970). G. 75 and G. 110 are New Minster Grave generation III. 1398
27. Old Minster: Grave generation 17 (c.970–c.980). 1400
28. Old Minster: Grave generation 18a (c.980–c.992). G. 105 and G. 112 are New Minster Grave generation III–IV. 1402
29. Old Minster: Grave generations 18b and 19 (c.992–c.1030), with the location of the original altar canopy. G. 107 and G. 108 are New Minster Grave generation V–VI. 1404
30. Old Minster: Grave generations 20 to 22 (c.1030–c.1090). G. 106 is New Minster Grave generation VII–VIII. 1407
31. Old Minster: mass reburial of bones from the Old Minster cemetery in RT. DB of the westwork. 1410
32. Cathedral Green: the ‘memorial court’ laid out around the site of St Swithun’s grave to the north of the Norman nave and west end, with Anglo-Saxon stone coffins originally in the ground floor of the westwork left in position. 1412
33. Cathedral Green: the 13th-cent. chapel of St Swithun and the 14th-cent. *modica capella* surrounding the successive monuments marking the site of the saint’s grave. Dean Kitchin’s trenches of 1886 are shown. 1414
34. Cathedral Green, the ‘Paradise’ cemetery: Medieval grave generation 1 (c.1200–c.1240) around the third (late 12th-cent.) monument marking the site of St Swithun’s grave. New Minster and the last remains of Old Minster have been demolished and cleared away (cf. Fig. 32); the first boundary walls of ‘Paradise’ have been built and the first path leading towards the monument laid. 1416
35. Cathedral Green, the ‘Paradise’ cemetery: Medieval grave generation 2 (c.1240–c.1280) and the first (13th-cent.) period of St Swithun’s Chapel around the fourth (early 13th-cent.) monument marking the site of St Swithun’s grave. The western boundary wall of ‘Paradise’ has been rebuilt, a bell-foundry, and lodges for masons, established against the N wall, and the second path to the monument has been laid. 1418
36. Cathedral Green, the ‘Paradise’ cemetery: Medieval grave generations 3 and 4 (c.1280–c.1360) around St Swithun’s Chapel. The western boundary wall of ‘Paradise’ has again been rebuilt and the third path leading towards the chapel has been laid. 1420
37. Cathedral Green, the ‘Paradise’ cemetery: Medieval grave generations 5–8 (c.1360–c.1520) around the *modica capella*, the second (c.1360) period of St Swithun’s Chapel. The west front of the Norman cathedral has been demolished; buttresses have been added to the N wall of the nave and the W front has been rebuilt; the W wall of ‘Paradise’ has yet again been rebuilt. 1424
38. Old Minster: burial around the grave of St Swithun during the lifetime of the martyrrium (c.970–c.975; cf. Fig. 14). Only four graves were placed nearby at this stage: G. 160, G. 587, G. 598, and G. 600. 1428
39. Old Minster: the site of St Swithun’s grave (cf. Figs 16 and 38) within the walls of the tomb-shrine in Compartment 8 of the westwork. 1429
40. Cathedral Green: St Swithun’s monument Stage 1, c.1100, the first (Norman) monument: above, the foundation of ashlar blocks with setting-out lines for the second course; below, the mortar bed of the second course with the imprint in the mortar of the diagonal tooling of the bed face of the ashlar. 1430
41. Cathedral Green: St Swithun’s monument, Stages 2 and 3, c.1150–c.1175 and c.1200. 1431
42. Cathedral Green: St Swithun’s monument Stages 4 and 5, c.1250;. 1432
43. Cathedral Green: ‘Paradise’ after the Reformation. Elements shown include ‘Building A’; pits (F. 207, F. 449) and a pit (F. 291), associated with copper-alloy metal-casting; ‘Paradise Wall’, demolished in 1771; Dean Kitchin’s trenches at St Swithun’s Chapel in 1886; a gas main, a water pipe (F. 144); and the concrete pads associated with the underpinning of the cathedral in 1906–12. 1433
44. Seven ordinary Anglo-Saxon graves from the Old Minster cemetery, Generations 4–12 (c.750 to c.917): G. 204, G. 260, G. 325, G. 434, G. 512, G. 876 and G. 886. 1436

45. Six unusual Anglo-Saxon graves from the Old Minster cemetery, Generations 7–17 (c.810 to c.980): Grave 544 and G. 545 Grave 564 and G. 565 G. 255, G. 230, and G. 441. Grave 488 1437
46. Five elaborate burials from the Old Minster cemetery: G. 16 (Generation 8 c.850–c.870), with four iron rings; G. 67 (Generation 9 c.850–c.870), with gold braid and silver garter-hooks; G. 201 (Generation 20–2 c.1030–c.1090), with an iron ring; G. 664 (Generation 12/13 c.910–c.930), with gold braid; G. 717 (Generation 10 c.870–c.890) with gold braid. 1438
47. Three coffins bound with elaborate iron fittings: G. 73 (New Minster Generation I/II, c.905–c.955), G. 74 (Old Minster Generation 10, c.870–c.890), and G. 624 (Old Minster Generation 16, c.950–c.970). 1439
48. Ironbound coffin from Old Minster, G. 68, Generation 16/17 (c.950–c.992). 1440
49. Ironbound coffin from Old Minster, G. 821, Generation 8 (c.830–c.850), the most elaborate of all the ironbound coffins. 1441
50. Three ironbound coffins placed upon charcoal: G. 730 (Generation 14/15, c.930–c.950), G. 867 (Generation 19, c.1010–c.1030), and G. 714 (Generation 20, c.1030–c.1050). 1442
51. Five graves with special features: G. 75 (New Minster Generation 3, c.955–c.980) in a nailed coffin with cover slabs of oolite. G. 440 (Old Minster Generation 14/15, c.930–c.950) in a nailed coffin on charcoal. G. 203 (Old Minster Generation 17, c.970–c.980) in a nailed coffin with iron rings, on charcoal and with flints to hold the head. G. 846 (Old Minster Generation 18, c.980–c.992) in a pegged coffin with flint packing, her arms crossed at the waist. G. 119 (Old Minster Generation 19, c.1010–c.1030) named Gunni, with a tile pillow, a Roman coin, an inscribed stone cover and a foot-stone. 1443
52. Two oolitic limestone coffins from Old Minster: G. 154 (Generation 17, c.970–c.980); G. 71 (Generation 18, c.994–c.1010), possibly the original coffin of Bishop Swithun. 1444
53. Three oolitic limestone coffins from Old Minster: G. 155 (Generation 17, c.970–c.980); G. 156 (Generation 20, c.1030–c.1050); G. 159 (Generation 20–2, c.1030–c.1090). 1445
54. Two greensand coffins and a mortared cist from Old Minster (Generation 21, c.1050–c.1070): G. 124 (with an arrowhead in a vertebra) and G. 125; mortared cist of chalk and limestone block, G. 966 (Generation 21, c.1050–c.1070), with a flint pillow. 1446
55. Cist graves from the medieval ‘Paradise’ cemetery: MG 172 (Medieval grave generation 1, c.1200–c.1240), with a lead *capsa*; MG 287 (Medieval grave generation 2, c.1240–c.1280), with a reused cross-shaped grave-marker; MG 203 (Medieval grave generation 3, c.1280–c.1320), priest with chalice, paten and trowel; MG 155 (Medieval grave generation 4 (c.1320–c.1360) priest with chalice, paten, belt-buckle, fragments of gold braid, and a triangular hook. 1447
56. Old Minster: double graves of Generations 4–7 (c.750–c.830), 8–10 (c.830–c.890), and 14–16 (c.929–c.970) in the context of the minster as it was before 971. 1448
57. Old Minster: charcoal burials, Grave variation 8, in the context of the reconstructed plan of the minster at the time of burial. A. before c.900 (Grave generations 7–11); B. c.903–c.971 (Grave generations 12–16); C. c.971–c.980 (Grave generation 17); D. c.980–1093 (Grave generations 18–22). 1449
58. Old Minster: burials in ironbound coffins, Grave variation 10, in the context of the reconstructed plan of the minster at the time of burial. A. before c.900 (Grave generations 8–11); B. c.903–c.971 (Grave generations 12–16); C. c.971–c.980 (Grave generation 17); D. c.980–1093 (Grave generations 18–22). 1450
59. Old Minster: burials with stone elements (built graves, monolithic coffins, stone covers, markers, and mortared cists), Grave variations 13–16, in the context of the reconstructed plan of the minster at the time of burial. A. before c.900 (Grave generations 9–11); B. c.903–c.971 (Grave generations 12–16); C. c.971–c.980 (Grave generation 17); D. c.980–1093 (Grave generations 18–22). 1451
60. Old Minster: the baptistery in the N porticus, as remodelled between c.980 and 992–4; plan and sections, with reconstructions. 1452
61. Old Minster: the timber-work of F. 265 (latrine-pit) and F. 279 (well) plans, three-dimensional view and exploded details (cf. Figs 16, 28–30). 1454

62. Old Minster: possible cemetery chapel to the W of the westwork in Generations 19 and 20 (c.1010–c.1050) (1:50). 1455
(The positions of these following sections are shown on Fig. 3a.)
- 63a. E part. Section E–W on 500N, the central axis of Old Minster: through the external crypt and E apse completed in 992–4, and through the whole of the 7th-cent. church including its W wall, and the Norman bell-foundry. 1456
- 63b. W part. Section E–W on 500N, the central axis of Old Minster, from and including the W wall of the 7th-cent. church, through the central spaces of the *martyrium* with St Swithun's grave and the monuments above and the later chapel around it; and through the foundation of the Norman W front into the pre-Norman layers to the W. 1464
64. Section E–W on c.502.67N, across Compartment 9 and G. 156. The Norman robbing of the W wall of the 7th-cent. church runs against the E end of the coffin of G. 156. The chalk foundation of the E wall of the *martyrium* is seen to the W, sealed by the 'memorial court'. 1472
65. Section E–W on 502.50N, through the floor of the E *porticus* of the 7th-cent. church, showing the flagstones of the floor of the 7th-cent. *porticus*, with the 'step' cut in their surface. 1473
66. Section W–E on c.510.75N to 726 and thereafter on 507.75 to 752.35, from the cemetery in the W, through the robbing of the westwork to the chalk foundations of the E and W walls of the *martyrium*, the whole sealed by the surface of the 'memorial court'. The mass reburial of bones, the northern chapels of the westwork, and the foundations of the W and E walls of the apse of the *martyrium* are shown. 1474
67. Section W–E on 508.50N, through the northern chapels of the westwork (Compartments 2, 3, and 4), the whole sealed by the surface of the 'memorial court'. From the robber-trench of the westwork, with the mass reburial, and the W and E walls of the N apse of the *martyrium*, to the latrine-pit in the E. 1480
68. Section E–W along c.509.50N, from the E wall of the cells behind the W façade, across the foundation of the E wall of the *martyrium* apse, and through the robber-trenches of the westwork, the whole sealed by the surface of the 'memorial court'. The mass reburial of bones, the cemetery W of the façade and the well are also shown. 1484
69. Section W–E along 513.10N, across the N apse of the *martyrium*. 1492
70. Section N–S on 726E, to the W of the westwork, across the cemetery which is here cut by the foundation trench of the N tower of the Norman W front. 1494
71. Section N–S on 733E, across the robber-trench of the westwork and the foundation of the N tower of the Norman W front. 1496
72. Section S–W–N–E, diagonally from 735.35E to 744E, through the Norman Tower, St Martin's Tower, and the robber-trenches of the westwork, to the wood-lined well or latrine-pit. 1498
73. Elevation and section S–N on 743.22E and 744E, through Compartments 7 and 3, showing the chalk foundations of the N and W walls of the central square of the *martyrium*. 1502
74. Section S–N on 747.50E, from the central axis of the minster on 500N through the chalk foundation of the N wall of the central space of the *martyrium*, the robber-trench of the internal partition wall and main N wall of the westwork, and the chalk foundation of the N apse of the *martyrium*, to the S wall and robber-trenches of the building at the S end of the W front of New Minster. 1504
75. Elevation N–S on c.747.60E, of part of the E side of Dean Kitchin's trench of 1886 to the W of the monuments over the site of St Swithun's tomb-shrine. 1507
76. Section N–S on 749.25E, across the chalk foundation of the N wall of the central space of the *martyrium*, with the wrecked tomb-shrine of St Swithun marking the site of the saint's grave, to the N wall of the cathedral (1:25). Anglo-Saxon graves appear around St Swithun. The tomb-shrine of St Swithun and the later monuments marking the site of his original grave are surrounded by the walls of the 13th-cent. chapel of St Swithun and its reduced later form. 1508
77. Section S–N on c.750.50, from the N wall and chalk foundation of the N apse of the *martyrium* through external layers including New Minster construction spreads, c.901–3. 1511
78. Section S–N on 754.50E, immediately W of the 7th-cent. church, through the chalk foundation of the N wall of the *martyrium*, the latrine-pit, and the cemetery between

- Old Minster, and the robber-trench of the S wall of New Minster, which cuts the cemetery and all construction spreads. 1512
79. Section N–S on 759.50E, across the cemetery between the S wall of New Minster and the N wall of the 7th-cent. Old Minster. 1516
80. Section N–S on c.765.75/767E, from the S wall of New Minster (overlapped by ‘Paradise Wall’), across the three chapels added to the E side of the W façade c.920, and the width of the 7th-cent. nave. 1520
81. Section N–S on c.777.35/775/774E, from the S aisle and S wall of New Minster (directly overlain by ‘Paradise Wall’), across the N porticus and baptistery of Old Minster, and the width of the 7th-cent. nave, with the foundation for the 7th-cent. altar. 1524
82. Section S–N on c.778/780E, across the site of the robbed foundations of the ‘triumphal arch’ inserted c.750 between the nave and E porticus of the 7th-cent. church (cf. Figs. 10 and 11), showing 8th-, 10th-, and 11th-cent. robber-trenches above the 7th-cent. foundation trenches; the layered foundation of the E wall of the 7th-cent. nave runs S–N across the full width of the section. This section should be read with the plans and interpretive diagrams of Fig. 10. 1532
83. Section S–N on c.783E, across the robber-trenches of the S and N walls of the 7th-cent. E porticus, and across the S and N walls of the E arm and N apse dedicated in 992–4. 1536
84. Section N–S on 788.60E, across the robbing of the 7th-cent. E porticus, converted by 992–4 into a crypt below the high altar. The foundation of the E wall of the 7th-cent. E porticus forms the base of the section. The upper part of the fill of the earlier of the Norman bell-pits appears at 496N. 1540
85. Section S–N on 789E, across the N and S walls of the E arm completed in 992–4. The earlier of the Norman bell-pits cuts into the robber-trench of the late 10th-cent. S wall of the E arm. 1542
86. Section N–S on 790E, across the area outside the E wall of the 7th-cent. E porticus, showing the robber-trenches of the N and S passages to the late 10th-cent. crypt: the layers shown here all pre-date the construction of the E arm of Old Minster between 980 and 992–4. 1548
87. Section N–S on 791.50E, across the N wall of E arm dedicated in 992–4 (1:25). The robbing of the passage into the crypt below the altar in 1094 cuts the main robbing of the E arm the previous year. The only surviving flagstone from the floor of the E arm hangs in position partly over the fill of the robber-trench. 1549
88. Section S–N on 800.50E, across the robbing fills of the external crypt and of the E apse dedicated in 992–4. The block from a narrative frieze (the ‘Sigmund stone’; pp. 830–9,) and a foot-stone showing the Tomb of Christ (p. 845–6) were found in the fill. of RT.AR. ‘Paradise Wall’ is seen at the N end of the section. At the S end, the peaks of layers preserved to either side of MG. 782 reveal the extent to which the graves of the ‘Paradise’ cemetery have destroyed the deposits which once overlay the site of Old Minster. 1550
89. Section S–N on c.807.15, across the Old Minster cemetery to the E and S-E of the E apse dedicated in 992–4. The grave-cover of G. 119 is inscribed with the name of Gunni, ‘the earl’s companion’ (pp. 848–52, **106**). 1554
- 90a. Old Minster, the 7th-cent. church: geometry and setting out, assuming a square E porticus (see pp. 80–2 and 85). 1555
- 90b. Old Minster, the 7th-cent. church: geometry and setting out, assuming an apsidal E porticus (see pp. 83–5). 1556
91. Old Minster, the 7th-cent. church; A: foundation trenches, robber-trenches, and standing walls; B: standing walls with base-square grid superimposed. 1557
- 92a. Old Minster, the 7th-cent. church: reconstructions of the plan, roof plan, sections, and elevations. 1558
- 92b. Old Minster, the addition of St Martin’s Tower (c.725): roof plan, isometric view, and artist’s impression of the reconstructed church. 1559
- 93a. Old Minster, the addition of St Martin’s Tower c.725: setting out, plan, sections, and elevations. 1560
- 93b. Old Minster, the addition of St Martin’s Tower (c.725): roof plan, isometric view, and artist’s impression of the reconstructed group. 1561

94. Old Minster, the conversion of the square E porticus into an apse (c.750) and the insertion of a triumphal arch: setting out, plan, sections, elevations, roof plan, isometric views, and artist's impressions. 1562
- 95a. Old Minster, the addition of the W façade (c.905) in response to the building of New Minster (c.901–3): setting out, plan, roof plan, sections, elevations, isometric view, and artist's impression. 1564
- 95b. Old Minster, the addition of chapels to the E face of the W façade (c.920): setting out, plan, roof plan, sections, elevations, isometric view, and artist's impression. 1566
- 96a. Old Minster, the building of the double-apsed link-building as a *martyrium* around the site of St Swithun's grave (c.971–5): setting out, plan, roof plan, sections, and elevations. 1568
- 96b. Old Minster, the building of the double-apsed link-building as a *martyrium* around the site of St Swithun's grave (c.971–5): isometric views and artist's impressions. 1570
- 97a. Old Minster, the building of the westwork (dedicated 980) incorporating the tower of the *martyrium* and St Martin's Tower: setting out, plan, roof plan, sections, and elevations. 1572
- 97b. Old Minster, the building of the westwork (dedicated 980) incorporating the tower of the *martyrium* and St Martin's Tower: isometric views and artist's impressions. 1574
98. Old Minster, the reconstruction and extension of the E end (dedicated 992–4): setting out, plan, roof plan, sections, elevations, and an artist's impression of the Old and New Minsters seen from the east. 1576
99. Old Minster in its final state (992–4 to 1093): isometric views and artist's impressions. 1578
100. Old Minster and New Minster from the north-west c.1000: artist's impression. 1580
101. Old Minster and the parcelling out of land to New Minster. 1582
102. New Minster, the church as excavated in 1963–8: reconstructed walls in red (1:150). Stars indicate burials in coffins with iron elements, whether nails only or nails and fittings. Charcoal graves are shown in black. OD levels refer to the floor of the grave. A line above a grave number (e.g. G. 51) indicates that the grave lies below another and cannot therefore be shown on the plan. 1584
103. New Minster, section S–N on 778–783E and 786–787E, diagonally across the E part of the nave and aisles (cf. Fig. 102). Across the S wall and S aisle to RT. GA, adjacent to a pier of the S arcade of the nave; across the nave to RT. GH, adjacent to a pier of the N arcade of the nave; across the N aisle to the N wall. Graves of the Old Minster cemetery lie to either side and beneath the S wall of New Minster. The walls and floors of the S range of the Roman forum can be seen along this section. The Roman walls seem to have been partly reused in the construction of the minster. 'Paradise Wall' cuts into the S wall of New Minster. 1586
104. New Minster and its setting out: geometry and elevations. 1592
105. New Minster with the nave of the Norman cathedral under construction: artist's impression looking N–E across the 'memorial court' and the ruins and site of Old Minster. 1594
106. New Minster, the cemetery and double-apsed chapel (late 10th cent. to c.1066) on the site of Domestic buildings A–D. 1596
- 107a. New Minster, the northern domestic buildings: plan of Buildings A–D (c.1066–c.1110). 1598
- 107b. New Minster, the northern domestic buildings: isometric reconstruction of Building A in its final state c.1110. 1600
- 107c. New Minster, the northern domestic buildings (c.901–c.1110): the development of the complex. A: the cemetery and double-apsed chapel; B: Building A, W range; C: Building A, S range, with Buildings B, C, and D. 1601
- 107d. New Minster, the northern domestic buildings: timber well-base from Pit 6 (c.1065–6). 1602
108. New Minster, the northern domestic buildings: sections across Building A. A: E–W across the double-apsed chapel and S range of Building A; B: N–S across the S range of Building A; C: E–W across the stone-lined well, in the courtyard of Building A. 1603
109. New Minster, the northern domestic buildings: sections across Buildings A and B. A: east–west across the W range of Building A, through the sunken rooms containing the latrines, Pits 15 and 16; B: west–east through the sunken latrine attached to the W wall of the W range of Building A; C: south–north through the deep room below Building B. 1606
110. New Minster, the northern domestic buildings, Building A: section E–W across the E wall, courtyard, verandah, W range, and sunken room. Below, Roman buildings from E to W: Courtyard house, Room 2, Corridor 1, and courtyard; N–S streets 1–5 and street-side ditches;

- Forum, E range, Rooms 1, 5, 6. G. 6 and G. 14 of the New Minster cemetery cut into the Roman deposits. 1608
111. New Minster, the northern domestic buildings: sections of the N and S faces of the contractor's excavation for the basement of the Wessex Hotel, 1962. A: W–E along the N face of the contractor's excavation, showing the natural subsoil, Roman buildings, post-Roman water-channels, and the New Minster Buildings; B: W–E (reversed for comparison with A) along the S side of the contractor's excavation, showing the same sequence overlain by New Minster Building A. 1612
112. New Minster, the southern domestic buildings: plan of the S range (Building E), all periods. 1616
113. New Minster, the southern domestic buildings: the earliest buildings. Pre-existing boundary wall, major unidentified structure with S ?apse, and rectangular building, early to mid-10th century. 1619
114. New Minster, the southern domestic buildings: the S range of the claustral building constructed *c.* 964–6. 1620
115. New Minster, the southern domestic buildings: the S range of the claustral building, enlarged and piers inserted *c.* 1065–70. 1622
116. New Minster, the southern domestic buildings: S range of the claustral building, final changes and additions of the late 11th to early 12th cent. 1624
117. New Minster, the southern domestic buildings: the site of the claustral building after demolition *c.* 1110. 'Paradise Wall' (? 'La Posterne'); medieval graves and features inside 'Paradise'; E–W path along the N (outer) side of 'Paradise Wall'; post-medieval graves N of the path. 1626
118. New Minster, the southern domestic buildings: section W–E through the S range. Robber-trench ED is Dean Kitchin's excavation trench of 1885. 1628
119. New Minster, the southern domestic buildings: section west–east through the E range. 1634
120. New Minster, the southern domestic buildings: section S–N across the area immediately W of the S range. 1636
121. New Minster, the southern domestic buildings: section S–N, then E–W, across the SW part. At the N end of the section is the chalk foundation of the major unidentified structure with a S ?apse. 1638
122. New Minster, the southern domestic buildings: section S–N across the S range, into the cloister garth. 1642
123. New Minster, the southern domestic buildings: section S–N across the E end of the S range. 1646
124. New Minster, the southern domestic buildings: development of the S range *c.* 900–*c.* 1110. 1650
125. New Minster, the southern domestic buildings: isometric reconstructions of the S range looking NE (1:500). 1651
126. Nunnaminster/St Mary's Abbey (COE 1973): plan of the SW angle of the claustral buildings, as excavated, all periods. 1652
127. Nunnaminster/St Mary's Abbey (COE 1973): plan of the SW angle of the claustral buildings, Anglo-Saxon and Norman periods. 1653
128. Nunnaminster/St Mary's Abbey (COE 1973): section W–E along the N face of Trenches III and II, across the W range of the claustral buildings, with underlying Roman building. 1654
129. Nunnaminster/St Mary's Abbey (COE 1973): section S–N across Trench I, along the W face of Trench II, and across Trench III, across the S range of the claustral buildings. 1658
130. Nunnaminster/St Mary's Abbey (COE 1973): section W–E along the N face of Trench I and across Trench II, into the S range of the claustral buildings. 1662
131. Nunnaminster/St Mary's Abbey (COE 1973): section W–E along the N face of Trench I and across Trench II, into the S range of the claustral buildings, late 9th to mid-12th cent. 1666
132. Nunnaminster/St Mary's Abbey (AVG): plan of the nave, as excavated, all periods. 1667
133. Nunnaminster/St Mary's Abbey: Nunnaminster I, plan of the western structure and adjacent part of the nave. 1668
134. Nunnaminster/St Mary's Abbey: Nunnaminster II, plan of the W front and adjacent part of the nave. 1669

135.	Nunnaminster/St Mary's Abbey: St Mary's Abbey, plan of the excavated part of the Romanesque nave.	1670
136.	Nunnaminster/St Mary's Abbey (AVG): St Mary's Abbey, plan of the excavated part of the later medieval nave.	1671
137.	Nunnaminster/St Mary's Abbey: section N–S across the N aisle and nave of the Romanesque abbey church with earlier structures.	1672
138.	Nunnaminster/St Mary's Abbey (AVG): Section east–west along the nave of the Romanesque abbey church and across the foundation of the W front (F. 160) of the Nunnaminster II church.	1676
139.	Nunnaminster/St Mary's Abbey (AVG): development plans, early 10th to 16th cent.	1678
140.	Winchester: the SE quarter from the mid-7th to the mid-8th cent. in the context of the central streets and forum of the Roman city.	1679
141.	Winchester: the SE quarter from c.880 to c.901.	1680
142.	Winchester: the SE quarter from c.901 to c.963.	1681
143.	Winchester: the SE quarter from c.963 to c.1065.	1682
144.	Winchester: the SE quarter from c.1065 to c.1093–4.	1683
145.	Winchester: the SE quarter from c.1093–4 to c.1110.	1684
146.	Winchester: the SE quarter from c.1110 to c.1141.	1685
147.	Winchester: the SE quarter from c.1141 to c.1179–80.	1686
148.	Pottery from the early domestic buildings of New Minster: the Badorf pitcher from Pit 2.	1687
149.	Pottery from Old Minster: the bell-pit group from F. 33; B1–12.	1688
150.	Pottery from Old Minster: the bell-pit group from F. 33; B13–19.	1689
151.	Pottery from Old Minster: the well group from F. 154; W1–8.	1690
152.	Pottery from Old Minster: the well group from F. 154; W9–15.	1691
153.	Pottery from the northern domestic buildings of New Minster: the tripod pitcher from Pit 15 in the abbot's hall).	1692
154.	Old Minster: radiocarbon dates for grave generations 1–4; Bayesian modelled dates, <i>c.f.</i> Table 2.13.	1693

LIST OF CHARTS

1.	Cathedral Green (CG 1962–9), site of the Old and New Minsters, phasing of Roman and post-Roman layers (Final phases I–XIX [1–19]).	1696
2.	Cathedral Green (CG 1962–9), Old Minster and New Minster, phasing of Anglo-Saxon layers (Final phases XIX–XL [19–40]).	1698
3.	Cathedral Green (CG 1962–9), Old Minster and New Minster, phasing of Anglo-Saxon and early Norman layers (Final phases XL–LVI [40–56]).	1702
4.	Cathedral Green (CG 1962–9), New Minster and the site of the Old and New Minsters, phasing of Norman, later medieval, post-medieval, and modern layers (Final phases LVI–XCV [56–95]).	1706
5.	Cathedral Car Park (CACP 1961), Roman forum, N–S street, Buildings II.1 and II.2, phasing of Roman provisional phases (Final phases 1–27).	1710
6.	Cathedral Car Park (CACP 1961), urban domestic occupation, New Minster cemetery, oval chapel, and northern domestic buildings (abbot’s residence), phasing of Anglo-Saxon, Norman, post-medieval and, modern provisional phases (Final phases 28–51).	1714
7.	Cathedral Green (CG 1970), New Minster, southern domestic buildings, phasing of Anglo-Saxon and early Norman layers (Final phases CCXVII–CCXLI [217–41]).	1716
8.	Cathedral Green (CG 1970), New Minster, site of the southern domestic buildings, phasing of Norman, later medieval, post-medieval, and modern layers (Final phases CCXLI–CCLXVI [241–66]).	1718
9.	City Offices Extension (COE 1973), Nunnaminster (St Mary’s Abbey), southern domestic buildings, phasing (Chart 9A) of post-Roman, Anglo-Saxon, and Norman and (Chart 9B) of medieval, post-medieval, and modern layers. (Final phases 4–29).	1720
10.	Abbey View Garden (AVG 1981–3), Nunnaminster (St Mary’s) monastic church, phasing of post-Roman, Anglo-Saxon, medieval, post-medieval, and modern layers (Final phases 5–34).	1724

ACKNOWLEDGEMENTS

The Winchester Excavations Committee acknowledges with gratitude the generous support it has received over the years in conducting the excavations and preparing the results for publication. Among the very many bodies and individuals, it would like most especially to thank

The Dean and Chapter of Winchester Cathedral

for permission to carry out the excavations and their continuing support and interest.

The excavations on which this book is based were supported by grants provided by

The American Council of Learned Societies, Lord Ashburton, the Hon. F. D. L. Astor, the Aurelius Trust, Mr David Ball, the British Academy, the Baring Foundation, the British Museum, the Calouste Gulbenkian Foundation, Mr Daniel P. Davidson, Duke University, the Ernest Cook Trust, the Esmée Fairbairn Charitable Trust, Dr Joan Evans, Cmdr Brian Hall, the Hampshire County Council, the Haverfield Trust, the Arts and Humanities Research Board (now AHRC - UKRI), the Marc Fitch Fund, Mr I. D. Margary, The Mary Duke Biddle Foundation, the Ministry of Works (later of Public Building and Works), Mrs Dilys Neate, the Nuffield Foundation, the Old Dominion Foundation, the Pilgrim Trust, the Royal Archaeological Institute, the Scouloudi Foundation Historical Awards, W. R. Selwood Ltd., the Society of Antiquaries of London, Trust Houses Ltd., the United States National Endowment for the Humanities, the University of Exeter, the University of North Carolina, Winchester City Council, and the Wolfson Foundation.

The work of preparing the results for publication was supported by grants provided by

Anthony du Boulay Trust, Signe Arkell, Lord Ashburton, Aurelius Trust, Avocet Trust, Avenue Trust, David Ball, Baring Foundation, Basil Samuel Trust, Martin Biddle, Carol Bianchi, Bonham Carter Trust, Bulldog Trust, Janie Cadbury, Cedars Trust, Giles Clarke, City of Winchester Trust, Ernest Cook Trust, Cowley Trust, Daniel Davison, De Laszlo Foundation, Department of the Environment, Egypt Exploration Society, Esme Fairbairn Trust, Richard Greaves, Guinness Trust, Gulbenkian Trust, Philip Gwyn, Brian Hall, Hampshire Archives Trust, Hampshire Cultural Trust, Hampshire County Council, Hampshire Field Club and Archaeological Society, Headley Trust, Historic England, The Historic Towns Trust, James Scott Memorial Fund, Michael Langdon, Leverhulme Trust, Linbury Trust, Jacqueline Lunn-Rockcliffe, Naomi Lyon, Stewart Lyon, Jock Macdonald, Marc Fitch Fund, Robin McCall, Nigel McNair Scott, Peter Mitchell, Jocelyn Morris, Sir Jeremy Morse, Rupert Nabarro, National Westminster Bank, Dilys Neate, Nuffield Foundation, Finian O'Sullivan, Oxford University Press, Mr and Mrs Richard Petersen, Pilgrim Trust, Sir David Plastow, Earl of Portsmouth, Rank Foundation, Robert Kiln Trust, Royal Numismatic Society, Scouloudi Foundation, Society of Antiquaries of London, Jeffrey Smith, Mark Thistlethwayte, Try Homes, The UK Numismatic Trust, Edward Wakefield, Wates Foundation, Chris Webb, Mr and Mrs W Weiant, Duke of Wellington, University of Winchester, WARG Winchester Archaeology and Local History Society, Winchester City Council, Winchester College, Winchester College Society, Winchester Residents Association, Wolfson Trust.

This book is published with the aid of a subvention provided by

Eleanor Atherton, Eileen Bendall, Kathy Brown, Beth Williams Bullock, Alice Craft, Sarah Boll Cummer, Mollie Drury, Dorothy Fox, Julia Gosling, Coleman Jennings, Cece Saunders Kirkorian, Helena Quirk Knapp, Susan Knight, Frances Knight, Lucy Weier Krystallis, Robin McCall, Deric Mallett, Pearson Marvin, Woodard Openo, Paula Quirk, Jean Stark, Barbie Coulston Struble, Joanne Rubin Waters, Margaret Wells, Austin Whitaker

LIST OF ABBREVIATIONS

<i>AB</i>	<i>Analecta Bollandiana</i>
Abb.	Abbildung(en)
AERE	Atomic Energy Research Establishment
Add.	Additional
<i>AJA</i>	<i>American Journal of Archaeology</i>
<i>Antiq J</i>	<i>Antiquaries Journal</i>
App.	Appendix
<i>Arch</i>	<i>Archaeologia</i>
<i>Arch J</i>	<i>Archaeological Journal</i>
Archive	Winchester Research Unit/Winchester Excavations Committee archive with Winchester Museums Service (2009)
AS 114	<i>Liber historialis et antiquitatum domus sancti Swithuni Wintoniæ Johannis Exceter eiusdem loci commonachi propriis manibus descriptus, A.D. 1531</i> , All Souls College, Oxford, MS 114
ASC	Anglo-Saxon Chronicle. Editions used as follows:
<i>ASC A</i>	<i>The Anglo-Saxon Chronicle</i> , 3: <i>MS. A</i> , ed. J. N. Bately (Woodbridge, 1986)
<i>ASC B</i>	<i>The Anglo-Saxon Chronicle</i> , 3: <i>MS. B</i> , ed. Simon Taylor (Woodbridge, 1983)
<i>ASC C</i>	<i>The C-Text of the Old English Chronicles</i> , ed. H. A. Rositzke, <i>Beiträge zur englischen Philologie</i> , 24 (Bochum-Langendreer, 1940)
<i>ASC D</i>	Classen and Harmer (ed.) 1926
<i>ASC E</i>	<i>Two of the Anglo-Saxon Chronicles Parallel</i> , i: <i>Text</i> , ed. Charles Plummer (Oxford, 1892)
<i>ASC F</i>	<i>The Anglo-Saxon Chronicle: A Collaborative Edition</i> , 8: <i>MS F</i> , ed. Peter Baker (Woodbridge, 2000); <i>The Anglo-Saxon Chronicle: A Collaborative Edition</i> , 1: <i>Facsimile of MS. F: The Domitian Bilingual</i> , ed. David N. Dumville (Cambridge, 1995); <i>Annales Domitiani Latini: An Edition</i> , ed. Francis P. Magoun, jr., <i>Mediaeval Studies</i> , 9 (1947), 235–95
<i>ASC G</i>	<i>Die Version G der angelsächsischen Chronik</i> , ed. A. Lutz (Munich, 1981)
<i>ASE</i>	<i>Anglo-Saxon England</i>
<i>ASWills</i>	<i>Anglo-Saxon Wills</i> , ed. Dorothy Whitelock (Cambridge, 1930)
A-S	Anglo-Saxon
AVG	Site code, Abbey View Gardens 1981–3
BAACT	British Archaeological Association Conference Transactions
BAA Trans	Transactions of the British Archaeological Association
BAR	British Archaeological Reports, British series
BAR Intl. Ser.	British Archaeological Reports, International Series
<i>B.d.A.</i>	<i>Bollettino d'Arte</i>
BL	British Library, London
BM	British Museum, London
BMNH	British Museum (Natural History), London, <i>now</i> The Natural History Museum
BnF	Bibliothèque nationale de France, Paris
<i>BNJ</i>	<i>British Numismatic Journal</i>
BP	before present
BT	J. Bosworth and T. N. Toller, <i>An Anglo-Saxon Dictionary</i> (Oxford, 1898)
BT ^{Supp}	T. N. Toller, <i>An Anglo-Saxon Dictionary, Supplement</i> , with revised and enlarged addenda by A. Campbell (Oxford, 1972)
<i>Bulletin KNOB</i>	<i>Bulletin of the Koninklijke Nederlandse Oudheidkundige Bond</i> (Utrecht)
<i>BZ</i>	<i>Byzantinische Zeitschrift</i>
CA	Chapter Minute Books, MSS, WCL
<i>C.A.C.</i>	<i>Congresso di Archaeologia Cristiana</i> (Atti, Actes)
CACP	Site code, Cathedral Car Park 1961

cal	calibrated
Cal. Papal Reg.	<i>Calendar of the Entries in the Papal Registers Relating to Great Britain and Northern Ireland: Petitions to the Pope, Vol. I 1342–1419</i> , ed. W H Bliss (London, HMSO, 1896)
CASSS	<i>Corpus of Anglo-Saxon Stone Sculpture</i>
CBA	Council for British Archaeology
CBCR	<i>Corpus Basilicarum Christianarum Romae</i> , ed. Richard Krautheimer, with Spencer Corbett, Wolfgang Frankl, and Alfred K. Frazer, 5 vols. (Vatican City, 1937–77)
CCCC 110	<i>Chronicon in quo continetur historia Angliæ presertim cænobii Wintoniensi a Lucio usque ad initium regni Henrici VI</i> , Corpus Christi College, Cambridge, MS 110
CCCM	<i>Corpus Christianorum, Continuatio Mediaevalis</i>
CCR	<i>Calendar of Close Rolls, Richard II, 1381–5</i> , vol. 2 (London, HMSO, 1920) <i>Calendar of Close Rolls, Edward III, 1354–60</i> , vol. 10 (London, HMSO, 1908)
CCSL	<i>Corpus Christianorum, Series Latina</i>
C.E.B.	<i>Congrès International des Études Byzantines</i>
CG	Site code, Cathedral Green 1962–70
CG67/XXXIII/9, etc.	Drawing number: for explanation, see p. 27
cm	centimetre
CO	Chapter Order Book, MS, WCL
COE	Site code, City Offices Extension 1973
CPR	<i>Calendar of Patent Rolls, Richard II, 1377–85</i> , vol. 1 (London, HMSO, 1897) <i>Calendar of Patent Rolls, Edward III, 1350–4</i> , vol. 9 (London, HMSO, 1907) <i>Calendar of Patent Rolls, Edward IV & Henry VI 1467–77</i> (London, HMSO, 1971)
CSEL	<i>Corpus Scriptorum Ecclesiasticorum Latinorum</i>
DACL	Fernand Cabrol and Henri Leclercq, <i>Dictionnaire d'archéologie chrétienne et de liturgie</i> , 15 vols. in 30 parts (Paris, 1907–53)
DB	Domesday Book
DB + county abbreviation	Great and Little Domesday Book (translation and printed text) cited by section number from the Phillimore County volumes (gen. ed. John Morris, Chichester 1976–84)
DEC	Ken Parry, David J. Melling et al., <i>The Blackwell Dictionary of Eastern Christianity</i> (n.p., 2001)
DMLBS	R. E. Latham, D. R. Howlett, and R. Ashdowne (eds), <i>Dictionary of Medieval Latin from British Sources</i> (Oxford, 1977–2013)
DNB	<i>The Dictionary of National Biography . . . to 1900</i> (1885–1901) with supplements to 1990 (1996), now replaced by <i>ODNB</i> , q.v.
DOP	<i>Dumbarton Oaks Papers</i>
Du Cange	Charles Du Fresne, sieur du Cange, <i>Glossarium mediae et infimae latinitatis</i> , ed. Léopold Favre, 10 vols. (Niort, 1883–7)
E	East (in the archaeological and architectural discussions and in footnotes) or Easting (in grid references)
<i>Econ HR</i> ¹	<i>Economic History Review</i> (1st., etc., series)
EETS	Early English Text Society
EHD	<i>English Historical Documents c. 500–1042</i> , ed. Dorothy Whitelock, English Historical Documents, 1, 2nd edn (London and New York, 1979)
EHR	<i>English Historical Review</i>
<i>Epitome</i>	<i>Epitome translationis et miraculorum S. Swithuni</i> , ed. Lapidige in WS 4.ii, 564–73
F	Feature
f., ff.	folio, folios
<i>Find</i>	<i>Find: The Newsletter of the Winchester Archaeological Rescue Group</i> 1 (October, 1972) – 43 (September, 1987) [superseded by <i>WMS Newsletter</i> ; see also <i>WARG</i>]
Fph.	Final phase: for explanation, see p. 23
ft, ',"	foot, feet
FMS	<i>Frühmittelalterliche Studien</i>
G.	Anglo-Saxon grave
GCS	Die Griechischen Christlichen Schriftsteller der ersten Jahrhunderte

gen.	generation
<i>Gents Mag</i>	<i>Gentleman's Magazine</i>
GF	Grave file: for explanation, see p. 27
<i>Gl</i>	Glass, followed by number
GRBS	<i>Greek, Roman and Byzantine Studies</i>
<i>Hants Stud</i>	<i>Hampshire Studies</i> , see <i>Proc Hants FC</i>
<i>Hants Chron</i>	<i>Hampshire Chronicle</i>
HAR	Carbon-14 date determined by the United Kingdom Atomic Energy Authority, Harwell, Berks
HBS	Henry Bradshaw Society
HRO	Hampshire Record Office
HRS	Hampshire Record Society
I.C.R.B.M.	Index to the Charters and Rolls in the Department of Manuscripts, British Museum. Eds Henry J. Ellis and Francis B. Bickley (London, 1905) (nb – these items are now held at the British Library)
<i>I Interim, II Interim</i> , etc.	Martin Biddle, Interim reports on the Winchester excavations 1961–71, in <i>Arch J</i> (<i>I Interim</i>) and <i>Antiq J</i> (<i>II–X Interim</i>) as follows: * <i>I Interim</i> (1961 season), <i>Arch J</i> 119 (1962), 150–94 (with R.N. Quirk) * <i>II Interim</i> (1962 and 1963 seasons), <i>Antiq J</i> 44 (1964), 188–219 * <i>III Interim</i> (1964 season), <i>ibid.</i> 45 (1965), 230–64 * <i>IV Interim</i> (1965 season), <i>ibid.</i> 46 (1966), 308–32 * <i>V Interim</i> (1966 season), <i>ibid.</i> 47 (1967), 251–79 * <i>VI Interim</i> (1967 season), <i>ibid.</i> 48 (1968), 250–84 * <i>VII Interim</i> (1968 season), <i>ibid.</i> 49 (1969), 295–329 * <i>VIII Interim</i> (1969 season), <i>ibid.</i> 50 (1970), 277–326 * <i>IX Interim</i> (1970 season), <i>ibid.</i> 52 (1972), 93–131 <i>X Interim</i> (1971 season), <i>ibid.</i> 55 (1975), 96–126, 295–337
J.A.C.	<i>Jahrbuch für Antike und Christentum</i>
JBAA ¹	<i>Journal of the British Archaeological Association</i> (1st., etc., series; reverted to continuous numbering as of vol. 129 (1976))
JEH	<i>Journal of Ecclesiastical History</i>
J.Ö.A.I.	<i>Jahreshefte des Österreichischen Archäologischen Institutes in Wien</i>
J.Ö.B.G.	<i>Jahrbuch der Österreichischen Byzantinischen Gesellschaft</i> (1951–68)
J.Ö.B.	<i>Jahrbuch der Österreichischen Byzantinistik</i>
JRS	<i>Journal of Roman Studies</i>
JSA	<i>Journal of the Society of Archivists</i>
JSAH	<i>Journal of the Society of Architectural Historians</i> (USA)
JTS	<i>Journal of Theological Studies</i>
JWCI	<i>Journal of the Warburg and Courtauld Institutes</i>
L.	Layer (context)
LB	Level Book: for explanation, see p. 10
Lewis and Short	C. T. Lewis and C. Short, <i>A Latin Dictionary</i> (Oxford, 1879; repr. 1975)
<i>LV</i>	<i>Liber Vitae</i>
<i>Med Arch</i>	<i>Medieval Archaeology</i>
MG	medieval grave
MGH	Monumenta Germaniae Historica
MS	manuscript
m, mm	metre, millimetre
N	North (in the archaeological and architectural discussions and in footnotes) or Northing (in grid references)
N.C.A.	New College Archive (Bodleian Library, Oxford)
n.d.	no date of publication
n.s.	new series
Niermeyer	J. F. Niermeyer, <i>Mediae latinitatis lexicon minus</i> (Leiden, 1984)

OD	Ordnance Datum
ODB	<i>The Oxford Dictionary of Byzantium</i> , ed. Alexander P. Kazhdan <i>et al.</i> (New York and Oxford, 1991)
ODCC	<i>The Oxford Dictionary of the Christian Church</i> , 3rd edn., ed. F. L. Cross and E. A. Livingstone (Oxford, 1997)
ODNB	<i>Oxford Dictionary of National Biography</i> (2004)
OLD	<i>Oxford Latin Dictionary</i> , ed. P. G. W. Glare (Oxford, 1992)
OMT	Oxford Medieval Texts
o.s.	Old Series, Original Series
OS	Ordnance Survey
OS 1869–71	Ordnance Survey map of Winchester at 1:500 scale, surveyed 1869–71. The sheet covering the area of the cathedral and the minsters, Hants XLI.13.19, was surveyed in 1871
OxCal v2.18	See Bronk Ramsey 1994, 1995
PBA	<i>Proceedings of the British Academy</i>
PECS	<i>The Princeton Encyclopedia of Classical Sites</i> , ed. Richard Stilwell (Princeton, 1976)
PF	Phasing file: for explanation, see p. 6
PG	<i>Patrologia graeca</i> , ed. J.-P. Migne (Paris, 1857–1904)
PH.	Post-hole (except in P.ph.; see below)
Photo + number	Negative number: for explanation, see p. 27
PL	<i>Patrologia latina</i> , ed. J.-P. Migne (Paris, 1844–64)
PLRE i	<i>The Prosopography of the Later Roman Empire</i> , i: A.D. 260–395, ed. A. H. M. Jones, J. R. Martindale, and J. Morris (Cambridge, 1971)
PLRE ii	<i>The Prosopography of the Later Roman Empire</i> , ii: A.D. 395–527, ed. J. R. Martindale (Cambridge, 1980)
PMCF i–iii	<i>Les Premiers Monuments chrétiens de la France</i> , ed. Ministère de la Culture et de la Francophonie, Atlas archéologiques de la France, Série typologique, i: Sud-Est et Corse (Paris, 1995); ii: Sud-Ouest et Centre (Paris, 1996); iii: Ouest, Nord et Est (Paris, 1998)
P.ph.	Provisional phase: for explanation, see pp. 23–5
PRO	Public Record Office, Kew at The National Archives (TNA)
<i>Proc Hants FC</i>	<i>Proceedings of the Hampshire Field Club</i> , retitled <i>Hampshire Studies</i> as of vol. 51 (1996)
PSAL	<i>Proceedings of the Society of Antiquaries of London</i>
PSAS	<i>Proceedings of the Society of Antiquaries of Scotland</i>
RAC	<i>Rivista di Archeologia Cristiana</i>
RAI	Royal Archaeological Institute
R.B.E.	<i>Register of William Edington, Bishop of Winchester, 1346–66</i> , vol. 2, HRO, 21M65/A1/8–9
R.B.S.	<i>Register of John de Stratford, Bishop of Winchester, 1324–34</i> , vols 42–3, HRO, 21M65/A1/5
RCHME	Royal Commission on the Historical Monuments of England
R.C.S.	Registers of the Common Seal (alias Ledger Books), MSS, WCL
RdGA	<i>Reallexikon der Germanischen Altertumskunde</i>
Reg.	<i>Regesta regum Anglo-Normannorum</i> , ed. H. W. C. Davis <i>et al.</i> , 4 vols (Oxford, 1913–69), and <i>Regesta regum Anglo-Normannorum: The Acta of William I (1066–1087)</i> , ed. David Bates (Oxford, 1998)
Reg. Bp. Courtenay	<i>Register of Peter Courtenay, Bishop of Winchester, 1486–92</i> , HRO, 21M65/A15
Reg. Bp. Fox	<i>Register of Richard Fox, Bishop of Winchester, 1501–34</i> , HRO, 21M65/A1/17–21
Reg. Bp. Orleton	<i>Register of Adam de Orleton, Bishop of Winchester, 1333–45</i> , HRO, 21M65/A1/6–7
Reg. Bp. Waynflete	<i>Register of William Waynflete, Bishop of Winchester, 1447–86</i> , HRO 21M65/A1/13–4
Reg. Card. Beaufort	<i>Register of Henry, Cardinal Beaufort, 1405–25</i> , HRO 21M65/A1/12
Reop.	Trenches reopened in a subsequent season. For the location of Reopening 1965 and Reopening 1969, see Fig. 2
RF	Recorded find, followed by number: see p. 29
RLAC	<i>Reallexikon für Antike und Christentum</i> , ed. Th. Klausner (Stuttgart, 1950–62)
RS	Rolls Series
RT.	Robber-trench: for explanation, see pp. 12–18

S	South (in the archaeological and architectural discussions and in footnotes)
S (followed by charter no.)	short reference to Sawyer (see below)
s.a.	<i>sub anno</i>
SCD	Structural context description: for explanation, see pp. 24–5
SF	Small find, followed by number
SGT	Anglo-Saxon glazed tile
s.n.	<i>sub nomine</i>
s.nn.	<i>sub nominibus</i>
SNB	Site note–book: for explanation, see p. 10
SOMP	Saxon Old Minster Plaster: see pp. 69–70, 906–8
SPM	<i>Die Schweiz vom Paläolithikum bis zum frühen Mittelalter</i> (Basel, 2005)
s.v.	<i>sub verbo</i>
TB (plus year)	Annual Treasurers' Account Books, MSS, WCL
TLL	<i>Thesaurus linguae Latinae</i> , 1900–, Berlin (formerly Leipzig): De Gruyter (formerly Teubner)
TLS	<i>Times Literary Supplement</i>
TNA	The National Archive
TRHS	<i>Transactions of the Royal Historical Society</i>
VCH	<i>Victoria County History</i>
VCH Hants	<i>The Victoria History of the Counties of England: Hampshire and the Isle of Wight</i> , ed. W. Page, 5 vols. (London, 1900–12)
VCH Oxon	<i>The Victoria History of the Counties of England: Oxfordshire</i> , ii (1907), vii (1962)
VCH Wilts	<i>The Victoria History of the Counties of England: Wiltshire</i> , 18 vols. (London, Oxford, and Woodbridge, 1955–2011)
vol. (vols)	volume(s)
VRKB ¹	<i>Vorromanische Kirchenbauten: Katalog der Denkmäler bis zum Ausgang der Ottonen</i> , ed. F. Oswald, L. Schaefer, and H. R. Sennhauser (Munich, 1966–71)
VRKB ²	<i>Vorromanische Kirchenbauten: Katalog der Denkmäler bis zum Ausgang der Ottonen</i> , Nachtragsband, ed. W. Jacobsen, L. Schaefer, and H. R. Sennhauser (Munich, 1991)
W	West (in the archaeological and architectural discussions and in footnotes)
W.	Wall
Wt	weight
WA	<i>Annales monasterii de Wintonia (A.D. 519–1277)</i> [and] <i>Annales monasterii de Waverleia</i> , ed. Henry Richards Luard, <i>Annales monastici</i> , 2, RS (London, 1865)
WARG	<i>Winchester Archaeological Rescue Group Newsletter</i> 2006–[?]
'WC'	A 'lost Winchester chronicle', for parts of which see <i>Ungedruckte anglo-normannische Geschichtsquellen</i> , ed. F. Liebermann (Strassburg, 1879), 56–96
WCL	Winchester Cathedral Library, HRO
WCM	Winchester City Museums
WCR	<i>Winchester Cathedral Record</i> , published by The Friends of Winchester Cathedral 1931–[?]
WMS Newsletter	<i>Winchester Museums Service Newsletter</i> , 1 (June 1988) – 56 (Dec 2006/March 2007), superseded by <i>Winchester Museums Review</i> , 1 (July 2007) [all published; for their predecessor, see <i>Find</i> ; see also WARG]
WOMP	White Old Minster Plaster: see pp. 69–70, 906–8
WS	Worked stone, followed by number: see pp. 69–70, 906–8
WS 1	Martin Biddle (ed.), <i>Winchester in the Early Middle Ages: An Edition and Discussion of the Winton Domesday</i> , Winchester Studies, 1 (Oxford, 1976)
WS 2	Derek Keene, <i>Survey of Medieval Winchester</i> , 2 vols, Winchester Studies, 2 (Oxford, 1985)
WS 3.i	Francis M. Morris and Martin Biddle, <i>Venta Belgarum: Pre-Historic, Roman Winchester and Post-Roman Winchester</i> , 2 vols, Winchester Studies, 3.i (Oxford, 2023)
WS 3.ii	Giles Clarke, <i>The Roman Cemetery at Lankhills</i> , Winchester Studies, 3.ii (Oxford, 1979)

WS 4.i	Birthe Kjølbjæ-Biddle and Martin Biddle, <i>The Anglo-Saxon Minsters of Winchester</i> , Winchester Studies, 4.i
WS 4.ii	Michael Lapidge, <i>The Cult of St. Swithun</i> , Winchester Studies, 4.ii (Oxford, 2003)
WS 4.iii	Alexander R. Rumble, <i>Property and Piety in Early Medieval Winchester: Documents relating to the Topography of the Anglo-Saxon and Norman City and its Minsters</i> , Winchester Studies, 4.iii (Oxford, 2002). Roman numbers in bold refer to the individual documents published in this volume
WS 5	Patrick Ottaway and Martin Biddle (eds), <i>The Brooks and Other Town Sites of Medieval Winchester</i> , Winchester Studies, 5 (Oxford, in prep.)
WS 6.i	Beatrice Clayre, <i>Winchester Castle: Fortress, Palace, Garrison and County Seat</i> , Winchester Studies, 6.i (Oxford, in prep.)
WS 6.ii	Patrick Ottaway and Martin Biddle (eds), <i>Wolvesey Palace</i> , Winchester Studies, 6.ii (Oxford, in prep.)
WS 7.i	Katherine Barclay, <i>Ceramics</i> , Winchester Studies, 7.i (Oxford, in prep.)
WS 7.ii	Martin Biddle <i>et al.</i> , <i>Object and Economy in Medieval Winchester</i> , in two parts, Winchester Studies, 2 vols, 7.ii (Oxford, 1990). Arabic numbers in bold refer to the objects catalogued in this volume
WS 8	Martin Biddle (ed.), <i>The Winchester Mint and Coins and Related Finds from the Excavations of 1961–71</i> , Winchester Studies, 8 (Oxford, 2012)
WS 9.i	Caroline M. Stuckert (ed.), <i>The People of Early Winchester</i> , Winchester Studies, 9.i (Oxford, 2017)
WS 9.ii	Mark Maltby, <i>The Animals of Early Winchester</i> , Winchester Studies, 9.ii (Oxford, in prep.)
WS 10	Martin Biddle, Jane Renfrew, and Patrick Ottaway (eds), <i>Environment and Agriculture of Early Winchester</i> , Winchester Studies, 10 (Oxford, 2022)
WS 11	Martin Biddle and Derek Keene (eds), <i>Winchester</i> , The Atlas of British Historic Towns, vi, Winchester Studies, 11 (Oxford, 2017)
yd	yard (measurement)
YOMP	Yellow Old Minster Plaster: see pp. 69–70, 906–8
ZAK	<i>Zeitschrift für Schweizerische Archäologie und Kunstgeschichte</i>
ZDPV	<i>Zeitschrift des Deutschen Palästina-Vereins</i>