

Contents

Acknowledgements

ix

Foreword

xi

John Ashurst

1 Introduction

1

Alison Henry

2 The Historical Context

9

Peter Burman and Michael Drury

Introduction

9

The influence of antiquity

10

The break in tradition

13

Re-evaluating tradition

13

The influence of the Modern Movement

23

The continuity of craft practice today

24

International conservation charters and standards

28

Complementary disciplines

28

Guidelines for present and future policy

29

3 Restoration versus Conservation

33

Michael Drury

Restoration

33

Preservation

36

Conservation

38

Case study: Salisbury Cathedral, West Front

49

4 The Role of Archaeology

57

Jerry Sampson

The role of archaeology in stone conservation

58

Preliminary survey

61

Closer inspection

63

Monitoring work in progress

69

| | |
|---|------------|
| 5 Principles and Practice | 75 |
| <i>Nicholas Durnan and Colin Muir</i> | |
| Inspection, analysis and methodology | 75 |
| Repair and conservation | 79 |
| Stone replacement | 85 |
| Conservation records | 87 |
| 6 Sourcing and Selection of Stone for Repair | 89 |
| <i>Ewan Hyslop</i> | |
| Introduction | 89 |
| The decision to replace stone | 89 |
| The choice of stone | 91 |
| Testing of stone | 93 |
| Sourcing of stone from quarries | 96 |
| Conclusion | 98 |
| 7 Consolidation | 101 |
| <i>Clifford Price</i> | |
| Introduction | 101 |
| Historical perspective | 103 |
| Properties and performance requirements | 104 |
| Consolidant types | 105 |
| Application of consolidants | 116 |
| Evaluating the effectiveness of consolidants | 118 |
| When are consolidants used? | 120 |
| The future | 122 |
| 8 Cleaning Techniques | 127 |
| <i>Kyle C. Normandin and Deborah Slaton</i> | |
| Introduction | 127 |
| Causes and identification of soiling | 128 |
| Stone properties and choice of cleaning method | 132 |
| Selection of cleaning techniques for stone | 136 |
| Quality control and the evaluation of façade cleaning | 155 |
| Conclusion | 156 |
| 9 Limestone | 161 |
| <i>Nicholas Durnan</i> | |
| Introduction | 161 |
| Characteristics of limestone | 162 |
| Main types of limestone decay | 163 |
| Techniques for limestone conservation | 166 |
| Inspection, maintenance and re-treatment | 184 |

| | |
|---|------------|
| 10 Sandstone | 191 |
| <i>Colin Muir</i> | |
| Introduction | 191 |
| Sandstone characteristics | 192 |
| Sandstone decay and treatment | 192 |
| Cleaning | 205 |
| Consolidation | 210 |
| Pointing and bedding mortars | 211 |
| Plastic repair | 212 |
| 11 Marble | 217 |
| <i>Jonathan Kemp</i> | |
| Introduction | 217 |
| Marble decay mechanisms | 222 |
| Conservation of marble | 226 |
| 12 Polychrome Stone | 237 |
| <i>Christopher Weeks</i> | |
| Introduction | 237 |
| Monumental polychromy in medieval and Renaissance culture | 237 |
| Polychromy techniques and style | 238 |
| Distribution of polychromed façades in Europe | 243 |
| The contemporary state of preservation of painted stone | 244 |
| Practical issues of conservation | 247 |
| Treatment | 248 |
| Conclusions: future trends | 255 |
| 13 Church Monuments | 263 |
| <i>David Carrington</i> | |
| Introduction | 263 |
| Materials commonly used | 263 |
| The historic building environment | 270 |
| A brief history of monument restoration and conservation | 270 |
| Investigation and analysis | 273 |
| The need for structural interventions | 276 |
| Dealing with damp | 277 |
| Considerations in cleaning monuments | 278 |
| Dismantling, rebuilding and structural repairs | 278 |
| Surface repair and consolidation | 286 |
| Case studies | 287 |

| | |
|--|------------|
| 14 Graveyard Memorials | 299 |
| <i>Chris Daniels</i> | |
| Introduction | 299 |
| Deterioration of graveyard structures | 300 |
| Inspecting, reporting and recording | 306 |
| Working on site | 308 |
| Remedial work | 310 |
| Emergency work to graveyard structures | 322 |
| Maintenance | 324 |
| Conclusion | 325 |
| Appendix | 327 |
| Practical application procedures for putty lime mortar repairs and sheltercoat | |
| Index | 329 |