

Contents

- 1 Introduction 1**
Dr F. G. Bell
- 2 Geology and Foundations 116**
Professor J. L. Knill, (Imperial College, University of London)
- 3 Modern Models for Mechanical Behaviour of Soil 132**
Professor A. N. Schofield, (University of Cambridge)
- 4 Computer Predictions in Difficult Soil Conditions 143**
Dr I. M. Smith, (University of Manchester)
- 5 Foundations on Rock 161**
Dr I.W. Farmer, (University of Newcastle upon Tyne)
- 6 Properties of Mining Wastes with respect to Foundations 175**
Dr R. K. Taylor, (University of Durham)
- 7 Ground Water and Foundations 204**
Dr A. D. M. Penman, (Building Research Establishment, Watford)
- 8 Site Investigation in Difficult Ground 226**
T. R. M. Wakeling, (Foundation Engineering Ltd, London)
- 9 *In Situ* Testing and Geophysical Surveying 233**
Dr F. G. Bell
- 10 Foundation Instrumentation 281**
Dr C. J. F. P. Jones, (West Yorkshire Metropolitan County Council, Wakefield)
- 11 Settlement and Foundations 293**
Dr D. J. Petley, (University of Warwick) and Dr F. G. Bell

- 12 Subsidence due to Mining Operations 322**
Dr F. G. Bell
- 13 Foundations and Earth Movements 363**
R.G.T. Lane, (Sir Alexander Gibb and Partners, Reading)
and Dr F. G. Bell
- 14 Ground Treatment 385**
P. F. F. Lancaster-Jones, (Cementation Ground Engineer Ltd, Rickmansworth)
and E. McKeand, (I.C.I. Fibres, Harrogate) and Dr F. G. Bell
- 15 The Stability of Slopes in Difficult Ground 427**
Professor W. Fisher Cassie C.B.E., (Emeritus Professor, University of Newcastle
upon Tyne)
- 16 Appraisal of Stability Conditions in Rock Slopes 449**
Dr L.R. Richards, G.M.M. Leg, R.A. Whittle, (Golder Hoek and Associates)
- 17 Open Excavation 513**
Dr F. G. Bell
- 18 The Design of Foundation Structures for Difficult Ground 539**
M.J. Tomlinson, (Consulting Engineer, Burton-on-Stather, S. Humberside)
- 19 Piling 552**
D. J. Palmer, (Lind Piling Ltd, Wallington)
- 20 Case Histories of Failures 580**
E. H. Steger, (Pell Frischmann & Partners, London)
- Index 593**