Preface to the second edition

Part 2 of BS 5628 was published in 1985 and relates to reinforced and prestressed masonry which is now finding wider application in practice. Coverage of the second edition of this book has therefore been extended to include consideration of the principles and application of this form of construction.

Edinburgh, April 1987

Preface to the first edition

The structural use of brick masonry has to some extent been hampered by its long history as a craft based material and some years ago its disappearance as a structural material was being predicted. The fact that this has not happened is a result of the inherent advantages of brickwork and the design of brick masonry structures has shown steady development, based on the results of continuing research in many countries. Nevertheless, structural brickwork is not used as widely as it could be and one reason for this lies in the fact that design in this medium is not taught in many engineering schools alongside steel and concrete. To help to improve this situation, the authors have written this book especially for students in university and polytechnic courses in structural engineering and for young graduates preparing for professional examination in structural design.

The text attempts to explain the basic principles of brickwork design, the essential properties of the materials used, the design of various structural elements and the procedure in carrying out the design of a complete building. In practice, the basic data and methodology for structural design in a given material is contained in a code of practice and in illustrating design procedures it is necessary to relate these to a particular document of this kind. In the present case the standard referred to, and discussed in some detail, is the British BS 5628 Part 1, which was first published in 1978. This code is based on limit state principles which have been familiar to many designers through their application to reinforced concrete design but which are summarised in the text.

No attempt has been made in this introductory book to give extensive lists of references but a short list of material for further study is included which will permit the reader to follow up any particular topic in greater depth.

Preparation of this book has been based on a study of the work of a large number of research workers and practising engineers to whom the