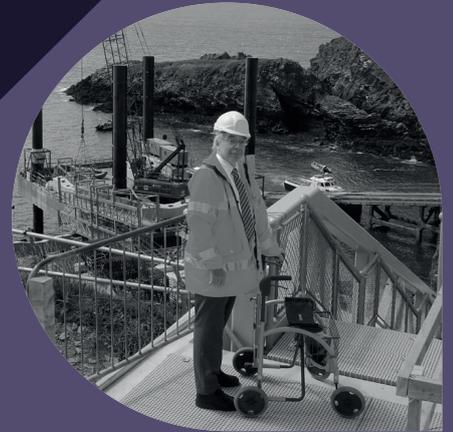


Inclusive design for structural engineers



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Foreword

At some time in our lives, all of us will require and use accessibility adaptations in relation to the built environment. This may include our time as a baby and toddler, and as we move into older age, through illness or disability.

It is morally wrong that the design of our buildings and infrastructure should be inaccessible to, or have reduced accessibility to anyone, regardless of personal circumstance or identity. Design to facilitate accessibility and inclusion involves negligible cost if considered at design stage so there is no excuse for not including it as a matter of course.

I have heard arguments that accessibility and inclusive design is solely the purview of architects, but all members of the design team have influence. I am delighted that this book shows us how we should use that influence.



John Nolan CBE
Past-President of The Institution of Structural Engineers and Chairman of Nolan Associates

Introduction

In a world where many buildings and spaces exclude a significant proportion of our population, collective action is required to remove the barriers that hinder access, present disadvantages for or discriminate against people with protected characteristics such as age, disability, gender, neurodiversity, sex, race, ethnicity, religion, pregnancy and more, so that everyone feels safe, welcomed and valued. Inclusive design therefore needs to be at the heart of all stages of the planning and construction process, and is the responsibility of all built environment professionals.

This book offers guidance on how structural engineers can make a positive contribution to the inclusive design process. Part 1 achieves this by advocating the use of the *Inclusive Design Overlay to the RIBA Plan of Work*,¹ and drawing on a number of small case studies. Part 2 focuses on eight principal built environment sectors, drawing on more in-depth case studies to demonstrate the benefits of incorporating inclusive design principles into structural design projects from the outset.

As one of the first specialist consultants involved in a building project, structural engineers have a unique opportunity to influence the design of the built environment, ensuring the safety of the public realm, as well as how people experience buildings and spaces. By considering inclusive design from the start, and challenging the wider team at each stage of design and construction, they can help to create buildings and spaces that are equitable for everyone.

Inclusive design does not have to add significant cost to a project. If considered from the outset it can provide a positive return on investment through increased footfall and revenue for businesses, along with the ability to recruit and retain employees from a broad and more diverse talent pool.

All too often budgets for projects are set to meet minimum regulatory standards, and not best practice or legislative responsibilities. While local building regulations and international best practice documents are important ‘guard rails’, they only provide a baseline, and in many cases these standards do not deliver buildings and spaces that are inclusive for everyone. As an example, the statutory guidance on access in international building codes focuses mainly on providing access for wheelchairs. However, in the UK, only 8% of disabled people are wheelchair users.² Structural engineers therefore need to think about what decisions they can make to design buildings that suit not only wheelchair users, but also the 92% of people with other physical, sensory or cognitive disabilities, such as neurodiversity.

As this book outlines, truly inclusive buildings and spaces can be delivered if design teams and specialist consultants think beyond minimum standards and engage and involve building users — stakeholders, disability groups and other under-represented groups — in a participatory, co-design approach.

Designing more inclusive buildings and spaces not only produces appealing environments for all; it is also more sustainable, avoiding the need for expensive and environmentally damaging retrofits and adaptations at a later date.

The book is packed full of information that structural engineers can put into practice to positively impact the lives of building users now and in the future.

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