

two rival programs or operating systems updating each other in parallel – but where we are never quite sure which is the latest or best version. It is not always clear how to reconcile the different points of view; whether to decommission some of the conventional approaches, and, if so, which ones; or to replace them with something new, and, if so, what?

To tackle these issues, this book has looked behind and beyond immediate policy and design conventions, revisiting a range of first principles, to inform a conceptual framework that may be used to underpin today's streets-oriented urban design agenda.

Although in the first place oriented to supporting urban design aspirations, the research for the book has required a particular appreciation of some of the 'nuts and bolts' of transport planning and engineering, in order to get to the heart of some of the problems of urban layout, since urban structure in its physical sense is significantly influenced by the structure of movement and access.

In effect, good urban structure is necessary to create good urbanism – just as good engineering structure is necessary to create good architecture. However, although structure is necessary, it is not sufficient. Good engineering cannot rescue bad architecture. Engineering supplies, at least, some of the most basic functional requirements of a building – that it stands up – even if the rooms don't properly function for human occupation and use. Similarly, a good urban structure supplied by a functional transport system cannot on its own create good urbanism. Modern urban layouts have often been designed in the most limited functional sense – a certain number of housing units connected to the right kinds of access road, plugged into a superstructure of main roads. But the wider functions of urban 'placemaking' have sometimes suffered; the result has not been the most attractive places for human occupation and use.

The challenge, then, is to rethink how transport may better serve urban design; how urban layout may be improved towards better 'placemaking' without compromising the basic functionality of circulation and access. This implies adapting structures to be more sympathetic to urban design ends, rather than simply throwing away the engineering altogether.

This book does not attempt to address all aspects of transport and urban design, but through a focus on streets and patterns and how these are tied up with urban structure, it is hoped that it can contribute to the creation of better urban places, that are 'functional' in the widest sense.

The creation of this book has, in a sense, encompassed a series of journeys. The research has involved a chronological journey going back 40 years to some of the seminal works of the 1960s, which in many