URBANISM

Fundamentals and Prospects

URBANISM

Fundamentals and Prospects

Han Meyer MaartenJan Hoekstra John Westrik

Contents

Introduction 6

Part I

The design of the urban ground plan 10

- 1 The urban ground plan as the city's 'musical score' 13
- 2 The urban ground plan and society 19
- 3 The urban ground plan and the territory 43
- 4 The composition of the urban ground plan 61
- 5 A typology of urban ground plans 73
 The urban ground plan as an urbanised landscape 74
 The orthogonal urban ground plan 82
 The monumental urban ground plan 94
 The picturesque and scenic urban ground plans 98
 The modern, functional urban ground plan 104
 The layered or composite urban ground plan 112

Intermezzos ı and ıı

A new urban ground plan for Kop van Zuid in Rotterdam and Westelijke Tuinsteden in Amsterdam 116

- I Kop van Zuid in Rotterdam 119
- II Westelijke Tuinsteden in Amsterdam 131

Part II

The design of public space 142

- 6 The design task for public space 145
- 7 **The systems of public space** 163 The urban green system 164

The urban water system 170

The urban traffic system 176

The systems of cables and pipelines 182

- 8 Layout and material use in public space 193
- 9 A typology of public space 207

The street 210

The square and the place 216

The lane 222

The boulevard and the avenue 228

The passage 234

The gracht canal 240

The singel canal 246

The dyke 252

The park 258

The common field 264

The urban motorway 270

Intermezzos III and IV

Design of public space in the centre of

The Hague and in Rotterdam West 276

- III The Hague De Kern Gezond 279
- IV Rotterdam West 289

Part III

Building regulations 302

- 10 Urban design and building regulations 305
- Parcelling and building regulations 311
 Parcelling and building 314
 Density 320
 The transition from public to private 328
 Streetscape and cityscape 332
- 12 Tools for building regulations 341
- 13 From rural settlement to city centre: eight exercises in the grammar of the urban fabric 361

Rural settlements: Gees and De Rijp 362 Suburban residential districts: Vreewijk (Rotterdam) and Ypenburg (The Hague) 368 Urban residential districts: Heemraadssingel (Rotterdam) and Vaillantlaan (The Hague) 374 City centres: Oude Boteringestraat (Groningen) and Weena (Rotterdam) 380

Intermezzos V and VI
Building regulations in Leidsche Rijn
(Utrecht) and the railway zone in Delft 386

- v Leidsche Rijn (Utrecht) 389
- VI Railway zone (Delft) 399

Part IV

The programme and utilisation of the city 408

- 14 Changes in cities and society 411
- 15 Spatial tasks in the urban landscape of the twenty-first century 431
 Territory: towards the sustainable treatment of nature and the environment 434
 Networks: mobility and accessibility 440
 Urban patterns: diversity and mixing of functions 446
 Designing regional coherence 466
- 16 Urban design and research in the twentyfirst century 475

Notes 491 Sources of illustrations 496 Bibliography 498 Index 504 Acknowledgements 509 Credits 511

Introduction

Cities are regularly the locus of major changes in society. Those changes can be economic, social, cultural or political in nature. Cities have even been deemed a prerequisite for development and innovation in a society. For that evolution to become possible, the cities themselves may need to change. Sometimes that may involve large urban extensions; sometimes it may mean changes to the existing city, with radical transformations of areas that are run down or no longer function properly. But many changes can take place without any modifications necessarily being required to the physical structure of the city.

At the same time, there is also considerable con-

At the same time, there is also considerable continuity in cities: anyone returning to a city after an absence of many years will still recognise much of it and be able to find their way around despite the many economic, social and physical changes. The continuity in spatial structure, with recognisable spatial forms and patterns, is an important aspect for many people that helps them get to know, understand and become attached to the city.

So cities are simultaneously sites of change and of continuity. Urbanism is the discipline that has the task of creating the spatial conditions for these two apparently contradictory aspects. This book gives an overview of the principles behind urbanism, the discipline's core elements and its body of knowledge. In addition, the relevance of this discipline's core elements is examined for the current and future developments affecting cities: are the core elements of urbanism still relevant from the perspective of developments in the twenty-first century? The book is largely based on developments in the practice of urbanism in the Netherlands. That does not mean its relevance is limited to the Netherlands. Over the centuries, urbanism in the Netherlands has been open to foreign influences. Conversely, Dutch urbanism has played a key role in the international debate about the future of cities. Such a debate is ongoing at the moment and we hope this book will contribute to that debate. Urbanism has a long tradition in the Netherlands. This reflects two rather unusual factors. Firstly there is the fact that the Netherlands consists largely of a marshy river delta and not all of the land is suitable for building on without further

measures. From the start, the boggy terrain could only be claimed for agriculture and urban development if the people wishing to settle there cooperated closely, coordinated matters and made carefully considered choices. As early as the late Middle Ages, a planned approach was being taken to the development and layout of urban areas and farmland in the Netherlands. The rational arrangement of land reclamation and major urban extensions such as Amsterdam's ring of canals garnered great admiration internationally at the time. Surveying and civil engineering were the main instruments of the first urban planners avant la lettre, and these disciplines formed an important basis for the professionalisation of urbanism in the twentieth century. The second factor prompting the increasing professionalism of urbanism is the relatively extreme deterioration of conditions in Dutch cities in the nineteenth century. The Netherlands may have been a wealthy country, but most of that wealth was in the form of investments overseas. Dutch merchants who lived off their investments became proverbial for their extreme frugalness and apathy, personified by the fictional character Jan Salie. While neighbouring countries invested heavily in the new industries, the Dutch economy lagged far behind. Despite this, a series of successive crises in agriculture drove migration from the countryside to the towns and cities. But no investments were made in the cities either, so the result was an explosive growth in hovels and slums and a number of serious cholera epidemics. In the nineteenth century, the Netherlands was a 'kingdom full of slums'; it had the highest proportion of the population living in slum neighbourhoods in all of Europe.² Eventually, a movement emerged at the end of the nineteenth century and start of the twentieth century in which socially-minded politicians, pugnacious trade unionists and enlightened businessmen took the lead in making up for the lost economic and social ground. A belief took hold that these two aspects were inextricably linked: economic renewal was necessary, but could only be achieved if the social conditions of the urban working class were improved, and vice versa.

This led to a significant increase in urbanism activity in the twentieth century. Urban planning

became a question of emancipation and progress for the nation as a whole. The quality of working-class housing, the quality of the city's appearance and the distribution of functional programmes across the city all became part of the urban planner's remit. Berlage's plan for Amsterdam-Zuid (1915) had a revolutionary role because it brought about a close association between urban planning and architecture, creating an urban look that symbolised social progress. The General Expansion Plan for Amsterdam (Algemeen Uitbreidingsplan or 'AUP', 1932), drawn up by Cornelis van Eesteren and Theo van Lohuizen, went one step further and was also a pioneering example of functional planning. Both plans are considered to be historic landmarks in Dutch urbanism, with an influence on the development of the discipline that extended far beyond the Netherlands' borders and was not limited to the interbellum decades. The cohesive combination of architecture and urban planning, and the tight planning of the functional urban setup became the essential elements in twentiethcentury Dutch urban planning, elements that brought it international acclaim.

In the 1960s, the close relationship between functional planning and urban design was even formalised in Dutch law. The 1966 Spatial Planning Act (Wet op de ruimtelijke ordening) made the Netherlands a model for planners, designers and policymakers around the world. The philosophy and designs behind these celebrated plans and the Spatial Planning Act have had a significant influence on the theory and practice of urbanism throughout the twentieth century. It is now hard to imagine how things could ever be different. Various authors have described Dutch urbanism and spatial planning during this period as a success and a shining example.3 However, doubts started to emerge at the end of the twentieth century. The genesis and success of the two elements (the emphasis on the cohesive combination of architecture and urbanism and on a functional basis for the spatial design), with Plan Zuid, the General Expansion Plan and the Spatial Planning Act as unparalleled high points, have to be seen in the context of society at that time. The plans and their legal status are evidence not just of a particular interpretation of urbanism as a

discipline but also of a specific social situation in which that interpretation could be warmly received and embedded.

It is that social situation that has changed beyond recognition. Both Plan Zuid and the General Expansion Plan were expressions of a basic consensus between the commissioning parties and the public sector about what shape the city should take. However, recent decades have seen big shifts in the relationship between the private and public sectors. Much has changed, not just in a formal sense – we only have to think of the privatisation of part of the public sector, 'hands-off' government and the increasing role of specific parties such as project developers in planning processes - but also in terms of the culture and the objectives that different parties have: there is no longer the high degree of (apparent) consensus that existed in the mid-twentieth century. The trend towards greater individualism and the urban programmes that follow one another at an ever faster rate have been a major factor in this change process. While 'the market' (and consequently its capriciousness) is becoming more and more important for private commissioning parties, it is important for the public sector to continue to see urban quality as a long-term affair and not lose sight of the coherence with the bigger picture. These developments meant that the Dutch urbanism and spatial planning practice of the post-war decades could no longer be continued without running into problems. By the dawn of the new millennium, the 'Dutch planning doctrine' was in a state of confusion.4 According to Bertrand Russell, the essence of

According to Bertrand Russell, the essence of Western culture is an uncomfortable combination of social cohesion and individual freedom.⁵ We are constantly searching for a balance between the two. There comes a point when that balance is achieved, after which it remains in place for a short while, only to be lost until a new balance is found.

That balance is precisely the concern of urbanism as a discipline. The balance that was achieved in the early and mid-twentieth century no longer exists, yet we still work with the views, concepts and instruments that typified the equilibrium in that period. The discipline of urbanism faces the task of finding a new balance and fleshing it out

with the aid of new concepts and instruments. In the twenty-first century, urbanism is facing challenges that are new and different in nature to those of previous periods. The economic situation has changed dramatically and will continue to change. The digital revolution and associated globalisation coupled with further robotisation are generating completely new demands and opportunities for the spatial organisation of cities. The same applies for the increasingly urgent need to consider sustainability, climate adaptation, the energy transition and the closed-cycle (or circular) economy.

In short, once again the question is whether the principles of urbanism developed so far can play a meaningful role from the perspective of the twenty-first century. Much of the methodology and toolkit of twentieth-century urbanism seems 'worn out'. Does this mean that a completely new methodology and a completely new set of tools need to be developed? To what extent can the discipline build on its founding principles, which were largely developed prior to the twentieth century and could therefore perhaps be relevant again for the issues of today and tomorrow? The need for reflection about the discipline, with a view to ensuring it is fully prepared for the future, did not come out of the blue, nor is it of purely academic interest. This project, which started in 1998, is the result of collaboration between the Department of Urbanism, part of the Faculty of Architecture at Delft University of Technology, and the Van Eesteren-Fluck & Van Lohuizen (EFL) Foundation. This led to a longterm study, a series of debates and publications, of which this book is a cohesive and condensed account.

How the book is organised

The central theme of this book is the distinction between the public and private domains as the foundation for urbanism. This distinction is essential in our modern, bourgeois society. Urbanism is concerned with the spatial dimensions of this distinction. As an activity, its main goal is to promote the public interest while it also has to create the optimum conditions for individual citizens so that they can make the

best use of their private land. In its essence, an urban design is simply the subdivision of an area into land for public use and plots for private use. The product of this subdivision is the urban ground plan. This essence of the discipline of urbanism is explained in Part 1 of this book. This first part, in particular chapters 2 and 3, deals with the changing nature of the relationship between public and private interests, which led to new challenges in certain periods that demanded new solutions. At the same time, cities benefit from a high degree of continuity in the spatial structure across time. Urbanism has the task of designing 'strong' ground plans that can accommodate social change.

Parts II and III deal with the two separate elements of the ground plan: public space and private space. Regarding public space, the focus is on the design of that public space as the key aspect of the urban ground plan in which public interests are at stake. In the case of private space, the design and layout of the plots and the building structures are primarily a matter for the private landowners; the urbanist's task is to formulate certain rules that safeguard public interests.

Part IV of this book addresses the question of how the driving forces of economic developments and demographic changes have yielded methods and concepts for controlling and recording the use of land in the city (i.e. the 'spatio-functional organisation'). This final part also considers the extent to which the core elements of urbanism, as set out in the first three parts, are still relevant for the challenges of the twenty-first century. Some say that urbanisation is now on such a scale and so complex that the guiding principles of urbanism are no longer relevant and that any attempts to design the spatial layout of cities are futile and doomed to failure. It is also claimed that we should have more confidence in the ability of the market or private initiatives to come up with their own solutions.

In this book, we want to investigate whether the challenges of the twenty-first century require a new approach for upholding public interests and what consequences that has for the design of urban ground plans, for the design of public spaces and for the spatio-functional organisation of the city. The four parts of this book are interspersed with descriptions of urban designs that have been put into practice, each providing a concrete illustration of the themes of the preceding part.

Part I The design of the urban ground plan

The urban ground plan as the city's 'musical score' 13

The intransigent nature of the boundary between public and private 14
The cultural appreciation of existing urban structures 14
Landscape features, geomorphological structures and hydraulic engineering works 14
The urban fabric 17

The urban ground plan and society 19

The changing meaning of land during four historical periods 19 The precursor to the modern city: from a feudal to a bourgeois society 19 The emergence of the modern city: regulating land ownership and public works 22 Searching for a balance between economic development, public health and aesthetics 24 Land development: costs and benefits 26 Urbanism as a new discipline involving design and technology 26 The city as a Modernist ideal: blurring the relationship between street, plot and building 29 Plan Zuid: building per island rather than per plot 31 The idea of the modern city 33 Designing the twenty-first century city: the return of plots, islands and streets 36

The urban ground plan and the territory $_{43}$

The longue durée of the landscape 43

The layered urban landscape 45

Hydraulic engineering infrastructure: drainage, protection and connection 49

Increasing vulnerability and exhaustion of the urban territory 53

Using the ground's resources 54

Towards sustainable use of land, water and air 55

New assignments, new opportunities 56

The composition of the urban ground plan 61

Cohesion and diversity; primary structure and basic components 61

Structure and dimensions of the private land: plots and islands 61

Structure and dimensions of the public land: networks 67

Influence of the ground and the surroundings 67

Planning area and the ground 68

Planning area and surroundings 68

${f 5}$ **A** typology of urban ground plans $_{73}$

The urban ground plan as an urbanised landscape 74

The orthogonal urban ground plan 82 Speed and flexibility 93

The monumental urban ground plan 94
Typical formal elements 94

The picturesque and scenic urban ground plans 98

The picturesque urban ground plan 98

The scenic urban ground plan 101

The modern, functional urban ground plan 104

Dutch Modernism I: a new city centre 107

Dutch Modernism II: the housing unit 107

Too much public space 107

Insufficiently adaptive 111

The layered or composite urban ground plan 112

Intermezzos I and II A new urban ground plan for Kop van Zuid in Rotterdam and Westelijke Tuinsteden in Amsterdam 116

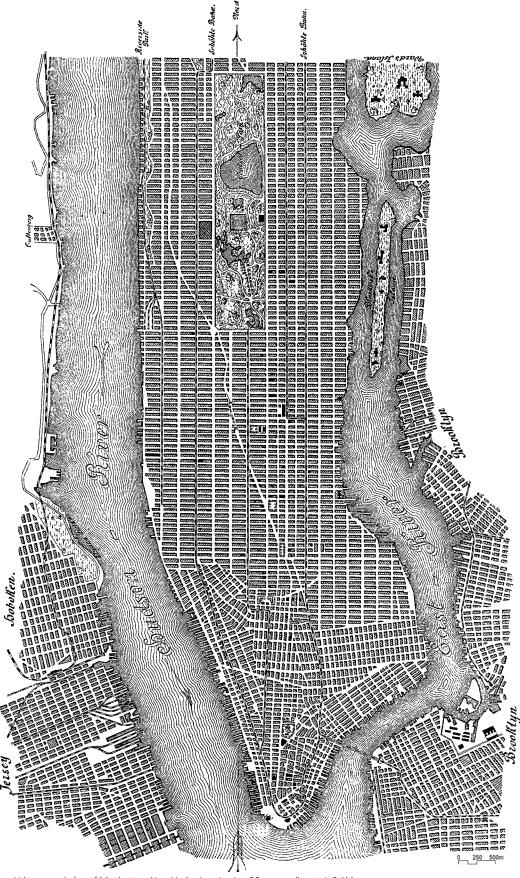
П

Kop van Zuid in Rotterdam 119

From a run-down port area to a new city centre 119
Ambitions, quality and programme 121
Spatial structure; design of the urban ground plan 122
Use of materials in the public space 122
Kop van Zuid, a long-term project 126

П

Westelijke Tuinsteden in Amsterdam 131
AUP versus Westelijke Tuinsteden 131
Transformation of the Westelijke Tuinsteden 137
A first assessment after ten years of renewal 138
Two examples of renewal 238
Grass and concrete 141



1.1 Urban groud plan of Manhattan, New York, situation in 1860, according to J. Stübben.