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Urban Architecture - Taking Care Rather than Preserving

New Approaches to Urban Architecture

In Denmark it used to be mainly individual buildings of particular architectural or historical value - and usually more than 100 years old - that were considered worthy of preservation and that were, in some cases, listed.

In Denmark today, we look not only at individual buildings but, also at relations and totalities, because a whole group of buildings, for example a street, can have great urban architectural qualities even though no single building is in itself valuable or old. The totality may have an identity or some feature that renders it invaluable.

Urban areas with particular urban architectural qualities are, for example, historical town centres - where these have not been totally changed by rapid and haphazard development. However, special qualities are often also to be found in the so-called "grey areas" - urban areas between a town's centre and the residential areas on its outskirts. These grey areas are not necessarily old - some of them have not even passed their first century. Nor do they necessarily contain any buildings that are worthy of preservation in the traditional sense. However, the grey areas can possess a wholeness and coherence that are perceived as an urban architectural quality. These urban areas have often been spared the depredations of development. In more than one sense, they have been overlooked. Now, however, we are beginning to open our eyes to their qualities.

The listing and preservation of individual buildings does not present much of a problem because we have a substantial body of experience on which to base this work. We have very little experience, on the other hand, of dealing with more anonymous urban areas whose identity we wish to preserve, but without obstructing their development.

Therefore, in 1988, the Danish Building Research Institute (SBI) set up a research project with the following objectives:

- firstly, to draw attention to urban architecture and its significance to our perception of towns
- secondly, to explain how to map, register and analyse urban architectural characteristics and how to draw up guidelines for new building and alterations with a view to preserving and developing the urban architecture.

In the following the general content of the research project is presented:

Firstly, reference is made to previous theoretical works concerning urban architecture. Some approaches to the understanding of urban architecture are presented: Physical

form, perception and significance. And the urban architectural totality - the object of the project - is explained as a combination of general and particular features. Then, in a number of sections, the general method with its principal steps is presented: The historical mapping, the registration, the analysis and finally the establishment of guidelines. The latter section contains concrete examples from a Danish town.

Theoretical Background

The project deals with general urban areas, where continuous development must be possible, and the project has a practical aim. This is evident by the theoretical works, which have been of importance. The relevant literature - which is mentioned in the following - includes works about the criticism of the social consequences of urban change, works about theories and methods concerning our daily use and perception of cities, and works about the practical use of the acquired knowledge.

From about 1960, and with increased force in the seventies and the eighties, criticism of the rapid and comprehensive transformation of our cities was brought forward. Among architects and planners criticism was directed towards Modernism - its urban design as well as the increasingly abstract urban theory behind it.

Modernism had led to an international and uniform architecture which typically represented breaks with existing urban architecture - often unfortunate breaks. Modernism had legitimated buildings which ignored the identity of place, the "Genius Loci" as described by Christian Norberg-Schulz in "Genius Loci - Towards a Phenomenology of Architecture" (1984) and Edward Relph in "Place and Placelessness" (1976). A result of this was an increased interest in the 1980s for the everyday life of the town and the urban spaces in which it takes place. It was realized that there is an active and mutual relationship between people and buildings. And consequently the emphasis shifted from grand *a priori* theories to theoretical pluralism and to historical and empirical analyses, case studies, and the development of practical methods, e.g. the use of guidelines.

The criticism was aimed at social problems as well as the visual impoverishment of the cities. Thus the American, Jane Jacobs wrote about the rediscovery of the street as important for urban qualities in "The Life and Death of Great American Cities", (1959).

About the same time the Englishman, Gordon Cullen in "Townscape" (1960) depicted the perception of urban areas in spatial sequences. And the American, Kevin Lynch demonstrated in "The Image of the City" (1960) a method to uncover the significance, which the residents in their daily life attach to elements of the city.

Criticism of modernistic urban design also led to development of new methods in the topological studies of the city. The Italian, Aldo Rossi analysed in "The Architecture of the City" (1966) the town as a structural unit made up of typical parts, namely the monument, the square, the street and the block. And the Luxembourg architect Rob Krier created a special urban space topology, published in "Urban space" (1979).

In Scandinavia, Jan Gehl in "Life Between Buildings" (Danish version 1971) and Finn Werne in "Den osynliga arkitekturen" (The invisible architecture, 1987) pointed out the significance of every day architecture for the residents of the city. K.Selberg og A. Sødal published a research report "Byforming" (Shaping the urban form, 1985), in which they

called for the development of new tools for the 3-dimensional planning of urban renewal; they presented European examples of analytical methods and approaches as well as guidelines for urban design.

Thus, at the start of SBI's project in 1988, the theoretical debate was characterized by openness, and there was a great interest for the developing of practical methods for taking care of urban architecture.

It was the German, Michael Trieb, author of "Stadtgestaltung. Theorie und Praxis" (Urban form. Theory and practice, 1977), who particularly inspired the research project of SBI. As a researcher at Stuttgart University, Trieb has worked theoretically with urban architecture, and as a consultant associated with the planning office "Stadtbau Atelier", he has developed a practical method, which includes urban architecture in planning.

Trieb's method combines the works of Cullen and Lynch, but it adds the historical dimension. In other words, Trieb adds historical *significance* to the *perception* of the *physical form*, which is the main concern of Cullen and Lynch. In short Trieb's method pinpoints features of the urban form at all levels as they are perceived, e.g. the silhouette of the town, urban spaces and building details. On this basis guidelines are worked out in order to preserve features of special historical and cultural significance.

Trieb's method has its strength and at the same time its weakness in its orientation towards practice. The method has been put to practical use and found valid in a number of German towns. On the other hand, as these are towns with a pronounced historical heritage, the method in its practical use tends to lead to a conservative and static concept of urban architecture.

Urban architecture, however, is a matter of dynamic relations just as much as of specific features. Trieb writes about this himself: "...timeless urban design principles - such as synthesis of unity and variety, balance between continuity and change or 'play' with types and metamorphoses - are representing a large and undiscovered field of knowledge in urban design" ("Urban Design in Practice", 1985).

As mentioned, SBI's project is particularly inspired by Trieb's work, and thus also by the works of Cullen and Lynch. But the emphasis in the approach of SBI's project was to develop a practical method which, firstly, is suited for Danish towns in continuous development, secondly involves the general public, and thirdly invites voluntary action and negotiation rather than legislation and control.

Physical Form Perception and Significance

In the booming years of the sixties and the beginning of the seventies in Denmark, quantitative considerations concerning function and economy prevailed in decision-making about changes to central urban areas. That may still be the case today, but recently, we discern a growing understanding and thus appreciation of the special qualities or splendour of historical urban districts.

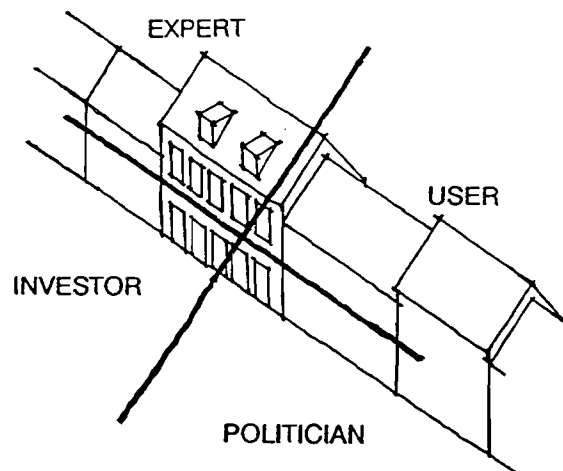


Figure 1. Today there is a common interest in urban architecture and urban identity among experts, politicians, investors and the public, although the motivations for the interest vary.

The growing awareness of urban architectural qualities is not limited to a town's physical form, but extends to the human activities taking place in it and its meaning, or significance (Relph, 1976).

On the one hand, towns are man-made but, on the other, they have an impact on people. They influence how we use and perceive them and the significance we attach to them. This continuous interaction between man and his physical environment is characteristic for the development of urban architecture.

Every town is shaped through time by changing needs, technical possibilities, prevailing values, architecture, styles and many other factors. The way we perceive a town's spaces and form thus depends on a very complex array of factors.

When revisiting old urban areas we recognize them because they have their own, individual character. We can, therefore, orient ourselves in them, and gain an understanding of their historical significance, from the traces of buildings from earlier times and activities. With their immense variation, streets and buildings can offer a wealth of experiences - without losing their unity.

An analysis of urban architecture must thus not only pinpoint the characteristic urban architectural features by their physical form, but also describe how these features are perceived and explain their special significance.

The *physical form* can be measured and weighed. It can be mapped by means of scale drawings or models. The *perception* of the physical form can be described visually - for example, by means of photographs, video-films or drawn perspectives. The *significance* of the physical form can be manifold - in SBI's research, we have

concentrated on the culture-historical significance, which generally can be described in words.

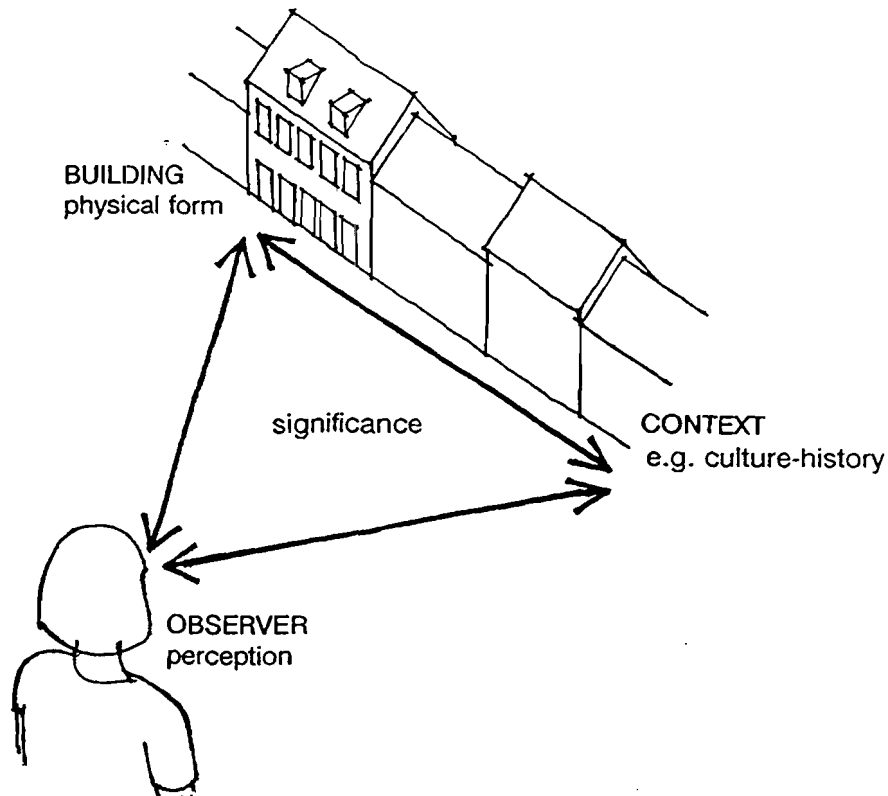


Figure 2. An analysis of urban architecture must not only pinpoint the characteristic urban architectural features by their physical form, but also describe how these features are perceived and explain their special significance.

Parts and the Whole

In towns, totalities and parts form a complex system. When we look at an urban picture we treat each building as part of a whole. Each building is in itself a whole, but it may be part of a row of buildings that is also perceived as a whole. The row of buildings can in turn be part of a street space that is also perceived as a whole. And, lastly, the street can be part of a large urban area with a specific identity (Rasmussen, 1979). In this way, a building without any particular architectural value can form part of a coherent whole, that is of urban architectural value.

The perception of an *urban architectural totality* can arise from a combination of general and special characteristics. For example, a town's skyline can be an urban architectural totality, made up of roofs at the same height, which are the general

characterizing feature, and individual towers, spires or other tall buildings, which are the special feature, since they represent a break in the general picture. Similarly, a row of facades can constitute a totality consisting of buildings whose horizontal lines are the general characterizing feature, while a single gable building in the row constitutes a vertical, special feature.

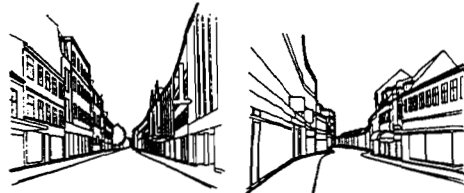
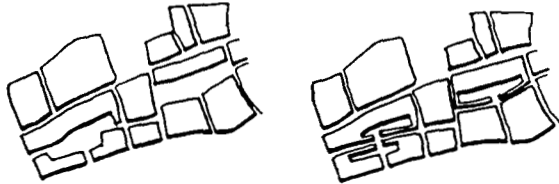
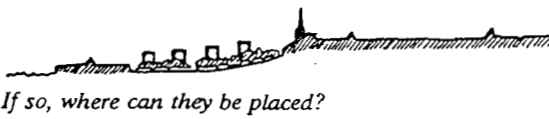
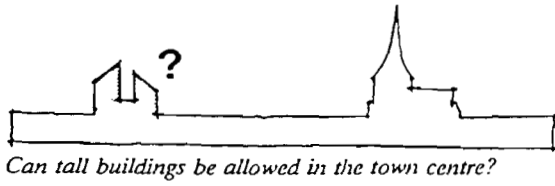
Urban architectural coherence can be due to a general urban architectural characteristic. For example, all the building facades in an otherwise varied street sequence may have approximately the same relationship between height and width, or the roofs may have approximately the same pitch, or different buildings may have the same type of entrance.

Lastly, a *break in the general urban architecture* can result from a special urban architectural feature, for example a building or part of a building whose height or design breaks with its surroundings and precisely by that helps to characterize the totality.

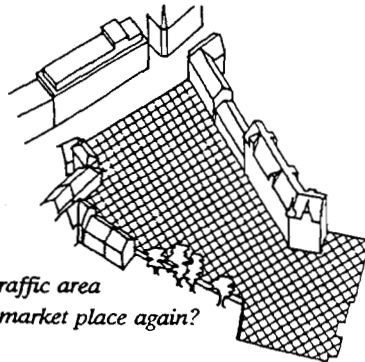
A totality is thus not the average of differences but a changeable unit - made up of general characteristics and special features, of coherence and breaks. Therefore, the aim of preservation and development of totalities and coherence is not to preserve the individual parts - by preserving the buildings, for example; nor is it to find a norm for the design of new infilling buildings. The task is, rather, to analyse *urban architectural relations* - totalities, coherence, and breaks. These relations are dynamic, i.e. they have been and they still are under constant change.

Furthermore, towns differ. Each town or district of a town has its own peculiarities. Something that is commonplace and unheeded in one country or town can be a distinctive feature of another country or town and perhaps found worthy of preservation.

In the final analysis it is a cultural and political question, which features are pointed out and how they are evaluated. This will vary from country to country and from town to town.



How can the special character of streets be preserved and strengthened?



How can a large traffic area become a market place again?



How should contemporary buildings be fitted into a row of old buildings?

Figure 3. These questions are being asked all over Denmark. There are no standard answers, but the special character of the individual towns can be preserved and developed by drawing up local guidelines for new buildings and alterations.

The General Method

The research project of SBI aims at everyday architecture. By this is meant urban areas with an identity, which is well worth preserving, but not necessarily historically exceptional or worthy of listing. Hereby the situation of the Danish project is different from that of Trieb's history-oriented project - not only as regards the physical form of the town but also as regards its cultural and political context.

In the well-preserved German towns from the Middle Ages, with which Trieb has mostly worked, the main goal may be to preserve the historical character, ranging from the urban structure to details of the single building. Guidelines for in-fill in these towns tend to become preserving and detailed by nature.

Preservation of the historical character as the main goal is expressed in Trieb's method: 1. Historical analysis of urban architecture (the town yesterday), 2. Goal formulation for future urban architecture (the town tomorrow), 3. analysis of urban architecture (the town today) and 4. design of future urban architecture (the town tomorrow). Please note that the goal formulation is based on the historical analysis and proceeds the analysis of the existing urban architecture.

However, in the Danish urban areas, characterized by constant change and development through history, it must be possible to continue this change and development. Therefore guidelines, aiming at preserving and developing the identity of an urban area, must indeed be precise - but they should only aim at features, which are important to the totality. And the guidelines should be managed in a flexible way, with possibilities for sound interpretation and for exceptions.

These differences are expressed in the method as well as in its application. In a Danish context the method is as follows:

1. Firstly, the historical development of the urban architectural characteristics is mapped (the town yesterday).
2. Then, the existing urban architectural characteristics are registered (the town today).
3. Next, the results of the mapping and registration are used as the basis for an analysis of the urban architecture.

This establishes the basis for planning: a collection of empirical data in the form of written material, maps, and registers.

4. Then, the goals are set for future urban architecture, duly weighed against other planning objectives (e.g. traffic and business interests).
5. Next, decisions are made on guidelines for the urban architecture (the town tomorrow).
6. Lastly, the local municipality deals with building applications etc. in accordance with the guidelines. As time passes, the guidelines are revised after repetition of the whole or parts of the process described.

In practice a preliminary registration is carried out in order to get an early notion of general or particular features which the historical mapping must explain.

The first steps in the method, as presented here, the historical mapping, the registration and the analysis are undertaken by professionals: Historians, planners, architects and others.

The fourth and the fifth steps, goal formulation and decision, are taken by politicians with the assistance of professionals. In these steps the public will naturally be included.

The sixth and last step, securing that the guidelines are respected, is taken by administrators, likewise with the assistance from professionals.

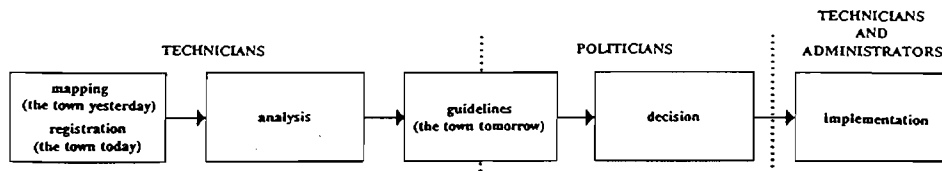


Figure 4. The general Method

Historical Mapping: The Town Yesterday

In the historical mapping, the evolution of the town or urban area is illustrated by means of a number of town maps - In Denmark, for example, from the beginning of the Middle Ages around 1050 to the present day. The maps are supplemented by contemporary pictures (engravings, drawings, photographs, etc.) and cultural-historical material (e.g. information about historical personages and events associated with localities in the town centre). Maps, pictures and information are selected according to their ability to portray something about the origins and development of characteristic spaces, streets, etc.

The historical mapping pinpoints urban architectural characteristics that have been preserved or have developed over a very long period of time and that can be of particular cultural-historical importance. The mapping will typically illustrate the dynamics of the history of the town or district: how, through the centuries, new functions have been accommodated in old structures and how structures have been changed when new demands have been made of them.

The aim of the historical mapping is thus, through increased knowledge of the cultural historical background of the urban architecture, to reveal its *significance*.

The material on which the historical mapping of urban architecture is based is mainly obtained from literature studies. In Denmark we have extensive literature on the general historical development of our towns. And there is additional literature on almost all major Danish towns articles or books - describing the local development. The Danish National Archives, The Royal Library, The National Survey and Cadastre, local and regional museums, and - where such exist - local historical archives, usually

contain relevant material - maps, literature, pictures, photographs, etc. Professionals from such institutions are often of immense help in the historical mapping of urban architecture, and many laymen with a particular interest in the history of their own town or district have collected material of great value to the work on urban architecture.

Danish municipalities - and particularly their municipal engineers' offices - usually possess a fund of knowledge and valuable material - historical maps, etc. - which can be put to good use in the historical mapping of their respective towns or districts.

The National Agency for Physical Planning in collaboration with the municipalities, is at present drawing up the so-called municipal atlases, which include a register of buildings and urban districts considered worthy of preservation. The Agency has set up a *Data and Documentation Centre*, which will also contain historical data from the whole country - on local building customs, for example.

Registration: The Town Today

The method previously used for registering urban architecture involved inspecting and appraising every single building. Urban districts with many architecturally valuable buildings were then regarded as valuable districts from an urban architectural point of view. However, one of the weaknesses of this method is that urban architectural totalities and coherence are overlooked in districts without individually valuable buildings.

Today, preference is given to methods that allow direct registration of complexes, i.e. connected buildings or entire urban districts. This is an expression of the view mentioned earlier that a district can be of urban architectural value even though it contains only a few valuable buildings - or none at all.

Since 1987 *The National Agency for Physical Planning* has built up a system for mapping and registering architectural qualities of urban areas. The mapping process is as follows: 1. Preliminary study; 2. Mapping and registration, including field work; 3. Collation of the results in a municipal atlas.

The *preliminary study* includes a description of the town's topography, history and local building customs. It is intended, firstly, as an aid in structuring the subsequent mapping and registration work and, secondly, as a support for the registrar's field work; thirdly, parts of the results of the preliminary study are intended as a basis for the municipality's preservation planning and for inclusion in the municipal atlas.

The *mapping* concerns urban areas that appear to be coherent units and that can thus be appraised under one heading. The mapping is mainly based on architectural cultural-historical and environmental criteria. The buildings are classified in types with a view to coding for transfer to computer. The mapping is used to establish and systematize the knowledge needed for preservation interests to be taken into account in municipal planning.

The subsequent *registration* of individual buildings is intended primarily as an aid to the municipality in its handling of building applications - e.g. applications for approval of alterations and demolitions. The data from the registration are transferred to computer.

The *municipal atlas* is an illustrated summary of the preliminary study and the mapping and registration work. The intention is to make the results of the entire work easily accessible particularly to the municipality's inhabitants - and a useful tool in the municipality's planning work.

When fully developed, a *data and documentation centre* established at The National Agency for Physical Planning will contain all registrations, both in tabular form and in a data base, registers of buildings worthy of preservation, and other material concerning individual buildings, districts, building customs, etc. for the entire country. The purpose of collecting such a vast quantity of material is to enable central and local government authorities and others to obtain information at any time for use in connection with local planning cases, building applications, preservation cases, etc. The collection will also be of immense research value.

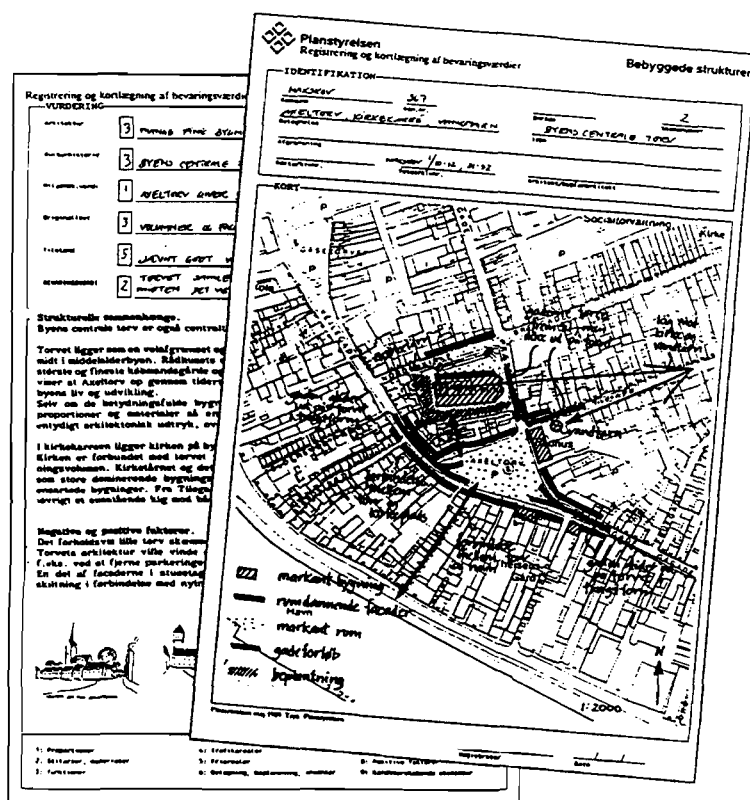


Figure 5. The National Agency for Physical Planning's mapping work concerns urban areas that have a coherent appearance and that can therefore be appraised as one unit. The urban structures are classified according to type with a view to coding for transfer to computer.

Analysis

The analysis is based on all information obtained by means of the historical mapping and registration. The aim of the analysis is to pinpoint those special urban architectural features which are perceived as characteristic for the totality or the identity of the town and which have a special significance, e.g. cultural-historical features.

The analysis will naturally take place on three levels: The urban area, the urban space and the building. And the analysis usually takes the form of a study and evaluation of the entire volume of data. Historical maps, illustrations and texts describe the emergence of the physical form. Perspective drawings, photos and possibly films or videos depict the perception of the form. And registrations and exact measurements describe the physical form itself and its use.

Firstly, the data are broken down into their individual components. These components are then studied and evaluated individually and in relation to the totality of which they are a part. Lastly, the components are put together again in the original totality, but now with more knowledge about its character and significance.

In practice, the analysis may take the form of discussions of the data collected. Through the discussions a number of urban architectural characteristics, particular to the district in question will emerge.



Figure 6. The characterizing feature of a street can be its curvature. The curved course can be preserved and intensified through guidelines on the placing and length of new buildings. (The shopping precinct in Roskilde, Denmark).

Concrete examples from an analysis of urban architectural features from each of the three levels are presented in the following:

An *urban area* is perceived as a silhouette of the town, where the mass of buildings constitute the totality and the church towers constitute the break with this. This urban architectural feature has in slightly different form characterized the town since the Middle Ages and it is even today the symbol of the town.

A square is perceived as an *urban space* - however, the characteristic drop of the terrain is veiled by a parking deck in the middle of the square. The square has always had great significance for the town, but its function and design have changed many times. Today it has significance as the place of arrival at the city for travelers by train. A *building* in a street is perceived as a totality in itself as well as a part of the characteristic S-formed space of the street. The space has significance as shopping, street and pedestrian mall. The space has historical significance as it is preserved since the Middle Ages, although no original buildings are preserved.

Guidelines: The Town Tomorrow

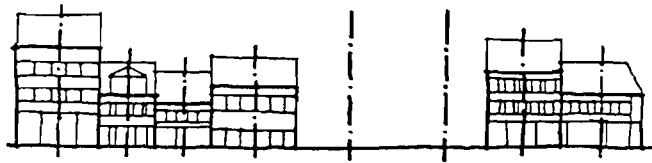
The urban architectural characteristics are presented to the public and to the politicians, who then, after weighing the urban architectural considerations against other considerations concerning, for example, traffic and business interests, decide which urban architectural characteristics should result in guidelines on future new building and alterations.

The method developed has a practical aim. Therefore, in SBI's research on urban architecture, it has been tested on a concrete example, Roskilde Town Centre.

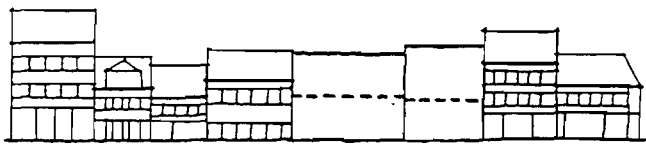
As everyone knows, towns differ. Each town or district of a town has its own peculiarities. Something that is commonplace and unheeded in one town can be a distinctive feature of another town and perhaps considered worthy of preservation. Things considered commonplace and uninteresting in one era may be highly valued and worth preserving in the next (Rasmussen, 1975).

The purpose of the analysis of the urban architecture is precisely to point out those urban architectural features that give a town, a district of a town or a street its distinctive character, thereby enabling the politicians to decide which characteristics are to result in rules. But both the features pointed out and the politicians' evaluation of them can vary from one town to another. The reason why Roskilde is a useful vehicle for demonstration of the method in a Danish context is that Roskilde town centre contains features and problems that are found in many other Danish towns as well:

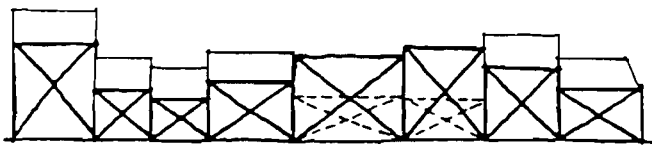
The *town centre*, which can be traced back to around the year 1000, differs from the surrounding, later parts of the town with respect to both density and structure. The streets in the centre of the town still bear signs of having been routed to suit the terrain, water courses and road transport routes. The centre of the town is characterized by its silhouette and its symbols, including the Cathedral with its twin spires. The typical, traditional urban spaces are the shopping precinct, the residential street, the square and the yard space. Typical new urban spaces are cleared yards and car parks.



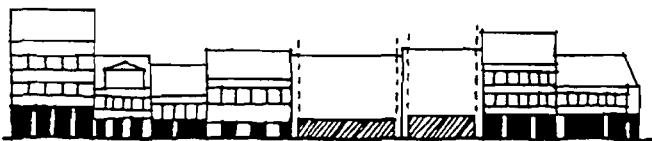
The individual building should be accentuated as a unity.



The termination of the street space at the top should be accentuated by a cornice or similar.



The proportions of the facades should correspond to those of the existing buildings.



The ground floor should not have ribbon windows - piers should be led visibly down to the ground

Figure 7. *The special spatial character of a street can be preserved by laying down guidelines for the principal characteristics of its buildings. Guidelines do not prevent practical buildings with a modern expression. The example shows proposed guidelines for alterations and new building in the shopping precinct in Roskilde, Denmark.*

The *shopping precinct* is typically characterized by new buildings and alterations. Here, we find features preserved from earlier times, but also later and new buildings,

of different design, which break the coherence. In the *residential street* fewer changes have taken place and the picture is therefore more coherent. The *square*, the site of the former market place, has been altered, mainly for traffic purposes. A new *street space* has arisen in a hollowed-out block in the interface area between an old group of buildings and a new one.

Suggested guidelines for the shopping precinct in Roskilde can be used to illustrate special characteristics which it may be decided should be preserved:

One of the aims of the guidelines is to preserve and clarify the curved course of the shopping precinct.

That means for example:

- that the street's surfacing should accentuate its curvature and
- that the facade length of new buildings should be limited to a certain number of metres.

Other guidelines aim at re-establishing special architectural features on buildings impaired by conversion/alteration.

That means, for example:

- that facades should have certain, specified proportions and
- that the existing mixture of vertical and horizontal divisions of facades should be maintained.

Conclusion

Guidelines represent an intrinsic contradiction between the wish to preserve the urban architecture and identity, and the wish to allow constant change and development. Therefore the guidelines themselves may be less important than the process of which they are the result: the historical mapping, the registration and the analysis.

Accordingly, the guidelines should aim at taking care of the urban architecture rather than at preserving it, in the strict sense of the word. Thus, the guidelines above, and other guidelines for urban architecture, do not mean close control of the design of new buildings. The guidelines are simply used to test how a designed new building or alteration will fit into the urban architectural context. It must be decided in each individual case whether the aim of the guidelines has been achieved or whether - by negotiation - changes to the project should be sought.

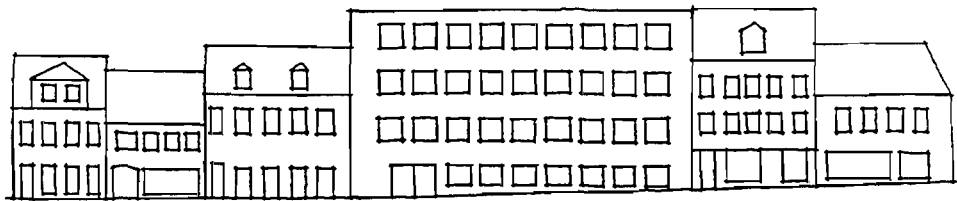
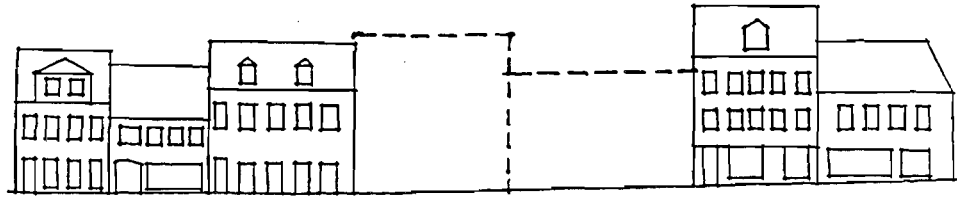


Figure 8. Top: Two ramshackle buildings are demolished. Middle: A proposal that does not consider unity and coherence. Bottom: A proposal based on the described working method - and that incidentally contains just as many m² as the clumsy solution above. An imaginary example of the use of guidelines for urban architecture.

Urban design guidelines are worked out in many countries. Their aim may be to preserve the historical character of an urban area (Mölln, Altstadt Lenzburg), or to create urban spaces with high quality in new housing areas (Essex), or to safeguard an overall feature of a city, e.g. its skyline (San Francisco). Guidelines worked out according to the SBI-project may be similar in their aim, but will typically be simpler and less restrictive.

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