

Language:

Swedish, ISSN 0281-1685, 96 pages.

Distribution:

Dept. of Architectural Design, School of Architecture, Chalmers University of Technology, S – 412 96 Göteborg

Keywords:

Service housing, group homes, building standards, user requirements, elderly people, mentally retarded persons, home service staff.

way housing standards and design respond to the needs, preferences and demands of primarily the residents and secondly the staff.

The methods used are questionnaires, interviews and conferences with staff and residents. A preparatory study was made in order to develop/improve the questionnaires.

The study shows that the residents (both elderly and mentally retarded persons) on the whole are satisfied with their housing. But the study also shows that in some ways housing for the elderly has been designed for elderly with less disabilities than those who live there today. The accessibility and usability is not always adequate, for example there are long corridors and many elderly need help to go to the common rooms. Furthermore the residents in service housing units experience loneliness and boredom in higher rates than the residents in group homes. Members of the staff are in general pleased with the working environments, according to this study, but they are dissatisfied with the staff rooms, especially in housing for the elderly, where they also are discontented with the structure/plan of the buildings in regard to the residents needs.

Elisabet Lundgren Alm:
Stadsgrönskan – Integrerat eller separerat stadsbyggnadselement? En analys av stadsgrönskans utveckling till ett självständigt stadsbyggnadselement med hjälp av historiska exempel och fallstudier
Dept. of Urban Design and Planning, Chalmers University of Technology, Göteborg 1997.

Language:

Swedish, ISSN 0349-3091, 67 pages.

Keywords:

Urban green areas, green structure, urban design and planning, case study research, infrastructure planning, sustainable urban development.

The report has four aims. The first is to analyse when the urban green areas became an independent element in urban design and planning. The second aim is to describe to which problems in the city urban green areas have been seen as a remedy. The third aim is to discuss the development of the conception "green structure" and how it is used. The fourth and last aim is to analyse how urban green areas are treated in planning practice of today. The historical description is based upon studies of examples divided in three different perspectives. They are function-culture, city-countryside and planning-accidental occurrence.

The analyse shows that the treatment of urban green areas as an independent element in urban design and planning is as old as the history of modern cities. The development of the conception "green structure" can be seen as a logical result of the development of modern urban planning.

How urban green areas are treated in planning practice is dealt with in case studies from two Swedish municipalities. These two cases indicate that urban green areas today are treated quite isolated from the rest of the city and that the use of the green structure-conception seems to consolidate this situation rather than change it.

Eva Örneblad:
**The Solarhouse in Järnbrott:
Green spaces and creative social processes
towards a sustainable architecture.**
[Solhuset i Järnbrott – grönrums
och kreativa sociala processer på väg mot
en bärkraftig arkitektur]
Dept. of Architectural Design, School
of Architecture, Chalmers University
of Technology, 1997.

Language:
Swedish, ISBN 91-7197-542-X, 197 pages.

Distribution:
Architecture, Dept. of Architectural Design,
Chalmers University of Technology,
S-412 96 Gothenburg, Sweden.

Keywords:
Architecture, urban renewal, sustainable design,
user participation, active green spaces, creative
social processes.

In what way can we change architecture and in what way can the design of a building influence and support people to change the course of their lifestyle towards sustainability? This report introduces the study of a successful, experimental housing renewal project, focusing on both the physical and the social aspects of sustainability. The experiment consists of the installation of an air-based, solar heating system in the building. To help the tenants understand the principle of passive and active solar heating, a greenhouse was built along-side the basement. This has started an interesting social process among the tenants in the building.

The aim has been to find in what way design can be a catalyst for environmental awareness and changed patterns of behaviour. In this report, I discuss the meaning of design and the establishment of "green spaces" and the initiation and support of "creative social processes" as essential aspects of this. A "green space" can be defined as a place or room enabling people to carry out environmentally friendly patterns of behaviour (i.e., a compost room or a greenhouse). The study establishes the importance of the design of "green spaces" to support the use and appropriation of rooms by people who, thus, meet each other on informal terms. Both the initial social process, starting with the time of the renewal and the ongoing social process dealing with collective activities, (such as cultivating and composting) are also established as essential aspects and have a similar influence on life in the building. The processes strengthen both the tenants' identification with their home, the motivation to join collective activities in the building, as well as function as pedagogical instruments in a kind of "knowledge by action" process.

The study shows that the attached greenhouse has influenced social life in the building and has cultivated related patterns of behaviour. Some tenants also state an increased environmental awareness due to the activity and discussions in the greenhouse. During the cultivating season, a majority of the tenants spend part of their spare time in collective spaces in the building with decreased loneliness as a result. People have also, to a larger extent, developed mutual relationships with each other, compared with the control block of flats.

Furthermore, with the support of concepts, such as *sustainability, way of life and lifestyle*, specific results concerning a decrease in environmental impact owing to the solar energy system and the cultivating activity in the building are presented. The study also shows that it is important to define which changes of behaviour are most dependent on the lifestyle of the household and which are most conditioned by the life style and, therefore, are easier for individuals and groups to conduct by themselves.

Joachim Karlgren:
**Speed Adaption of Car Drivers
in Traffic Calmed Streets**
– Method development and case study
[Bilisters hastighetsanpassning på "miljö-
och säkerhetsprioriterade" gator
– metodutveckling och fallstudie]
Urban Transport Planning, Dept. of Urban
Design and Planning, Chalmers University
of Technology, Göteborg 1997.

Language:

Swedish, ISBN 91-7197-560-8, 144 pages.

Distribution:

Dept. of Urban Transport Planning,
Chalmers University of Technology, S - 412 96
Göteborg, Sweden. Phone: +46 31 772 2422,
fax: +46 31 772 2394.

Key words:

Speed adaption, traffic calming, speed
measurement, speed reducing effect.

The street is our most important urban space and in a near future, Swedish vehicle traffic will be restricted to 30 km/h in areas where pedestrians and cyclists are integrated with cars. To motivate car drivers to keep 30 km/h, many streets must be rebuilt, with the help of different kinds of measures, such as speed bumps, chicanes and change of surface. Better knowledge, for example about the effect that different measures have on the speed adaption of the car drivers, will be needed for making the rebuildings cost-efficient.

The main purpose of this thesis is to present and discuss a new method for studying how car drivers adapt their speed to the street design. A "laser camera" (the same instrument as the Swedish police use for speed control) connected to a computer, is used to produce a speed profile (a curve diagram) which shows how the average speed of the cars vary along the street. This method admits information about the speed adaption of the cars being driven along the street. With help from the speed profiles, new knowledge can be achieved concerning the speed reducing effect by different measures.

In this thesis examples of speed profiles of six different streets will be given. All of those streets are rebuilt to increase the priority of pedestrians and cyclists by enforcing car drivers to reduce speed. The speed profiles are interpreted and analysed. A brief traffic planning history and a quick look on today's knowledge about the speed reducing effect by different measures, will also be found in this thesis.

Mina Popova:
IT and the Architect's Role
Design Computing, Dept. of Building
Design, Chalmers University of Technology,
Göteborg 1997.

Information technology has the potential to change radically the culture of the entire construction sector. It can rationalize the communication between the actors in the design and construction process and provides new possibilities of reusing design solutions. The main purpose of our project is to investigate methods for structuring the information related to architectural work, which support the reusing of design solutions. An equally important task is the development of a concrete application of a comprehensive archive of components in an object-oriented database.

Architectural design deals with issues of widely varying nature: aesthetic and spacial issues, material choice and systems design all of which have a strong impact on the cost of operation, repair, and maintenance. While STEP aims at developing very comprehensive product models, we examine the possibility of building up a small-scale model responding to the information needs of a design team. In this work, we discuss the basics of the architectural work and present an outline of a database called Kit of

Language:

English, ISSN 0284-5091, 72 pages.

Distribution:

Dept. of Building Design, Chalmers University of Technology, S – 412 96 Gothenburg, Sweden.
Phone: + 46 31 772 2360.

Key words:

Design and construction process, design reuse, object-oriented approach, representation, multimedia, information technology, STEP.

Design Parts. The researchers view the Kit of design parts as a suitable carrier of information allowing the designers to store data reflecting their accumulated and refined professional knowledge and expression. Besides, the design team can later easily retrieve information needed for future design reuse from the database. The proposed Kit of design parts relates to existing universal models for product data representation and exchange, such as STEP.

Also, a discussion on the implementing of our ideas as well as a comment on multimedia as a way of integrating the various kinds of information needed in and architects' database are presented.

Today, the object-oriented approach in design is common among both architects and leading software producers for the construction industry. The construction sector is becoming increasingly aware of the potential of the new technology both to rationalize the design and construction process and offer designers new options to store, broaden and reuse professional knowledge. Finally, the conclusion is drawn that information technology will be one of the most important challenges facing the architects' profession in the years to come. Tools like the Kit of design parts will become vital in helping the professionals to fulfil the new requirements for effectiveness and quality assurance in the design and construction process.

Abstracts – licentiatavhandlingar

Eman Abdelrahman Farah:
House Form
in a Traditional Sudanese Urban Quarter
Dept. of Building Design, School
of Architecture, Chalmers University
of Technology, 1997.

The concern of this study is the Sudanese traditional house form. Such houses are prominent feature of the Sudanese Capital's architecture scene. They are well preserved in some of the old residential quarters of Khartoum. The existence of such quarters, housing a significant proportion of the population, ensures not only the preservation of the traditional house form, but also even the unique Sudanese domestic lifestyle.

This work was initiated as a contribution to the solutions of the problems facing such traditional quarters in the capital today. As a prelude, it involves a general theoretical study of the Sudanese traditional house in the northern and central parts of the country. A previous field study (1994) covering a number of old traditional quarters in Omdurman town and visits to various official and national archives so as to select a suitable site for the study.

This present study focuses on the documentation of both traditional house design and domestic life in the selected quarter of Wad Nubbawi. Thus, an empirical investigation was conducted on 40 households, in order to identify household dynamics and their connections to, and dependency on, the spatial organisation of the house. The investigation included a survey in the form of photographic documentation, physical measurements of the house-plan (furnishing plans), a questionnaire and one-day time-space diaries.

Results from the empirical study are presented in the form of photographs, time-space tables and plans. Examples pertaining to the relationship between household dynamics and the spatial organisation are discussed, and the effect of the mid-rise buildings on the traditional domestic lifestyle, is gauged from the participants responses.

Language:
English, ISSN 1402-0106.

Distribution:
Dept. of Building Design, School of Architecture,
Chalmers University of Technology,
S - 412 96 Göteborg, Sweden.

Keywords:
Traditional, old traditional quarters, house form,
household, spatial organization, domestic lifestyle.

Catarina Almqvist:
Service Housing and Group Homes:
A post occupancy evaluation of new special
housing units in the municipality of Alingsås
[Sevicelägenheter och gruppboendestäder: En
utvärdering av nybyggda särskilda
boendeformer i Alingsås kommun]
Dept. of Architectural Design, School
of Architecture, Chalmers University
of Technology, Göteborg 1997.

The municipality of Alingsås (34 000 inh.) has made a comprehensive renewal (renovation and new build) of housing for the elderly. In a few years about 300 flats have been renewed. Totally there are about 500 flats in servicehousing units and group-homes for elderly. The new grouphomes for mentally retarded persons were built between 1988 and 1994. Today there are 16 units of which 6 contain full standard flats and the others low standard rooms.

This study concerns housing standards and design of newly built special housing units for frail elderly people and mentally retarded persons. The purpose of the study is to make clear in what