

# Can wooden architecture bond the urban past to the urban future?

- what does materiality mean for the genius a city

**Ib Omland**  
Associate Professor

**LeRoy Tonning**  
Professor

University of Stavanger - October 2009

## Abstract

Both Liverpool and Stavanger, Norway have been the European Capitals of Culture in 2008. Stavanger 2008 chose a set of core values for the year, among them accessibility, cultural heritage and development, innovation and quality, environment, aesthetics and architecture.

One of the main projects developed was "Norwegian Wood", aimed at being a contribution to the continuous development of Stavanger as a city of wooden houses.

Wooden buildings have at one time dominated most of the villages and cities in Norway. While multi story brick buildings in time became the rule elsewhere, Stavanger has always had a desire to use wooden buildings. With more than 8000 wooden houses in the historic part of the city and a common use of wood as building material for the low-rise buildings in post-war developments, Stavanger has proclaimed itself to be the largest "wooden city" in Europe.

Development of wooden structures as an integrated part of the city is noticeable in the urban spaces. One could mention Skagen Brygge Hotel and Magasin Blaa (blue) as continuations of the line of waterfront buildings, and smaller commercial and residential new central infill buildings.

Strong economic development has given powerful forces in recent years to replace the small wooden buildings with large structures – a process has been critical in preserving the identity of the city.

The discussion now as the year has passed is what the cultural investments through the "Norwegian Wood" projects represent for the development of the identity of Stavanger.

### Keywords:

Wooden Architecture  
Norwegian Wood  
Materiality  
Urban atmosphere  
ECC 2008

### contact persons:

Assoc. professor  
Ib Omland  
University of Stavanger  
N-4036 Stavanger  
+47 51 83 19 17  
[ib.omland@uis.no](mailto:ib.omland@uis.no)

Professor  
LeRoy Olaf Tonning  
University of Stavanger  
N-4036 Stavanger  
+47 51 83 19 16  
[leroy.tonning@uis.no](mailto:leroy.tonning@uis.no)

## Introduction

This article will discuss the consistent use of a building material, in our case wood, in an urban environment as a way to create a link of ambience between the historical structure and new transformation projects. The theoretical perspectives will be introduced first. Then an illustration of how Stavanger, Norway has used the opportunity as the European capital of culture in 2008 to implement a program for new uses of wood as a building material, bridging the gap between the traditions of a historical "wooden" coastal town and new urban projects.

## Urban materiality and urban atmosphere

"Materials matter. Buildings speak to you in different ways through their materials. We notice this especially when they are made just from one material, like the largely unpainted wooden town of Koprivshitsa in Bulgaria, the cement-clad towns of the former Soviet block, the mud buildings of Yemen (as in the astonishing Shibam, called the Manhattan in the desert), the grey limestone of the Cotswold towns, the red bricks of industrial Lowell, USA, or the sand-coloured building in Fez. Then the material speaks to you in its full glory. Wood ages well; it fades, but does not crumble; it feels animate, a reminder that it was once a tree. Cement by contrast, has a deadening patina; it absorbs light back into itself, and its deceptive evenness gives a place a musty feel; the dust in the air." (Landry, 2006)



"Old Stavanger"

What Landry is speaking about here, is the wallscape of the urban fabric. Together with floorscape, it forms the townscape. Materiality as an atmosphere generator is a more or less continuative component in the materials forming the floorscape. In the wallscape the use of materials will be more complex and intricate, depending on a number of circumstances. Walls and floor are the constant factors of the town, radiating "the glory" of materiality as Landry puts it. Thomas Bernard let one of his protagonists explain this impression in saying: "In Lisbon, more than in any other city in the world is what I would call a 'landscape of architecture' to be found." (Bernard 1992) Lisbon is the pioneer city in the art of stone paving and "... the traditional pavement [has] bewitched poets and artists..." (Matos 2004) The floorscape of the town could be a main element in this landscape. In our case however, wood is placed in focus, and as wood has little use as material for floorscape, we will turn to the materiality of the wallscape. The urban wallscape we will define as the sum of the architectural facades facing the open spaces of the city - its streets and places, its parks and squares. And as "the architecture takes place in the wall ... and above all elucidate how the building is in the world" we could say that the wallscape is the architectural backdrop of a town. (Norberg-Schultz, 1978a)

Frederick Wulz launches three ideal categories of walls. (Wulz, 1991) The *façade*, he says, is a confrontation between the exterior and the interior rooms; a confrontation that creates clarity and precision, but also releases differences. These encounters take place in the facade that as ideas can be perceived and understood in three principally different ways: as a *monolith*, as a *membrane* and as an *autonome* element.

The wall as a monolith "is the building". The membrane facade is diametrically the opposite of the monolithic. The idea here is that the facade is stretched as a thin film between the interior and the exterior. There is often no bearing structural design, but it is attached on the outside of the framework of the building, as we most often see in our case with wooden panelling.

What concerns us in this article is a townscape where the wallscape is dominated by wooden structures and painted wooden surfaces. The material - wood, unites and creates a common theme in the material framework of the open urban spaces. It distinguishes the places and gives them special sensational conditions. A townscape "... imposes something on us - pain, sudden fear.. or .. joy. We are not the source of the world, but are suddenly being filled from outside with horror or pleasure...It is not merely a question of what the situation involves as far as possibilities or restrictions for action on our part, but a fact that this; reality is always charged. We cannot choose to be emotionally present or not. The choice that we many times can experience is a choice between letting our reasoning or emotions win ... this is always based on an emotional involvement in the world: a motion already existent. The most precise would be to say that this is about the atmosphere/mood - about not being able to be disconnected emotionally, but always think, judge and act in the light of a mood." (Nyeng, 2006)

An urban "[r]oom has its defined atmosphere... It can be beautiful, light, gloomy, sober, cheerful, etc., and these moods are transferred to the person in the room. The situation caused by the atmosphere is especially noticeable when things are glorious, depressing, etc. on the person." (Bollnow, 1963)

To find a vocabulary that to an adequate degree is able to relay what it is meant to be "on the inside" in an urban area - a street, an open place in the open spaces of the city, is a theoretical challenge. The terminology in „urban design...frequently excludes the atmosphere of cities, the feeling of the look. Does it make you shrink into yourself, make you calmly reflect or fill you with passion? Does it close you in or open you out? Does the physical fabric make you respond with a sense of 'yes' or 'no'? Does it involve you, make you want to participate?" (Landry, 2006)

Such questions are essential in an investigation attempting to get a better understanding of how the atmosphere of urban spaces results from different architectural utterances in the use of the material wood brought together in one place. Open urban spaces are not always surrounded by heroic architecture. They can be constituted of a wide variety of buildings and architectural and cultural expressions of many levels of qualities. We will look at the sensation of an urban place as being "taken captive" by its atmosphere, not as a question of an esthetical statement.

The concept of atmosphere refers to the work of Gernot Böhme. (Böhme,1995) Böhme seems to give an adequate theoretical tool in what he calls a "new aesthetic". It is a theory

that deals with the relationship of qualities in the surroundings and the human state. This *and*, this *in-between* them both is atmosphere, it is where the qualities of the surroundings are connected to the human state. Gernot Böhme tells what the “new” consists of: it is not a judgement of aesthetics alone, it is not dominated of semiotics, and the main purpose it not to be a normative theory of art and arts. The object for the new aesthetic is the full range of aesthetical work, of production of atmospheres. The new aesthetic is seen from the view of the producer of a theory of aesthetic work that is to be understood as bringing forth atmospheres. In urban design, the aesthetic work will either support a given atmosphere, or weaken it. From the view of the recipient it is a theory of perceiving. Perceiving here means the experience of the presence of people, objects and surroundings. It is a question of perceptible impressions; the concern is not about the things one perceives, but about the sensation it gives, generating atmosphere. When we enter a street or an urban square, in one way or other the atmosphere of the space puts me in a certain mood. The atmosphere is decisive for my emotional state and accordingly for my perceptual awareness. Only when we are within the atmosphere of the place so to speak, do we identify and perceive the different objects. The atmospheres, as they are sensed in the urban surroundings, as well as related to the objects and people in open urban spaces, are the main subject in the “new aesthetics”. It investigates how certain absolute objective descriptive characteristics of these surroundings modify our conditional sentiments in these surroundings. The concept of atmosphere is applied to people, spaces and nature. We speak of an imposing aura radiating from a person; the pleasant atmosphere of a garden, a cheerful ambience of a morning in spring. In this article urban spaces are investigated being empty, as a result of architectural surroundings only. The question is what the atmosphere radiating from these surroundings can do to me, what entering or staying in an open urban space do in the sense of bringing me to a certain perceiving mode. In this case the surroundings are determined by the effect of a wallscape dominated by the use of wood.

Chr. Norberg-Schulz writes repeatedly about atmosphere as a certain general state, connected to the experience of architecture. (Norberg-Schulz, 1978a) There are two factors to consider: the circumstance of the experience and characteristics of the architecture itself and the landscape the collective urban cluster is generating. Bettina Köhler quotes Frank Lloyd Wright (db 7/02) as she writes: “...aware of it or not; men are given tranquillity and energy from the atmosphere radiated from the things in their living surroundings. The atmospheres put down roots within them like plants in the earth in which they were planted.” (our translation from German)

The aesthetic work here in question consists of giving the wallscape a certain radiating capacity to influence open urban space - that means creating atmosphere by use of the materiality of objects. The architecture produces atmospheres within all aspects. Forming with wood as the main material concretizes it, and this articulation contributes in creating a definite urban atmosphere.

A wooden building is different from buildings built with other materials. The properties of a building material will naturally influence the gestalt of a building, both in the overall expression and in detail. It is suitable to speak of a culture related to the use of materials. Norberg-Schulz defines the term “art of building” (Norw: byggekunst) as a marriage of fine materials and good techniques, calling it a basic environmental fact. (Norberg-Schulz, 1990)

The use of wood as a structural and enclosing material has a definite influence on our comprehension of buildings and urban environments. Chr. Norberg-Schulz states that “wood still means something to us...the application of wooden material seems to satisfy a need which is not easily met in other ways. Hardly any other material, natural or synthetic, is so rich as wood.... wood is a ‘warm’ material. It’s surface is never monotonous, as are modern synthetic products: it has endless variations.” The readiness for wood to be moulded and profiled with simple tools and manual labour have made the urban spaces to be bordered by wooden houses with conformal variations over a variety of themes – unique, and at the same time unitary. Norberg-Schulz goes on to say: “It is easy to understand the inspiring force of wood. It has played a major role in the history of architecture. When we go deeper into the development of stone architecture, we see that the forms are generally based on wooden structures, which one later tried to adapt to a more permanent material. That was the case both in Egypt and Greece, and the Gothic



Skagen Brygge Hotel



Magasin Blå (blue)



Stiftelsesbakken - residential infill building



Steinkargaten 21 – a small commercial building in the historical core of the city

cathedral was inspired by large wooden barns and market halls, whose framework-construction created a prototype for the complex structure of the cathedral.” (Norberg Schulz, 1978b)

Wood has natural warmth that reminds of summer, flowers, and trees. (Norberg Schulz, 1978b) It can be given colour that defines an atmosphere – for instance the dark, down to earth colour of tar and soil, the immaterial white that softly articulates the details with shadows, or the bright colours of whatever mood is to be expressed. The use of colours is a cultural expression that should be subject to discipline.

The detailing of some styles is sober and unassuming; while at times the detailing results in the pure joy of making the houses reflect a wealth and splendour of design, made possible by the potential of an obliging workable material – giving a definite expression to the urban setting.

Wood as a material has a distinctive transformational quality. It is renewable and at the same time tells a story of history. The fresh scent of a shiny, recently painted wall may have changed the character of the building and the adjacent space, due to a new choice of colour, while the many layers of peeling paint tell about the efforts of many generations to preserve the underlying qualities.

The wooden houses of Stavanger have incrementally developed down through the years, taking to the style of the day. Some houses are a blend of neo-classicism, art nouveau and Swiss style, while others are more or less straightforward in design. There has normally been a certain consensus in scale and use of materials, although detailing has varied. Architecture of the last part of the 20<sup>th</sup> century has usually sought to reflect the sentiments of the post-war era, looking for new means of expression in wood. The Skagen Brygge Hotel as a new addition to the continuous line of waterfront buildings, and the residential and commercial wooden buildings by architects Helen and Hard are useful examples of recent development in wooden design.

## Stavanger - European Capitals of Culture 2008 - a town of wooden houses

In May 2004 Liverpool and Stavanger were proclaimed to be European Capitals of Culture by the EU Council of Ministers. Stavanger 2008 chose a set of core values as a foundation for the development and implementation of being the Cultural Capital the upcoming year.

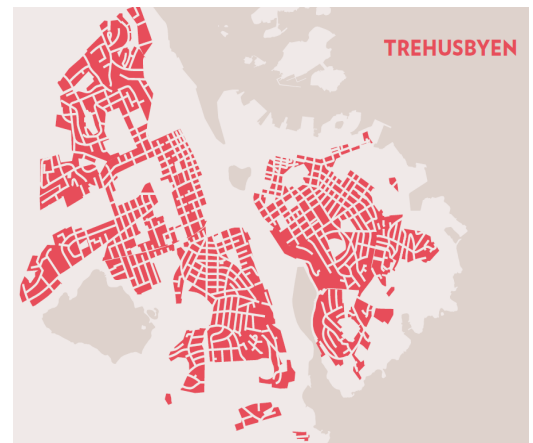
These values were to reflect the vision in guiding the work on the projects. The vision was expressed in the slogan “Open Port”, where “open” would reflect the openness of the population to new ideas and possibilities. The chosen core values were 1) Tolerance and freedom of expression, 2) Hospitality and accessibility, 3) Cultural heritage and development, 4) Innovation and quality, and 5) Environment, aesthetics and architecture.

One of the main projects developed with this backdrop, called “Norwegian Wood” was designated to investigate a possible further development of the historic and present extensive use of wood as a building material in the region as in the city itself. As an exception to the dense expansion of the other main cities in the end of 1800’s and beginning of 1900’s, two story wooden buildings for two families in a sort of open “chess” pattern was chosen here. Elsewhere in the larger cities of Norway multi story brick buildings in a closed pattern was the rule.

Included in the many wooden houses built during this period, are a great amount of older wooden buildings in the core of urban Stavanger, where you still have a reminiscence of the original medieval street pattern. A central ring around the core of the city of Stavanger with more than 8000 wooden buildings is protected with regulations. As also the rest of the town is dominated by wooden buildings, the municipal authorities have proclaimed the city to be the largest “wooden city” in Europe.

In an invitation to architects worldwide to participate in the project “Norwegian

Wood”, Stavanger 2008 the project is described: (Stavanger2008) “The vision for the project is to contribute to the development of the Norwegian timber city, making use of an urban, modern and sustainable timber architecture in harmony with the historical city. Norwegian Wood is to be an arena for application and research within environmentally sound timber architecture, a both national and international showcase. To realize this vision, Stavanger 2008 invited architects to participate in designing the wooden houses of the future on various spots in the Stavanger region. This project is anchored to all the core values: beneficent environment, aesthetics and architecture sum up the aim of the project. It is an overriding desire for the architecture to take responsibility for how we manage our resources. Norwegian Wood is meant to stand for tolerance and freedom of expression, hospitality and accessibility, both in relation to architectural expression and in the invitation to the international circles of expertise to take part in designing wooden buildings for the future. Norwegian Wood expresses also a desire to refine and develop this part of our cultural heritage – bringing to use knowledge hidden in a long tradition of building with wood.”



The wooden city - trehusbyen

The Norwegian Wood programme aimed at developing new concepts for 15 innovative and environmentally-friendly timber projects, intended to add to the abundant construction traditions still evident in Stavanger containing various types of buildings, ranging from small pavilions to large multi story buildings, primarily of wood. Local architects contributed through competitions, working together with international firms to find solutions that were both linked to traditional and innovative uses of design in wood. New products, methods of production and rethinking of structural systems in developing a better understanding of the potential of wood as a building material were given special attention.

The prize-winning projects were connected to a building site supplied by the municipality, and both developers and contractors were found. The projects were to be financed and sold on the open market, giving a realistic base for the projects. The buildings were considered to be both a “laboratory” for investigating the potential of new designs and “real life” schemes, taken into use as an integrated part of the natural or built environment.

Among the many projects, we have picked out a few with a special position connected to interesting urban situations where past and present seems to be a main theme.

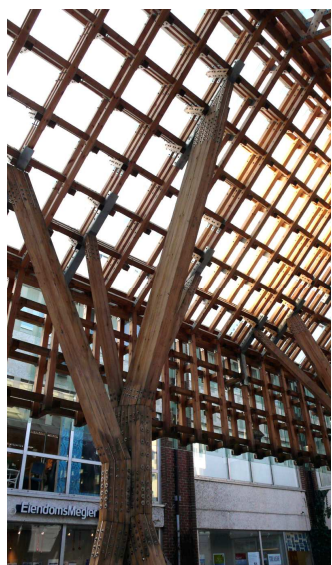
## Some of the Norwegian Wood projects

**Sandnes Pavilion** is a “Norwegian Wood” project for the design of a pavilion in the centre of Sandnes, a neighbouring city of approx. 60 000 inhabitants included in the Stavanger 2008 program. Sandnes municipality has felt a need for a long time to have a covered meeting place in the central pedestrian area. The idea is to have a place for performances, an arena for commerce, public meetings and so forth. This was the background for announcing an architectural competition through the “Norwegian Wood” programme. The condition for participating was that wood was used as the major material. The relationship to urban space and the specific place were important values for the project. The comments of the jury about the winning design were that a well known form, related to the surroundings is used – a house in a narrow passage with a saddle roof supported by walls that are suspended in mid-air, are hung up as foliage on a grove of artificial trunks of trees. The proposal shows a new interpretation of a traditional street scene. The transparent roof will give exciting light effects, both in daylight and after dark. A simple and unstrained relation to the functional needs will give optimal user possibilities. (NAL, 2007)



Sandnes pavilion

After the structure has been erected, it is obvious that the intention of the suspended, transparent roof and walls of shingled glass, with a three dimensional framework is a



Roof and bearing "tree-trunk" columns

metaphor of the foliage of a group of trees, while the bent columns represent the clusters of trunks. The layers of glass give a somewhat prismatic view of the surface, making the walls both an evident flat and a fleeting imaginary surface. By exposing the underlying members of the wall, an educational aspect of the art of building is made observable. The layers of wooden lattice are three dimensional, comprising a compound structure, a view normally covered by solid cladding.

The rigid "cage" of wooden battens is structurally supported by a number of seemingly randomly positioned columns as a cluster of tree-trunks, leaning together before sprawling to meet the cage as a tripod. None of the columns are vertical and they are bent or "broken", seemingly by some unseen force and tied together at the middle. The angled columns give a necessary structural strength to resist horizontal (wind) forces that otherwise would be difficult to counteract. The almost innumerable number of bolts securing the steel implants in the knees of the columns shows both the possibilities of creating unusual forms of wood, but also the limitations of wood in this type of structural members. The structure spans the gap between a contemporary work of art, a functional pavilion and traditional building design, creating a meaningful place, and the project gives a bonding experience of materiality and the urban environment that is easily understood.

**Egenes Park** in Stavanger is a four-story housing project with an integrated kindergarten, built with various timber building techniques – massive elements of wood, glue laminated structural elements, and traditional framing. The building is located next to a large sports area to the north and an established early post-war residential area with small, traditional detached wooden houses on the adjacent street.

A dark "energy cloak" of rustic panelling envelops the entire building towards the north, giving protection from the cold winds and opening up towards the south. The size of the dominating wall towards the large public area to the north as a rather unarticulated membrane wall is visually beneficial. The north wall is partially opened at ground level with passageways, and is also punctured by protruding balconies at the higher levels of solid wood "diving board" design, hung on brackets of steel with transparent glass railings. By changing colour and format of the siding at the corners, the impression of a membrane is reinforced.

The "cloak" is "draped" over supporting angular poles towards the south as a soft tent-like roof of wood. The zigzag parapet breaks down the large profile of the roof to accommodate the transition between the large building and the small neighbouring buildings, perceived as a structure, demonstrating the properties of wood as a flexible material. The continuous horizontal balconies in the south façade give the wall a subdued, decomposed effect. By using glass banisters, the solid wooden floor elements are expressed more clearly in the façade as thin layers.

From the south, the main longitudinal building structure seems to be floating on one-storey buildings, running perpendicular as foundation blocks, with passageways through to the north. The use of interlocked crossing volumes and varied exterior colours gives the project a scale that to some extent relates to the existing built up neighbourhood. A roofline taken down to the ground and covered with wooden stairs as an amfi theatre make a part of the building seem to "grow" out of the ground as part of the kindergarten playground topography.

The wooden structural elements are partially exposed in the exterior. However, to box in wooden staves to protect them from deteriorating seems to be an unnecessary complicated design. The building seems subsequently packaged, instead of having exposed naked structural elements.

The exterior panelling is partially a smooth boarding with minimal grooves in a light sand colour, giving a somewhat immaterial effect in the modernist tradition. These surfaces are contrasted by using a dark (black) rustic panelling, with a reference to shingles – a traditional Norwegian roof and wall covering on the stave churches. The change of panelling and colour at the corners in some places, project the understanding of a thin membrane wall, while in other places the panelling has been used around the corner of the volumes to convey a monolithic impression.

The exterior panelling is partially a smooth boarding with minimal grooves in a light sand colour, giving a somewhat immaterial effect in the modernist tradition. These surfaces are contrasted by using a dark (black) rustic panelling, with a reference to shingles – a traditional Norwegian roof and wall covering on the stave churches. The change of panelling and colour at the corners in some places, project the understanding of a thin membrane wall, while in other places the panelling has been used around the corner of the volumes to convey a monolithic impression.



Egenes Park from the south



Egenes Park from the north

The building gives a definite impression of being an authentic wooden building, a correct statement, as the main structure is of wood as well. This is not always the case in contemporary architecture, as many buildings today give the impression of being built of one material, while another has been used structurally and internally.

Eiganes Park has broken down the volumes, giving a profile that is able to communicate to a certain degree with the smaller houses in the neighbourhood. Notwithstanding, as an experimental project, it should be questioned if this type of building technique is a good example of favourable use of wood.

The building, being technically quite complicated and giving rather high investment costs, is not really what one would expect of an inherent wood building. The apartments have not been sold, possibly due to the present state of the real estate market.

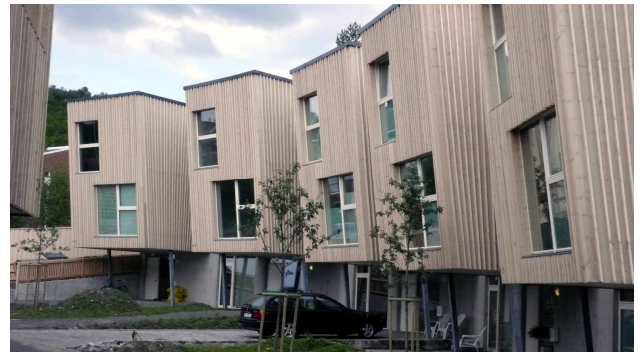
**Marilunden**, in Stavanger is a group of two-story wooden buildings with a compact irregular polygon form, positioned on a common base of concrete in two curved rows. The wooden structure is made of traditional fram-ing, produced as wall, floor and roofing elements, giving insulation properties as low energy housing (class A).

The elements were delivered without internal and external covering, and are not perceived as elements. The sculptured outer forms of the buildings are both quite dramatic and sensitively related to each other, with slanting walls, a strongly profiled vertical cladding and a flat roof.

The building volumes have a common form vocabulary, and are presently very conform in appearance and colour – untreated wood. The private areas on the second level between the forceful two-story walls are well-defined spaces, although with limited exposure to the sun. The outdoor areas at the lower level are open towards a common access area and are a part of a communal urban space with a strong solid wall towards the east and a row of monolithic volumes towards the west. By letting the buildings protrude beyond the wall, resting on columns or being cantilevered, outdoor covered spaces are created.

It is hopefully likely that the general design and impression of materiality will remain consistent. The houses are privately owned, and as the occupants put their personal stamp on their house, there will be variations in detail.

The contribution to wooden house design is the use of elements in quite complex forms. The dynamic forms of the project might offer new perspectives to the design in wood.



Marilunden

## Projects that have not yet been implemented.

**Siriskjaeret** is originally a reef off the shoreline in the eastern part of the city. The seafront was developed as a harbour, as the area was an industrial area, specifically connected to the canning industry. Today a major development is replacing the industrial buildings with residential and office buildings. Many of the new buildings are high-rise structures of steel and concrete.

The first question that should be raised is a question of density. Many of the new buildings in the new Stavanger urban sea front area are 12-story high-rise buildings, lined closely up along the shore, with little natural access to the sea for the general public. Buildings of this type differ strongly from the traditional building style of Stavanger.

Buildings of wood cannot compete with this degree of density. A senior city planner has expressed that the maximum height of residential building in Stavanger should be 7-stories. It has been proven that small-scale (wooden)



The proposed urban seafront development, complimenting or replacing industrial activity with residential developments.

buildings, designed as the traditional residential areas of Stavanger can compete in density with the post-war suburban high-rise building areas in Norway. (Kollandsrud, 1978)

In its overall evaluation, the jury writes that Siriskjaer occupies a vital place in the development of Stavanger's urban seafront. Within the historical centre around the harbour the "Blue Promenade" will provide the connection between the old port with its waterfront warehouses and the areas now to be developed. Siriskjaer can thus be integrated into the wooden city. (NAL, 2007) About the winning proposal, the jury says that it illustrates a clear will to reinterpret the idiom of Stavanger's seafront, linking the concept to an analysis of the area's industrial volumes and the desire for contact to the sea.



An architect's rendering of the proposed sculptured building mass, introducing a new approach in forming waterfront buildings.

The three proposals awarded will each generate a special sense of place although choices of motifs differ. But the materiality will be the sounding board by putting these new elements in harmony with the rest of the wooden building culture that distinguishes the district.

One of the features about newer development of wooden architecture is the sculptured design giving a building with many facets, often using the same material on the roof as on the walls. The use of many angles poses the question whether a surface actually is a wall or a roof. This type of design has traditionally been used in Mansard roofs, where part of the roof has been almost vertical, and has in effect been a wall with a roofing material surface. The design gave a soft, bulky impression of the building, popular during the art nouveau period. When the same material is used on walls and roofs, enveloping the building at various angles, the impression given is that of a sculptured, hollowed out mass.

The sloping walls can give dramatic experiences of both the interior rooms and the enclosure of the adjacent urban space, enhancing the normally predictable borders defined by buildings with rigid shapes. The lack of protruding balconies – a hallmark of newer residential buildings, is noticeable. Cubicles are hollowed out of the compact, closed structure to form an open-air recreational area for each flat, with the individual sculptured buildings linked together as a massive city wall of wood. The main shape of the prize-winning project has both certain references to traditional waterfront buildings, and a desire to completely recreate the design of a wooden building.

## Discussion

In the city branding of Stavanger as well as in many recent infill projects, local architectural tradition, using wood has played a central role. As part of the program for Stavanger as the European Capital of Culture in 2008, the Norwegian Wood program was meant to sustain the practice, choosing wood as both the structural and visible material. For the municipal leadership, the program was an important mean of maintaining focus on the genius of the city. Together with the organizer, wood was also promoted as the environmentally best choice of materials. The program launched new construction methods and detailing as well. Norwegian Wood came to be a main project in the cultural year - one of the few with more visible lasting results. It demonstrated the importance of giving special attention to the urban environment in general, and especially safeguarding the identity of the city given by the wooden building tradition. Both policy makers and the general public were reminded that the city has a rather unique building history, and the incentive to continue to develop the distinctive character was invoked. Implementing the Norwegian Wood project was also a gain for the special environmental and atmospheric effects that this material is able to generate in the open spaces of the city.

The Norwegian Wood project, campaigning for large buildings of timber, illuminated a series of functional demands – fire safety, sound insulation and structural stability that must be taken care of, demanding elaborate solutions in large wooden buildings. In a time

with increased focus on ecology and conservation of the environment, it is a fact that wood as a building material also has a number of environmental preferences: it is renewable, a local resource, easily processed without polluting, and easily disposed. Modern methods of production can produce elements that are stable and have strength as well as other attributes that make them suitable for larger buildings as well as small detached housing. It could well be that future development of design and production techniques will give solutions that are functional and feasible. The Norwegian Wood projects will hopefully give inspiration and a greater knowledge of how wood can be used in novel ways.

It is often difficult to implement new methods of construction and detailing in a conservative industry, and there is a need to have the type of incentive that Norwegian Wood represents. Some of the chosen solutions seem however to be quite complicated and costly, and as the results must be competitive and the investment should give decent returns, the economics of the projects have been difficult. Although experimental development is almost always more costly than well-proven solutions, it is important that new methods are developed in a realistic context, and that has been the case in the Norwegian Wood projects. It could well be that the combinations of the chosen solutions will be feasible, but even though they might prove to be a dead-end route, they would be a gained experience.

Figural design was obviously one important aspect in choosing the final proposal. It seems that the spectacular, creative solutions are especially appealing in this type of competition. Design is however more than the formative feature. Design is also detailing and technical solutions. And moreover, the design of a building is also a part of an urban design and thereby participating in the dialogue between the past and present time. Form, scale and materials constitute the frame of the urban open spaces where we can read this narrative. The cases show a love of the material and a willingness to tell architectural stories, adapting to a given urban situation as has been done in the pavilion in Sandnes. The Marilunden cluster of buildings give a flavour in new surroundings in the outskirts of the city that we also can relate to in the older parts of the city centre. The wallscape of Marilunden confirms that "Materials matter. Buildings speak to you in different ways through their materials. We notice this especially when they are made just from one material", to cite Landry once again. When we ask if wooden architecture can be a bond between the urban past and the urban future, we can recognize that newer infill projects, together with the Norwegian Wood projects confirm the query – by being in their surroundings, one can perceive how materiality generates a certain character and gives the urban spaces a special atmosphere and identity.

An investment splurge in projects of the type represented by Norwegian Wood is unquestionably profitable. The most important development of a historical town will however be an incremental process involving both authorities, employers, designers, and producers, constantly looking for better solutions where an important aspect always is the bond to the past.

## References

Arkitektnytt 2007/07

Benedikt, Michael 1985: "For an Architecture of Reality" Austin, Lumen Books

Bergsgard , Unnleiv, 2005: "Stavangers bebyggelse 1945-1965 'Den sosialdemokratiske orden'" in Stavanger Museum Årbok (Yearbook) 2005, Stavange7 2007

Bernard , Thomas, 1992: "Utslettelsen" Oslo, Gyldendal Norsk Forlag

Bollnow, Otto Friedrich, 1963: "Mensch und Raum" Stuttgart, W. Kohlhammer Verlag

Byggforsk: Trehus

Böhme, Gernot, 1995: "Atmosphäre", Frankfurt am Main, Suhrkamp Verlag

db 7/02

Christensen, Arne Lie: The Norwegian Art of Building, Oslo, 1995

Denizou, Karine et al: Tre i by – Hvilke mekanismer styrer materialvalget for større urbane byggverk? Wood in cities – Which Mechanisms are decisive when choosing materials for large urban structures? Project report 409, 2007

Espedal, K. J. 2002: "Bygningsfysikk" Lillestrøm, Byggenæringens Forlag as

Edvardsen, K. I. and Torjussen, L. 2000: "Håndbok 45 - TREHUS" Oslo, NBI

Haaland, Anders 1999: "En By tar form - Stavangers bebyggelse 1815 – 1949" Stavanger Wigestrands Forlag

Herzog , Lawrence A., 2006: "Return to the Centre" Austin, University of Texas Press - page 8

<http://regionstatistikk.stavanger.kommune.no/3Befolkning/301.htm>

<http://www.stavanger.kommune.no/publikum/divsvg.nsf/SVGstatistikk?openform&referer=Statistikk&sub=1>

Kollandsrud , Gullik 1978: "Trehusbyen – kan den gjenskapes?" Oslo, Treopplysningsrådet

Landry, Charles, 2006: "The Art of City Making" London, Earthscan

Matos, Ernesto, 2004: "Pavements of Lisbon" Lisboa; Camara Municipal

Norberg Schultz, Chr. 1990: Foreword in the book by Holan, Jerri 1990: "Norwegian Wood - a tradition of building" New York, Rizzoli

Norberg Schultz, Chr., 1978a: "Mellom jord og himmel." Oslo, Universitetsforlaget

Norberg Schultz, Chr., 1978b: "The Norwegian Tradition" i Dag Rognelien, red., 1978: "Treprisen – ten norwegian prize-winning architects" Oslo, Arkitektnytt.

Norske arkitektkonkurranser / Norwegian Architectural Competitions 408, 2007. Oslo, NAL

Norske arkitektkonkurranser / Norwegian Architectural Competitions 409, 2007. Oslo, NAL

Nyeng, Frode, 2006: "Følelser i filosofi, vitenskap og dagligliv" Oslo, Abstrakt forlag

Stavanger 2008: "Norwegian Wood - International invitation for pre-qualification for competitions/tender to design several exciting building projects in Rogaland, Norway"

Stavanger Kommune, 1993: "Sjøhusrekken I Stavanger – Porsjeket for vern og fornyelse", Stavanger Kommune

Wood Frame Housing '87 proceedings from an international conference in Oslo.

Wulz, Fredrik F. 1991: "Fasaden och stadsrummet : arkitektonisk idé, text och komposition" Stockholm, Byggförlaget