ICOMOS
Why Save Historic Timber Structures?
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PRESENTATION

4. Timber as a renewable resource in relation to historic construction;

Modern wooden designs as additions in historic environments

ABSTRACT

How has traditional wooden architecture developed and what are its expressions in contemporary society? In the Nordic countries, where wooden architecture has played a major role throughout history, the attitude to this heritage is very different in two neighbouring countries, Sweden and Finland, due to historic circumstances that are reflected in the chosen symbols. This becomes especially clear in modern infill projects in listed conservation areas with timber structures. The following projects will be presented in this context: Nora Parish House by architects Tina Wik and Ingrid Reppen, inaugurated in December 1999, which received the Europa Nostra Award 2002 for its successful modern contribution to the historic wooden town of Nora, located in the heart of Sweden, and Vallila Library in Helsinki by architect Juha Leiviskä, which is located in an area with listed wooden workers' housing from the early 20s.
The tradition of building in wood is perhaps the most important part of the cultural heritage of the Nordic countries. We have many remaining examples of wooden buildings from as far back as the 12th and 13th centuries, as well as well-preserved agglomerations of wooden buildings in villages and towns dating from the 18th or 19th centuries.

The environmental context, of being part of the Northern forest belt, has created this culture, where every part of a building used to be made of wood and the material was used creatively for many expressions and contexts. New building materials have gradually replaced wood where the material has demanded labour intensive maintenance, such as on roofs and foundations. The use of wood as a structural material is still however predominant in smaller buildings, mainly residential houses, but it is becoming increasingly common in smaller public buildings as well. Historically wood was used almost as often as stone or brick in more prominent buildings such as many mansions, some castles and many churches.

All towns in the Nordic countries were built mainly with wooden buildings up to the mid 19th century when the bigger towns gradually grew into larger scale cities constructed of plastered brick buildings, 4 to 6 stories high. Large destructive fires in urban areas speeded up this process and it became forbidden to build in wood within cities, a rule that was not abolished until 1994, when a new fire protection law was passed. The details of this law are slightly different in the two countries. The historic use of wood as a building material is, however, the reason why many small towns and almost all villages and smaller agglomerations in the bigger cities are still of wood. Many of them are listed conservation areas and new additions require a sensitive adaptation. The buildings often need to be modernized in order to survive and kept as living environments. A conflict between two aspects of authenticity has to be balanced in these historic areas. Changes in design brought by the modernizing process or the infill projects raises the question of which authenticity shall prevail in the implementation; the ‘original’ design and outlook of the building, or to develop the living tradition of using wood.

In many cases the only option for infill projects, certainly in villages and small communities but also in some areas within bigger cities, is to build in wood. This is also often required in the Urban Plans of these listed areas. WOOD has become part of our nations’ consciousness as a symbol for Nature. It is part of our collective memory and a strong part of our identity. Wood surrounds us everywhere, as a building material and in nature, which is full of trees and every meadow not actively kept cleared will quickly be overgrown with spruce and pine, and sometimes birch, trees. Our forests are also our main source of income. Sweden and Finland are two of the world’s biggest exporting countries for wood and wooden materials such as different types of boards and cellulose as well as paper products.

In spite of a strong concrete and steel industry a wooden house is the symbol of our countries. Wood is generally considered to be the most beautiful building material. This is the material we read about in literature, in both novels and poetry, where Nature is almost a stronger element than Love. This is also why enjoyment of our
natural environment is strongly linked to human rights and well-being in the Nordic landscape, available for everyone to walk in, to pick berries in, to camp in as long as nothing is destroyed.

Finland and Sweden have very similar nature, climate and were even the same country up to 1809. It is however interesting to notice, how the similar cultural wooden built heritage has developed differently in the two countries. Later historical events have lead to the choice of quite different symbols of identification. This is most evident in infill projects with modern expressions. This difference is why I will present one project from each country.

Sweden has a long history of peace. It has not been at war since 1809, and it was a powerful nation in the 17th century, dominating its neighbours of which all have sometimes being part of Sweden. Finland is on the contrary, a young nation, gaining its independence as late as 1917. It was a small nation with a Swedish as well as Russian history. The Finnish nation wanted to stand out and distinguish itself from both Russia and Sweden. They wanted to find the true ‘Finnish’ nature and visualize this in all forms of art, music, literature (in a language which only had a written form about 40 years earlier), and in architecture.

The National Romantic movement was very important in Finland since it coincided with the establishment of the nation. The Finnish character was, through influences from Richardson in Chicago, first expressed with heavy granite architecture by architects such as Eliel Saarinen. Finland found, however, its new expressions in architecture that the whole population considered to embody the character of independent Finland in Alvar Aalto’s interpretation of functionalism and modernism. Alvar Aalto rejected the classical tradition and its symmetrical approach to design. Instead, he based his design on the asymmetry of nature, designing buildings as expressions of the nature they are part of, using the light to form spaces.

Looking at Villa Mairea, perhaps his most important project, and the layout of the building, the way it is incorporated in the woods, how the entrance porch becomes part of the forest and the forest part of the house through a panoramic window, illustrates this approach. The house is a part of Finnish nature, without imitating foreign architecture. It is independent. The forms of this small-scale building are, in spite of its size, just like forms in nature, irregular and impressive, and here constructed of wood. No matter that the wooden boards are thin in dimension, the way they are nailed vertically permits an irregular curved form here independently rising up monumentally above the rest of the house. A detail like the handle of the entrance door is cast in a form imitating a twig. Here we have a direct association with nature. There are, however, reflections to the past, but these are not to a recent past, but to something considered very old, an archaic past from the time of Kalevala, the Finnish national epic. We can see this in the design of the gate or the earth roof of the sauna.

The influence of the architecture of Alvar Aalto still imbues much of the modern architecture in Finland today. As this approach is considered to be part of modern Finnish identity it also influences new infill projects in historic areas. I will present one project built in a residential area for workers built in the 1910s in the eastern part of central Helsinki. This area is constructed of wooden two storey buildings and its design is influenced by the National Romantic Movement. It received a Europa Nostra
prize for being a well-preserved part of the Finnish cultural heritage a few years ago. It used to be rather dilapidated. This has changed and the area is today well-preserved and maintained.

A new library with a kindergarten was planned in 1990 on a small site to improve the public services in the area. The architect chosen for the project was Juha Leiviskä. He chose to respect the scale of the wooden housing in the area in these public buildings and place them on the same line as the other buildings. This meant that the buildings were placed on the line of the pavement and the problem of finding space for an entrance was solved by carving out a part of the corner where the entrance was placed. Corners are often specially decorated in this district, so the approach is typical for the area but the form is new.

The buildings do differ from others in the neighbourhood by clearly pointing out that these are public buildings. In spite of using the same materials and colour scheme as the other buildings in the area, the forms indicate that this building contains something important. Like the tower of wood in Villa Mairea of Alvar Aalto, the walls facing the street, made similarly of vertical wooden boards of thin dimensions, give a monumental impression.
Traditionally churches were the most important public buildings in Nordic culture. Here people were educated. Juha Leiviskä shows in his design of the exterior, and even more clearly in the interior, his attitude to this modern temple of knowledge. Libraries have replaced churches in the educational role, where anybody can enter for enlightenment.

The vigorous structure forms an interesting single space, dividing it into sub-spaces and thus forming parts with different characters. Some are intimate, such as the
innermost part, with small-scale reading places, and others monumental, such as the entrance area which also gives a good overview of the space and its functions. The different heights allow light to percolate into the room and emphasize the division of space by making some parts lighter and others darker. The monumental parts are lightened by rich ‘clerestory’ light which is moderated by an elaborated ceiling design which also serves as an acoustic absorbent. The interior structure is visible, clearly showing which parts support the other. This can be compared to our huge wooden churches with comparable visible structures besides their symmetrical design.

Juha Leiviskä’s concern for the details is traditional in wooden architecture. Roof eaves, window and doorframes, as well as joints and protruding parts, are given special attention and are the elements that give character to the building. These details are often elaborated in traditional wooden architecture, especially in the wooden architecture influenced by Russia. Juha Leiviskä has however chosen a very different form, a simplified form where the lines are straight and the nailing of them easy. If the light in elaborated traditional forms is spread through curves it is in Leiviskä’s design divided by several wooden lists.

The facades towards the street are closed, with few openings, but the building opens up towards the courtyard. Here the details are the richest and the dimensions of the building smaller, facing the diagonally placed kindergarten on the other side of the irregularly round courtyard. Thus the building occupies almost the whole rectangular block, forming a circular interior space connecting the two buildings.

The block was completed a couple of years ago when Leiviskä designed a residential row house for five families. The design is in tune with the other buildings in the quarter and the interior space is divided similarly with only one out of two bedrooms separated. The only bedroom separated traditionally with a wall, has two storeys with the upper part as a small third storey. The other bedroom has an open connection with the living space beneath but is visually separated. This gives a rich light into the space and an open impression, in spite of small dimensions on a narrow city lot. A design, common in public buildings, has influenced this urban residential building.
With regard to Sweden, here too, wooden architecture is considered to be an important part of Swedish identity. In Sweden there is a conception of the ‘Red House with White Corners’. The design of this traditional wooden house is the heart of Swedish culture and when building new structures in the countryside this house type is often copied in different ways and new interpretations are not as easily accepted here as in Finland. This red house has similarities to Roman architecture with low roof angles and symmetrical design, in contradiction with central European design. The assumption is that this building type reached Scandinavia mainly through England, after Scandinavians, mostly Danes, settled there. Throughout the centuries this peasant architecture has been influenced by different classical styles that have been interpreted in new details and expressions, embodying dreams of richer cultures.

There are often many restrictions in Sweden when designing new additions in conservation areas. The one I will show is one of my own projects I have carried out in collaboration with Ingrid Reppen. It is a Parish House in the small town of Nora in central Sweden. The project is the result of a first prize in an architectural competition held in 1995 and the building was opened by the local bishop in December 1997. The city of Nora is a small wooden town that received a Europa Nostra Award for its well-preserved architecture in the early 1990s. The town had had no new building since 1960 when a food store was erected. This construction caused so much criticism that no more new buildings had been allowed since then before this project started. A characteristic of buildings in Nora is that they are small-scale wooden buildings in sometimes one, but mostly two, storeys with entrances from a courtyard. All buildings are placed in line with the pavement. No large-scale buildings exist in the town and there was no assembly hall larger than for 80 – 100 persons.
Now the parish needed a larger building for its public activities such as the religious education of teenagers, activity rooms for children and Sunday school program as well as an assembly hall for 150 persons for many different activities. The chosen site was close to the church and the existing Parish House, on the plot of an abandoned fire station.

We chose to place the new building in line with the neighbouring buildings, an 18th century courthouse and a residential house dating from the 19th century and follow the urban pattern of the town. Trying to integrate the requested program and functions into the building, we realized that every possible centimetre had to be used. We squeezed the building into the block using the traditional organisation of Nora buildings, with the highest part towards the street and lowest towards the inner part. All courtyards in the town are filled with small-scale storage buildings.

A Parish House can be described as the living room of the town. Here many of the everyday activities take place and the building is used by everyone. We wanted to advertise the activities going on inside, and at the same time, create an inviting entrance where more than 150 persons could enter without crowding. This was possible with a traditional layout since an entrance from the street for this number of
people in Nora’s urban structure was impossible. The solution was to place the entrance in the courtyard. The entrance to the courtyard is emphasised with an asymmetrical facade and a protruding roof indicating a gate.

This gives the layout of the whole project: a wooden facade towards the street in two storeys with big windows allowing glimpses into the building’s most public functions where the entrance from a glazed omega shaped courtyard can be sensed. The glazed facade of the courtyard, much more modern in design than the facade towards the street, divides the exterior from the interior with a transparent wall, making a subtle transition from outside to inside. The interior hall is circular, connecting each room and each function of the building and giving a quick orientation for visitors. The hall is the artery through the building, like a narrow street in a small community. The transparent facade of the courtyard connects the rooms on the opposite sides and the different activities going on at the same time. Here the children’s activities are located, as well as the assembly hall, as a one storey building in the innermost part of the plot. The public kitchen, cafeteria and a smaller activity room are placed towards the street. The upper floor is more intimate and the rooms for the preparation for religious confirmation are reached from a balcony overlooking the entrance hall. There are parallels to this layout in traditional storage buildings.
The free placement of supporting walls was made technically possible to build by using a massive wooden structure for the intermediate floor. Additionally I want to point out that the ventilation technique is also simplified by using a natural ventilation system supported by only two fans in the whole building. All materials used are traditional: a wooden structure and wooden facades. The composition of the facades is a free interpretation of wooden constructions one can encounter in the countryside. The facades are painted in traditional linseed oil paint with the frequently in traditional architecture used pigment, yellow ochre.
My point in showing these examples is that the most important issue with regard to wooden architecture in the Nordic countries is that it still is a living tradition, a part of our everyday life. It must find new expressions in our contemporary life in order to develop. This is perhaps the most important authentic value regarding timber architecture. Old knowledge has been lost, but today, with the new building code, there is a great interest in finding new markets for this material and to develop new designs in wood. The historical gap between Finland and Sweden is disappearing and there is a renewed interest in both countries in finding solutions for the more extensive use of wood in building. Here a more industrialized building process will be visible in the designs since it will be governed by economic realities. Even if the most radical contemporary designs will not be constructed in conservation areas, these areas will benefit from a wider usage of wood since this ensures that the knowledge of techniques is kept from dying and the necessary materials still kept in production.