

## **Sustainable Reuse of Wooden Buildings in the Baltic Sea Region**

### **A Region of Timber Buildings**

The frontiers of the Baltic Sea Region are outlined by both geographical and historical arguments. It is not enough to look upon a map and include the area, which is in some way connected to the Baltic Sea, by direct contact to its coastline or indirectly through rivers floating into it. Norway and Iceland would then have to remain outside. They are qualified through historical connections – Baltic Sea vessels were at home also in the hanseatic town of Bergen and in Icelandic harbours.

People in the region express their feelings in many separate languages and their houses demonstrate connections to quite separate traditions. Varying types of buildings, windows, boarding and jointing techniques reveal influences from many diverse sources. They should be looked upon both as signs of different cultures, living side by side, and as variations in expression of a joint Baltic Sea culture.

People in the region share a special “feeling for wood”. Traditional houses on both sides of the sea are built in timber, the raw material coming from pine wood or oak. The most important tools have been the broad-axe and the plane, both of which were handled by the house-owners themselves. The sound of a distant saw, the smell of fresh logs, and the feeling for old floor boards - these are memories that constitute a solid base for a regional “wood consciousness”.



**Fig 1.** Wooden town of Tukums, Latvia.



**Fig 2.** Farmstead in northern Sweden, Hälsingland



### **Significance of Materials and Skills**

The architecture of the region may represent different styles, but knowledge, skills and tools have spread with master builders and craftsmen across the sea. Houses are most certainly built by craftsmen representing a non-interrupted tradition of selected materials and techniques. A tradition which has a significant, intrinsic value; it is not only a means in the conservation of historic buildings.

**Fig 3.** Materials and skills have a significant value; Hälsingland, Sweden



**Fig 4.** Workshop on the repair of timber; Ungurmuiza, Latvia

Sustainable management of historic buildings means to manage maintenance and change in such a way that the significant values should be passed on to future generations. In our case it is highly depending on the survival of professional knowledge and on the supply of “traditional” building materials; i.e. on a sustainable (labour) market for the trained masons, carpenters, architects, historians, restorers etc. and on a market for the traditional building materials and products.

#### **Working Group on Building Preservation**

A co-operation on cultural heritage in the Baltic Sea region was initiated by the ministers of culture in 1997. Four working groups, in four different fields, have been active since the year 2000. The working group on “Building Preservation and Maintenance in Practice” has members from eight countries – Estonia, Finland, Germany, Latvia, Lithuania, Norway, Poland and Sweden. Denmark was active until the end of 2004. Germany is represented by the State of Mecklenburg-Vorpommern. The group is chaired by Sweden and Latvia.

The overall objective of the working group is to enhance good (sustainable) management for the built heritage of the Baltic Sea region. Since each of the Baltic Sea countries is small and each national “heritage sector” consists of only a few people, there is a need for a greater Baltic Sea Region “market” - as support in each individual country and to strengthen the region as a whole.

#### **“Code of Ethics”**

The working group has agreed upon a “Code of Ethics” for those involved in the maintenance, repair and reuse of historic buildings. The main points are:



### *Thorough documentation*

A thorough documentation should form the basis of the design. Full understanding of the structure and the materials used is crucial.

There is a continuous need for recording and transferring traditional knowledge and crafts skills, for research into the old construction techniques, their function and environmental consequences. The characteristics of different wood species and the function of woodwork joints have to be translated to “modern” language.

**Fig 5.** Transferring traditional skills (carpenter Ernst Andersson, Småland)



### *Minimum interventions*

The original framework and the original surfaces should be protected and conserved. They constitute the testimony of history. Repair should be preferred to replacement. Additions for modern comfort should be removable; they have a shorter life-cycle.

There is a great need for adapted solutions and products for modern additions – for insulation, heating and ventilation. Timber buildings create a good interior climate; they are made of a “live” material. At the same time, high energy consumption will always be an argument against them. Modern buildings can always have better insulation.

**Fig 6.** Repair preferred to replacement: Staircase in Ramava Manor, Latvia

### *Traditional materials and methods*

Maintenance and renovation works should be carried out with the materials and methods that were originally used; they are made for continuous maintenance.

The confidence in traditional materials, i.e. quality timber, linseed oil paint and other surface treatments, has to be re-established. It has been destroyed by heavy marketing from producers of modern building materials.



**Fig 7.** Members of the Association of Enterprises in Building Conservation (FIBOR), on a study tour in Hälsingland.

Producers and suppliers of traditional materials are best supported by pilot projects and by defined quality demands concerning materials and processes. When modern alternatives are accepted, there should be evident arguments – not only lack of will or resources.

Professional crafts skills will survive only if they are demanded by the market and supported by continuous training.

With the aim to support the demand for professional skills a Swedish association FIBOR (Association of Enterprises in Building Conservation) was created in 1999, inspired by the European AEERPA (Association Européenne des Entreprises de Restauration de Patrimoine Architectural). Amongst the members you will find enterprises, contractors and craftsmen as well as consultants. FIBOR is a marketing association; organizing seminars and training. The Scandinavian countries have no “official authorization” of conservation architects or craftsmen.

## Building Preservation in Practice

The activities of the working group include seminars, workshops, a survey on regional building materials and a common web-site. Baltic Sea region networks for NGO's and for experts on interior climate and heating in historic buildings have been created.

In the years 1999-2003 three timber buildings were renovated; two manor houses in Latvia and one 19<sup>th</sup> century dwelling-house in Tallinn, Estonia. The renovation process was



organized as a co-operation between professionals from Estonia, Latvia and Sweden. Surveyors, architects, engineers and craftsmen from the three countries were working together and training workshops were arranged on methods for documentation, on the repair of timber constructions, on traditional paints etc.

The renovation of the dwelling house in Tallinn was recorded in a documentary film "Kalamaja – Possibility of a Wooden Town", which follows the process over the course of one year. Experts and ordinary citizens share their opinions and points of view on the future perspectives of the wooden town and the wooden (timber) house. The use of traditional crafts and materials is emphasized, as is the wooden town as a common Baltic-Nordic Heritage (there are scenes from Lithuania, Latvia, Estonia, Finland and Sweden).

**Fig 8.** Workshop on woodwork joints; Ungurmuiza, Latvia



**Fig 9.** Workshop on the repair of windows, Tallinn, Estonia

### **Demand for Sustainable Reuse**

Today the Kalamaja house (address: Väike Patarei 3) is partly used as an “Information Centre for Sustainable Renovation”. It is managed by the Estonian Heritage Society (Eesti Muinsuskaitse Selts) and directed towards all those involved in the maintenance and the redevelopment of Kalamaja and other wooden suburbs in Estonia.

Other “regional centres for information” are working with similar methods – through exhibitions, lectures, technical advice, training courses, distribution of building materials and manuals. Some survive on commercial basis; most of them are supported by a regional museum or a municipality. Together, they are meeting a demand for knowledge on conservation and reuse of wooden (timber) buildings.

Timber buildings, and the crafts connected to them, are significant parts of the regional identity. Reuse of timber buildings means sustainability, it means simple techniques, natural and renewable materials and small scale economy; it means future.



**Fig 10.** The newly renovated Centre for Sustainable Renovation at Väike Patarei 3 in Kalamaja, Tallinn, Estonia



**Fig 11.** Simple techniques, natural and renewable materials, small scale economy; Ramava Manor, Latvia