

TRADITIONAL TECHNIQUES IN RESTORATION  
OF AN OUTBUILDING OF KOITSANLAHTI MANOR

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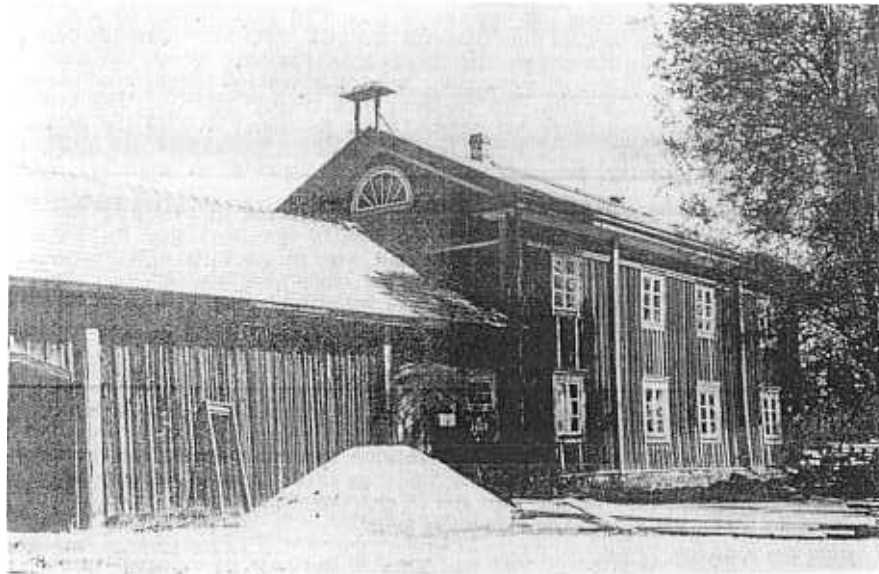
Koitsanlahti Manor in Parikkala lies in eastern Finland, just a few miles from the Russian border. While Finland was under Swedish rule from 1155 to 1809, this part was incorporated to Russia already after the Great Northern War in 1721.

The Manor was originally formed in 17th century by the bellicose Swedish king Gustavus Adolphus, who took peasants farms to provide his troops with foodstuffs. For this reason the Manor became a place of oppression, and the situation became even worse under Russian rule. The peasants were treated roughly, they had to pay heavy taxes and render labour services. In 1782 the people rose in revolt and burned down the Manor - the revolt was crushed with cruelty, peasants were killed and banished to Siberia.

The existing main building was erected in 1840's by the peasants labour services, which finally were abolished in 1858. In 1917 Koitsanlahti Manor passed over to the Finnish Government. It was rented out, and in 1945 the lands were divided into small farms for the evacuees. The main building became a school for domestic industry.

In 1966 the manor was opened as a museum, run by a provincial society. The main building was then restored. By then only one agricultural building was left of an estate which once covered 2500 acres and had a cattle of nearly 200 cows. This two-storied building, consisting of a stable, a storehouse and a coach shed between them, was probably built in 1870. It had been decades without any proper care and it was thought that only one part of it, the storehouse, could be saved.

Finally in 1976 the decision was made to preserve this building from total downfall. "The restoration costs much more than new building", was a general opinion, especially here where the building was already badly damaged. Yet there is a cheap alternative in restoration: to minimize interventions by accepting also worn and old looking material where it is still structurally strong, and by using supports where they are needed rather than renewing the structure. The methods are those that the owner would have originally used: simple handicraft methods and natural materials. In many cases the restoration work is tending towards a beautifully finished, neat and in fact new looking result, often with modern materials. This is like only the form and style of a historical building were valuable and not the material itself and the work used to it.



The technical conditions were miserable: the roof was leaking all over, the supporting beams and columns were on the verge of ruining, the timber walls had holes metres wide, all weather boarding, windows and doors were damaged. The first step was to build temporary supports to hold the building up during the reparation.

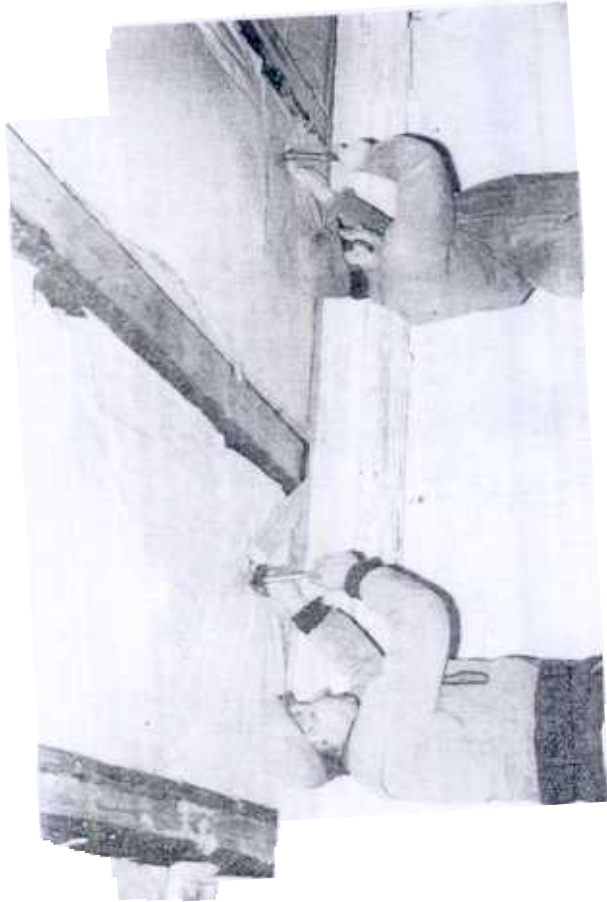
The ground was repaired only by setting the worse moved stones anew on sand, no concrete nor draining was used. The timber structure can stand little moving caused by the ground frost during hardest winters, there was no reason to build deep modern solid foundations. Inside the stable the wet earth with rests of rotten floors was dug out so deeply that a new earth floor of clay and sand could be made (in some parts also the wooden floor).

The badly rotten timber parts were renewed, yet as much of the original was left as possible. The dry rot which was active because of the leaking roof will stop when the wood becomes dry. The only place where chemically treated timber (pressure impregnation with K33 arsene-zinc-copper salts) was used were the sill beams. The walls were strenghtened by the old system of putting joint upright timbers inside and outside the wall; these supports were left naturally in sight.

One of the walls was so bad that most of it had to be built anew. It was not made of timber, to spare in expenses, but constructed with framework system covered by planks and weatherboarding - so could the last century builder also well have done. Even there the original corners were preserved and strenghtened because of their constructional importance.

The shingle might have been the original roofing material; by that time the shingle started to supersede broad roofing boards thanks to factory-made nails and mechanical shingle-planes. Anyway there had been shingle here for a long period, it was a genuine material for this building. One old shingle-plane was found from the village and put in working order. Old, slowly grown tough spruce was fallen from marshlands in February, the blocks were soaked and shingles planed in May and nailed in June - all this after tradition to get the best possible quality of shingles. The shingles were not treated with any modern chemicals for rot prevention (their effect is uncertain in this case, long period tests for 20 years are going on in Seurasaari Open Air Museum in Helsinki) but painted with red water paint like the walls. This protects them also against splitting effect of hot sun.

The water paint was cooked after old tradition. This paint was used on buildings already in the Middle Ages and final receipt was published by Swedish chemist J. Sahlberg in 1740's. The paint consists of water, rye flour, iron oxide red (or yellow), copper (or iron) sulphur and sometimes a little linseed oil with soap, and it is made by cooking.



The work was carried out by the regional office of the Ministry of Building. The work was done by three men in five months, plus electrical equipments and other special works.

The outbuilding has on two floors a total area of 588 square metres and a volume of 1560 cubic metres. The total expenses were 130.000 Finnish marks (approx. 34.000 dollars), i.e. 220 Fmk/m<sup>2</sup> (58 doll/m<sup>2</sup>) and 83 Fmk/m<sup>3</sup> (2,2 doll/m<sup>3</sup>).



## RESUME

### LES TECHNIQUES TRADITIONNELLES DANS LA RESTAURATION : DEPENDANCE DU MANOIR DE KOITSANLAHTI

La Manoir de Koitsanlahti, dont la partie principales était restaurée, est transformé en musée. Cependant la dépendance, composée d'une étable et d'un grenier que sépare un abri pour carrosses, tombait en ruine. La décision était alors prise de la restaurer en appliquant des moyens peu onéreux : minimiser les interventions en remplaçant du matériel même usé et vieux dans des endroits encore structurellement solides et en utilisant des supports au lieu de renouveler la structure. Cette méthode artisanale avec du matériel naturel aurait été celle utilisée par le propriétaire. Pourtant les conditions techniques étaient alarmantes : tout tombait en ruine, le toit, les poutres, les murs en bois lambrisés. Par exemple, le plancher était réparé uniquement en remplaçant des nouvelles pierres posées sur le sable sans ciment. Seules, les poutres en très mauvais état étaient remplacées, tout en gardant dans la mesure du possible les poutres originales. Les murs étaient renforcés par l'ancien système qui consiste à mettre les poutres à l'intérieur et à l'extérieur du mur. Les bardeaux n'étaient pas traités avec les moyens chimiques modernes pour prévenir contre la rouille mais recouverts d'une couche de peinture rouge. Technique traditionnelle, cette peinture à cuire est composée d'eau, de farine, de seigle, d'oxyde de fer rouge et du soufre de cuivre.